COUNTY OF SAN MATEO

GRANT YARD RADIO SHOP

APN# 054-063-180

DEFERRED SUBMITTALS:

- METAL BUILDING AND FOUNDATION
- FIRE ALARM SYSTEM
- FIRE SPRINKLER SYSTEM
- SOILS MANAGEMENT REPORT – TITLE 23, CHAPTER 2.7, SECTION 492.5, SMCO
- HVAC REFRIGERANT PIPING
- UNDERGROUND FIRE SERVICE MAINS
- EMERGENCY RESPONDER RADIO COVERAGE SYSTEM PLAN
- NON–STRUCTURAL SEISMIC BRACING

PROJECT DESCRIPTION:

THE EXISTING ROAD DEPARTMENT, AGRICULTURAL/WEIGHT AND MEASURES BUILDING AT 752 CHESTNUT ROAD, GRANT YARD WILL BE DEMOLISHED.

THE NEW RADIO SHOP BUILDING IS A TWO STORY 13,409 S.F. BUILDING OF TYPE II–B CONSTRUCTION WHICH HOUSES BUSINESS AND LOW–HAZARD STORAGE (VEHICLE PARKING) OCCUPANCIES.

NEW LANDSCAPING, IRRIGATION, PAVEMENTS WILL BE INSTALLED AT PERIMETER OF NEW BUILDINGS.

EXISTING SITE UTILITIES WILL BE REUSED AND EXTENDED TO NEW.

NEW ADA STALLS AND ACCESSIBLE ROUTE WILL BE CONSTRUCTED.

ALTERNATE BID ITEMS:

NO. 1 GARAGE BUILDING

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engineers • surveyors • planners • scientists

PHARIS ENGINEERING

LICENSED ARCHITECT
PAUL W. POWERS
C–29713
RENEWAL DATE 3/28/2021
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11–16–2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
COVER SHEET

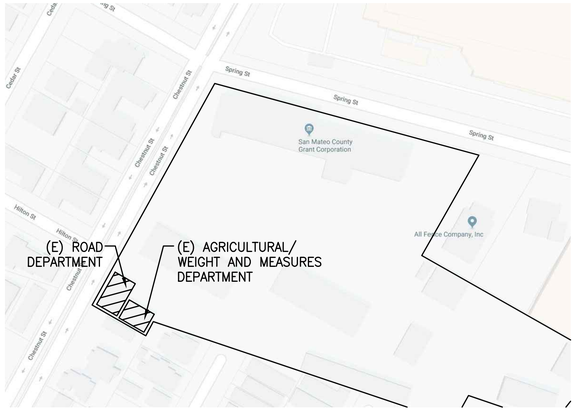
Sheet Number:
G000

ABBREVIATIONS:

@	AT
℄	CENTERLINE
ø	DIAMETER OR ROUND
#	POUND OR NUMBER
⌖	WORKING POINT
"	INCH
'	FOOT OR FEET
ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADJ.	ADJACENT
A.F.F.	ABOVE FINISH FLOOR
ARCH.	ARCHITECTURAL/ARCHITECT
BLDG.	BUILDING
BOT.	BOTTOM
B.O.	BOTTOM OF
BTWN.	BETWEEN
CBC	CALIFORNIA BUILDING CODE
CLG.	CEILING
CLR.	CLEAR
COL.	COLUMN
CONC.	CONCRETE
CONT.	CONTINUOUS
d	PENNY (NAIL SIZE)
DEMO	DEMOLITION
DET.	DETAIL
DIA.	DIAMETER
DIAG.	DIAGONAL
DIM(S)	DIMENSION(S)
DWG(S)	DRAWINGS
(E)	EXISTING
EA.	EACH
E.F.	EACH FACE
ELEC.	ELECTRICAL
ELEV.	ELEVATION
ENG.	ENGINEER
E.O.D.	EDGE OF DECK
EQ.	EQUAL
EQUIP.	EQUIPMENT
EXT.	EXTERIOR
F.E.C.	FIRE EXTINGUISHER CABINET
F.F.	FINISH FLOOR
F.O.F.	FACE OF FINISH
FT.	FOOT OR FEET
FURR.	FURRING
GA.	GAUGE OR GAGE
GALV.	GALVANIZED
CG.	CORNER GUARD
GL.	GLASS or GLAZED
GR.	GRADE
G.S.M.	GALVANIZED SHEET METAL
H.M.	HOLLOW METAL
HR.	HOUR
HT.	HEIGHT
H.V.A.C.	HEATING/VENTILATING /AIR CONDITIONING
IN.	INCHES
INFO	INFORMATION
INSUL.	INSULATION
INT.	INTERIOR
JT.	JOINT
LAM.	LAMINATE(d)
LB, LBS.	POUND(S)
LOC.	LOCATION
LONG.	LONGITUDINAL
LT.	LIGHT
MAINT.	MAINTENANCE
MAX.	MAXIMUM
MECH.	MECHANICAL
MTL.	METAL
MFR.	MANUFACTURER
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MNTG.	MOUNTING
(N)	NEW
N	NORTH
N/A	NOT APPLICABLE or NOT AVAILABLE
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.H.	OPPOSITE HAND
OPNG.	OPENING
OPP.	OPPOSITE
P.A.F.	POWDER ACTUATED FASTENER
PERP.	PERPENDICULAR
P.I.V.	POST INDICATOR VALVE
PL.	PLATE
PLYWD.	PLYWOOD
PSF	POUNDS PER SQUARE FOOT
QTY.	QUANTITY
R	RADIUS
R.C.P.	REFLECTED CEILING PLAN
REINF.	REINFORCED/REINFORCING
REQ'D	REQUIRED
REV	REVISION
RM.	ROOM
S.A.D.	SEE ARCHITECTURAL DWGS
SDI	STORM DRAIN INLET
S.E.D.	SEE ELECTRICAL DWGS
SF.	SQUARE FOOT
SIM.	SIMILAR
S.M.D.	SEE MECHANICAL DRAWINGS
SMS	SHEET METAL SCREW
S.P.D.	SEE PLUMBING DWGS
SPEC.	SPECIFICATION
STL.	STEEL
STRUCT.	STRUCTURE/STRUCTURAL
SUSP.	SUSPEND(ED)
T&B	TOP & BOTTOM
THRU	THROUGH
T.O.C.	TOP OF CONCRETE
T.O.S.	TOP OF STEEL
TYP.	TYPICAL
U.L.	UNDERWRITER'S LABORATORY
U.O.N.	UNLESS OTHERWISE NOTED
V.I.F.	VERIFY IN FIELD
W/	WITH
WD.	WOOD
W/O	WITHOUT
W.R.B.	WEATHER RESISTIVE BARRIER

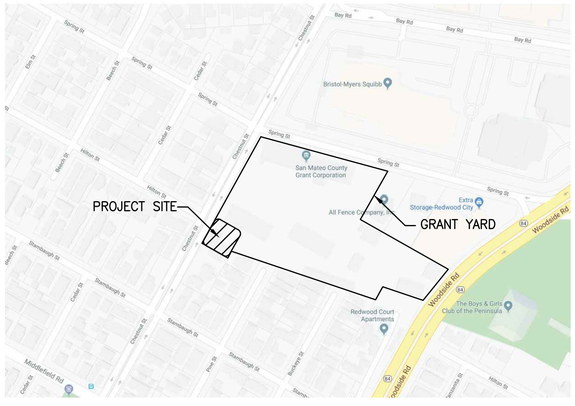
AREA MAPS:

PROJECT LOCATION:



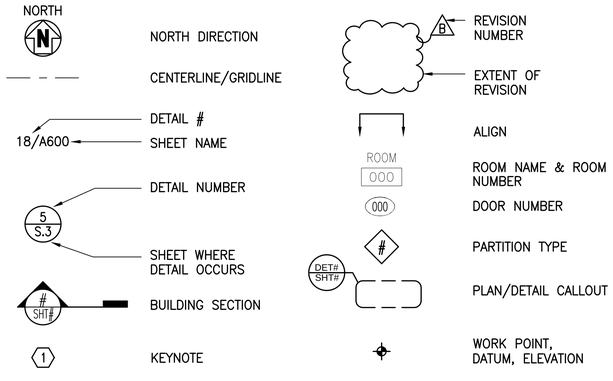
TRUE NORTH PLAN NORTH

LOCAL VICINITY MAP:



TRUE NORTH PLAN NORTH

LEGEND:



PROJECT TEAM:

OWNER:

COUNTY OF SAN MATEO
DEPARTMENT OF PUBLIC WORKS
555 COUNTY CENTER, 5TH FLOOR
REDWOOD CITY, CA

ARCHITECT/STRUCTURE/CIVIL/LANDSCAPE:
THE KPA GROUP

MECHANICAL/PLUMBING:
MORRISON–MAIERLE INC.

GEOTECNICAL:
ROCKRIDGE GEOTECHNICAL

ELECTRICAL/COMMUNICATIONS:
PHARIS ENGINEERING

FIRE PROTECTION:
THE KPA GROUP

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Morrison Maierle
engineers ▪ surveyors ▪ planners ▪ scientists

PHARIS ENGINEERING

LICENSED ARCHITECT
PAUL W. POWERS
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SHEET INDEX, ABBREVIATIONS LEGENDS

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GENERAL NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE PLANS, DETAILS AND SPECIFICATIONS PREPARED FOR THE PROJECT. ANY DEVIATION FROM APPROVED PLANS DURING CONSTRUCTION WILL REQUIRE 48 HOURS PRIOR WRITTEN NOTICE TO AND SUBJECT TO THE APPROVAL OF THE COUNTY.

2. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO INSTALL AND/OR ERECT THE CONSTRUCTION AS REQUIRED TO PROPERLY COMPLETE THE INTENDED WORK. MISCELLANEOUS ITEMS OF WORK, MATERIAL, EQUIPMENT, ETC. NECESSARY TO COMPLETE THE INSTALLATION SHALL BE PROVIDED BY THE CONTRACTOR WHETHER OR NOT MENTIONED IN THE SPECIFICATIONS OR SHOWN ON THE DRAWINGS.

3. CONTRACTOR SHALL PROVIDE FOR INGRESS AND EGRESS TO MAINTAIN A FUNCTIONAL GRANT YARD THROUGHOUT THE PERIOD OF CONSTRUCTION.

4. NO CONSTRUCTION VEHICLE ACCESS TO CHESTNUT STREET AFTER PAVEMENTS REMOVED.

5. REFER TO THE CIVIL UTILITY PLANS AND OTHER DOCUMENTS FOR ADDITIONAL REQUIREMENTS AND WORK. UTILITY AND SERVICE MODIFICATION AND ROUTING MAY EXTEND OUTSIDE THE BOUNDARY OF THE LIMIT OF PROJECT WORK. CONTRACTOR SHALL INCLUDE IN BID ALL COSTS AND MATERIALS ASSOCIATED WITH UTILITY AND SERVICE WORK OUTSIDE LIMIT OF PROJECT WORK BOUNDARY.

6. PROPERLY DIVERT EXISTING STORMWATER STRUCTURES, DOWNSPOUTS, AND RAINWATER LEADER DURING CONSTRUCTION.

7. WORK SHALL NOT INTERFERE WITH GRANT YARD OPERATIONS.

8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE COUNTY OF ANY DIFFERENCES IN LOCATIONS OF EXISTING UTILITIES FROM THAT SHOWN, OR ANY CONFLICTS WITH THE WORK BEFORE CONTINUING WORK IN THAT AREA.

9. ALL REVISIONS TO THESE DOCUMENTS SHALL BE APPROVED BY THE COUNTY PRIOR TO CONSTRUCTION AND SHALL BE ACCURATELY REPRESENTED IN REVISED PLANS PRIOR TO THE ACCEPTANCE OF THE WORK AS COMPLETE. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT WRITTEN AUTHORIZATION FROM THE COUNTY.

10. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE COUNTY OF SAN MATEO, CAL–OSHA, AND THE STATE WATER RESOURCES CONTROL BOARD. ALL CODES, STANDARDS, AND SPECIFICATIONS SHALL BE AS AMENDED TO DATE.

11. THE CONTRACTOR SHALL PROVIDE PROMPT, WRITTEN NOTIFICATION TO THE COUNTY AND ARCHITECT CONCERNING CONFLICTS WITH, OR RECOMMENDED DEVIATIONS FROM CODES, LAWS, REGULATIONS, STANDARDS, AND OPINIONS OF REVIEW OFFICIALS AS DESCRIBED HEREIN.

12. ALL MONUMENTS MUST BE PROTECTED PER STATE LAND SURVEYORS STANDARD SPECIFICATION SECTION. NOTIFY THE ARCHITECT TO REPORT ANY MONUMENTS IN DANGER OF DESTRUCTION OR REMOVAL.

13. STATIONING HEREIN IS ALONG STREET CENTERLINE UNLESS OTHERWISE SHOWN OR INDICATED.

14. CONTRACTOR SHALL SATISFY HIM/HERSELF AS TO THE CORRECTNESS OF THE EXISTING TOPOGRAPHY AND OTHER SITE CONDITIONS PRIOR TO CONSTRUCTION. NOTIFY AND OBTAIN WRITTEN APPROVAL FROM THE COUNTY IF ANY DISCREPANCIES, REVISIONS, AND ADDITIONAL WORK THAT IS REQUIRED AS A RESULT OF SUCH FIELD INVESTIGATION PRIOR TO BEGINNING OF ANY WORK. FAILING TO DO SO SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CORRECT.

15. IT IS THE RESPONSIBILITY OF THE COUNTY TO OBTAIN PERMITS NECESSARY TO PERFORM THE WORK FROM THE APPROPRIATE AGENCIES.

16. SAFETY OF PERSONNEL AND PROPERTY DURING DEMOLITION AND EXCAVATION WORK IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. ONLY THE EXTENT OF THE WORK IS INDICATED; AND NOT THE METHOD, SEQUENCE, OR SAFETY PROCEDURES AND CONSIDERATIONS. REVIEW OF THE CONTRACTOR'S SUBMITTALS IS NOT INTENDED TO RELIEVE CONTRACTOR OF ANY OF THE ABOVE RESPONSIBILITY.

17. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FENCING, FLAGMEN OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY.

18. TRAFFIC CONTROL

    A. PRIOR TO BEGINNING ANY WORK ON EXISTING STREETS, ADVANCE WARNING SIGNS SHALL BE INSTALLED.

19. CONTRACTOR SHALL PROVIDE BARRICADE AND WARNING LIGHTS FOR ALL OPEN EXCAVATION.

20. THE NOISE LEVEL OF THE CONTRACTOR'S OPERATING SHALL BE KEPT TO A MINIMUM AS PER COUNTY STANDARDS.

21. THE CONTRACTOR SHALL EMPLOY MEANS NECESSARY TO CONTROL DUST AT AND NEAR THE SITE OF WORK AND ALONG APPROACH ROUTES TO THE CONSTRUCTION SITE. ADJACENT STREETS ARE TO BE CLEANSED DAILY OF DIRT AND DEBRIS THAT ARE THE RESULT OF OPERATION.

22. DUST SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS. AT ALL TIMES DURING CONSTRUCTION AND UNTIL FINAL COMPLETION, THE CONTRACTOR, OR SUBCONTRACTOR OPERATING EQUIPMENT ON THE SITE, SHALL PREVENT THE FORMATION OF ANY AIRBORNE NUISANCE BY WATERING AND/OR TREATING THE SITE OF THE WORK IN SUCH A MANNER THAT WILL CONFINE DUST PARTICLES TO THE IMMEDIATE SURFACE OF THE WORK. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGED CAUSED BY CONTRACTOR OR HIS SUBCONTRACTOR ACTIVITIES IN PERFORMING THE WORK UNDER THIS CONTRACT AND SHALL BE RESPONSIBLE FOR ANY CITATIONS, FINES OR CHARGES RESULTING FROM DUST NUISANCE.

23. THE CONTRACTOR SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
    A. WATERING OR COVERING OF STOCKPILES OF DEBRIS, SOIL, SAND OR OTHER MATERIALS THAT CAN BE BLOWN BY WIND
    B. COVER ALL TRUCKS HAULING SOIL, SAND AND OTHER LOOSE, MATERIALS OR ALL TRUCKS SHALL MAINTAIN TWO FEET CLEAR, BETWEEN HAULED MATERIALS AND THE TOP OF THE TRUCK BED

24. IF ANY CULTURAL FEATURES OR ARCHEOLOGICAL MATERIALS ARE UNCOVERED DURING GRADING, TRENCHING OR OTHER EXCAVATION WORK ALL WORK WITHIN 100 FEET OF THESE MATERIALS SHALL BE STOPPED UNTIL A PROFESSIONAL ARCHEOLOGIST (SOPA) AND/OR THE SOCIETY OF CALIFORNIA ARCHEOLOGY (SCA) HAS HAD THE OPPORTUNITY TO EVALUATE THE SIGNIFICANCE OF THE FIND APPROPRIATE MITIGATION MEASURES HAVE BEEN DETERMINED AND IMPLEMENTED THE CONTRACTOR SHALL ALSO IMMEDIATELY NOTIFY THE ARCHITECT.

25. FOR PAVING AND STORM DRAIN IMPROVEMENTS, TEMPORARY SILT AND DRAINAGE CONTROL FACILITIES SHALL BE INSTALLED TO CONTROL AND CONTAIN EROSION CAUSED SILT DEPOSITS AND TO PROVIDE FOR THE SAFE DISCHARGE OF STORM WATERS INTO EXISTING STORMWATER FACILITIES. DESIGN OF THESE FACILITIES SHOULD BE IN ACCORDANCE TO THE LATEST CALIFORNIA STORM WATER BEST MANAGEMENT PRACTICE HANDBOOK.

26. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM TO THE CALIFORNIA STORM WATER CONSTRUCTION BMP HANDBOOK.

27. THE CONTRACTOR SHALL MEET AND FOLLOW ALL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM REQUIREMENTS IN EFFECT AT THE TIME OF CONSTRUCTION.

28. CONTRACTOR SHALL MAINTAIN GOOD HOUSEKEEPING PRACTICES AT THE JOB SITE. EXCESS BUILDING MATERIALS AND DEBRIS SHALL BE REMOVED PROMPTLY FROM THE JOB SITE AND DISPOSED OF AT AN APPROVED DUMPSITE. THE JOB SITE SHALL BE LEFT CLEAN AT THE END OF EACH WORKDAY.

29. THE CONTRACTOR MUST MAINTAIN THE STREETS, SIDEWALKS AND ANY OTHER PUBLIC & PRIVATE RIGHTS–OF–WAY IN A CLEAN, SAFE, AND USABLE CONDITION. ANY SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS MUST BE REMOVED AND SWEPT CLEAN FROM THE PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT.

30. CONSTRUCTION OPERATIONS – WASTEWATER GENERATED DURING CONSTRUCTION SHALL NOT BE DISCHARGED TO THE STORM DRAIN SYSTEM. THIS INCLUDES WASTE FROM PAINTING, SAWCUTTING, CONCRETE WORK, ETC. THE CONTRACTOR SHALL MAKE ARRANGEMENTS TO ELIMINATE DISCHARGE TO THE STORM DRAIN SYSTEM AND, IF NECESSARY, PROVIDE AN AREA FOR ON–SITE WASHING ACTIVITIES DURING CONSTRUCTION. MATERIALS, WHICH COULD CONTAMINATE STORM RUNOFF, SHALL BE STORED IN AREAS WHICH ARE DESIGNED TO PREVENT EXPOSURE TO RAINFALL AND NOT ALLOW STORM WATER TO RUN ONTO THE AREA.

31. FLUSHING OF STREETS AND PARKING LOTS TO REMOVE DIRT AND CONSTRUCTION DEBRIS IS PROHIBITED UNLESS PROPER SEDIMENT CONTROLS ARE USED. PREFERABLY, AREAS REQUIRING CLEANING SHOULD BE SWEPT.

32. CONTRACTOR SHALL PROTECT EXISTING FACILITIES FROM DAMAGE. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE COUNTY OF SAN MATEO. BARRICADES, SIGNS, LIGHTS, ETC., REQUIRED FOR THE PROTECTION OF PERSONNEL, THE PUBLIC PROPERTY AND MATERIAL SHALL BE PROVIDED FOR AND MAINTAINED DURING CONSTRUCTION BY THE CONTRACTOR, AND SHALL CONFORM TO ALL GOVERNING CODES, ORDINANCES AND REGULATIONS. THE CONTRACTOR IS RESPONSIBLE FOR THE REPAIR OF PUBLIC AND PRIVATE IMPROVEMENTS/FACILITIES DAMAGED BY OPERATIONS INCLUDING BUT NOT LIMITED TO MONUMENTS, BENCHMARKS, AC PAVEMENT, PAVEMENT MARKINGS, TRAFFIC STRIPING AND SIGNAGE, TRAFFIC LOOPS, EXISTING FIBER OPTIC, EXISTING SEWER MAINS ETC.

33. THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UTILITIES AS SHOWN ON DRAWINGS ARE APPROXIMATE AND WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. ONLY ACTUAL DEMOLITION WILL REVEAL THE TYPES, EXTENT, SIZES AND LOCATIONS OF SUCH UTILITIES.

34. ALL UNDERGROUND UTILITIES SHALL BE COMPLETE BEFORE PLACEMENT OF BASE ROCK UNLESS OTHERWISE NOTED.

35. CONTRACTOR SHALL PROVIDE DESIGN BUILD FOR FIRE ALARM SYSTEM. THE PURPOSE OF THE CONTRACT DOCUMENTS IS TO CONVEY TO THE BUILDING CONTRACTOR THE CONCEPT OF THE FIRE ALARM SYSTEM SUCH THAT THE CONTRACTOR CAN DESIGN THE SYSTEM, PREPARE AND SUBMIT THEIR BID. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL INFORMATION SHOWN WITHIN CONTRACT DOCUMENTS AND INFORM THE OWNER AND PROJECT ENGINEER OF ANY DISCREPANCIES IN A TIMELY MANNER BEFORE SUBMITTAL OF BID.

36. ALL KNOWN EXISTING UTILITY LINES ARE SHOWN FOR INFORMATION ONLY. CONTRACTOR SHALL EXERCISE ALL NECESSARY CAUTION TO AVOID DAMAGE TO ANY EXISTING UTILITY LINES OR FACILITIES TO REMAIN IN PLACE, WHETHER OR NOT SUCH LINES OR FACILITIES ARE SHOWN ON THESE PLANS, AND SHALL BEAR FULL RESPONSIBILITY FOR ANY DAMAGE THERETO. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND DEPTH. NEITHER THE COUNTY OF SAN MATEO NOR THE DESIGN TEAM ASSUMES RESPONSIBILITIES THAT EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED WILL BE THOSE ENCOUNTERED. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR SHALL NOTIFY AN UNDERGROUND UTILITY LOCATING COMPANY HIRED BY THE CONTRACTOR FIVE (5) WORKING DAYS IN ADVANCE OF CONSTRUCTION TO FIELD LOCATE UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THOSE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES TO VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION ALL WORK SHALL BE BORNE BY THE CONTRACTOR.

37. CONTRACTOR IS RESPONSIBLE FOR COORDINATING HIS WORK TO AVOID CONFLICTS BETWEEN SEWER. STORM DRAINS, WATER, GAS, STEAM AND ELECTRICAL MAINS. THE GENERAL CONTRACTOR SHALL EMPLOY A UTILITY AND SERVICE LOCATOR IN LOCATING BURIED UTILITIES AND SERVICES AT (AND IN THE VICINITY OF) THE PROJECT.

38. CONTRACTOR IS RESPONSIBLE FOR HAVING EXISTING GAS LINES, POWER LINES, WATER LINES, SEWER LINES, COMMUNICATION LINES, CABLE, ELECTRICAL LINES, ETC. DISCONNECTED AND RELOCATED AS NECESSARY. CONTRACTOR SHALL COORDINATE WORK WITH UTILITY COMPANIES.

39. UTILITIES OR SERVICES TEMPORARILY REMOVED OR DISCONNECTED IN ORDER TO PERFORM THE WORK SHALL BE REBUILT OR REPLACED TO MATCH THE (E) CONDITION PRIOR TO THEIR REMOVAL AND REINSTALLATION. SUCH WORK SHALL BE SUBJECT TO THE APPROVAL OF THE COUNTY.

40. UTILITY CONNECTIONS AND DISCONNECTIONS NECESSARY TO COMPLETE THE WORK WILL BE PERFORMED IN SUCH A MANNER AS TO MINIMIZE UTILITY SERVICE INTERRUPTIONS TO FACILITY OPERATIONS IN THE VICINITY OF CONSTRUCTION. THE CONTRACTOR WILL COORDINATE ALL UTILITY INTERRUPTIONS DURING ALL PHASES OF CONSTRUCTION. COORDINATE ALL OWNER'S "DOWN TIME" WITH THE OWNER'S REPRESENTATIVE.

41. UNLESS OTHERWISE NOTED SEPARATION OF SANITARY SEWER AND WATER LINES SHALL BE 10' HORIZONTAL AND 2' VERTICAL; SEPARATION OF SANITARY SEWER AND STORM DRAINS SHALL BE 5' HORIZONTAL AND 1' VERTICAL; SEPARATION OF ALL OTHER UTILITIES SHALL BE 5' HORIZONTAL AND 1' VERTICAL.

42. ALL EXCAVATIONS SHOULD BE PERFORMED IN ACCORDANCE WITH CAL OSHA REQUIREMENTS.

43. WHERE UNSTABLE OR UNSUITABLE MATERIALS ARE ENCOUNTERED DURING SUBGRADE PREPARATION, THE AREA IN QUESTION SHALL BE OVER EXCAVATED AND REPLACED BY SELECTED BACKFILL MATERIAL AS DIRECTED BY THE COUNTY.

44. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INCLUDE ALL MATERIAL AND LABOR REQUIRED WITHIN THE BID PRICE, FOR EARTHWORK CONSTRUCTION, TO CARRY OUT THE CUT/FILL AND/OR IMPORT/EXPORT AS NECESSARY TO MEET THE DESIGN GRADES SHOWN ON THE PLANS. CONTRACTOR IS TO DELIVER TO THE COUNTY OF SAN MATEO THE PROJECT IN A COMPLETE AND OPERATIONAL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR ANY INVESTIGATION OR STUDIES THAT ARE REQUIRED BY THE CONTRACTOR TO SATISFY THIS REQUIREMENT. NO ADDITIONAL COMPENSATION SHALL BE PAID FOR SAW CUT/FILL AND/OR IMPORT/EXPORT.

45. CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING STREET, SURROUNDING LANDSCAPE, AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION IN PAVING, CURBS, GUTTERS, SIDEWALKS, GRADING, ETC. AND TO AVOID ANY ABRUPT OR APPARENT CHANGES IN GRADES OR CROSS SLOPE, LOW SPOTS OR HAZARDOUS CONDITIONS.

46. PAVING CONTRACTOR TO ADJUST ALL EXISTING & PROPOSED MANHOLE RIMS, VALVE BOXES, UTILITY BOXES, CONCRETE VAULTS, ETC. TO GRADE AFTER THE LAST LIFT OF PAVING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ADJUST EXISTING AND NEW VAULTS, MANHOLES, VALVES, BOXES, METERS, AND OTHER UTILITIES TO FINISH GRADE.

47. LOCATE CONTRACTOR STAGING AND STORAGE AREA, PORTABLE TOILETS WITH LOCATION APPROVED BY COUNTY. PROVIDE BASE/PAVING IF REQUIRED BY GENERAL CONTRACTOR.

48. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN CONTROL OF THE ENTIRE CONSTRUCTION OPERATION AND TO KEEP THE ENTIRE SITE IN COMPLIANCE WITH STATE AND LOCAL LAWS AND MEASURES.

49. ADJUSTMENTS SHALL BE MADE TO THIS PLAN AS NECESSARY TO WORK WITH THE CONSTRUCTION PHASING OF THE PROJECT. CONTRACTOR SHALL SUBMIT PHASING PLAN TO THE COUNTY OF SAN MATEO FOR APPROVAL.

50. THE EROSION CONTROL PLAN (G007) MAY NOT COVER ALL THE SITUATIONS THAT MAY ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. VARIATIONS AND ADDITIONS MAY BE MADE BY THE CONTRACTOR TO THIS PLAN WITH THE APPROVAL BY THE COUNTY OF SAN MATEO. COST REGARDING ADJUSTING EROSION CONTROL PLAN DUE TO UNANTICIPATED AND CHANGING FIELD CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

51. CONTRACTOR SHALL CARRY OUT CONSTRUCTION OPERATIONS IN SUCH A MANNER THAT EROSION AND WATER POLLUTION WILL BE MINIMIZED. EXERCISE REASONABLE CARE WHEN HAULING ANY CONSTRUCTION DEBRIS OVER EXISTING ROADWAYS. SHOULD ANY BLOW, SPILL OR TRACK OVER AND UPON SAID PUBLIC OR ADJACENT PRIVATE PROPERTY, IMMEDIATELY REMEDY THE SITUATION BY USING PROPER CLEANING PROCEDURES. CONTRACTOR SHALL KEEP ALL PAVED AREAS CLEAR OF EARTH, MATERIAL AND DEBRIS. PROVIDE STREET SWEEPING AS NECESSARY, PER BMP FACT SHEET SE–7 OF "THE HANDBOOK". MAINTAIN AN INSPECTION SCHEDULE FOR THE IMPLEMENTED SEDIMENT AND EROSION BMP MEASURES AT LEAST ONCE A WEEK AND/OR 24 HOURS BEFORE AND AFTER A FORECASTED RAIN EVENT.

52. VACUUM, DUST, SWEEP AND REMOVE DEBRIS DAILY.

53. ANY NOISE CAUSED BY CONSTRUCTION (INCLUDING BUT NOT LIMITED BY DEMOLITION, DRYWALL INSTALLATION AND OTHER DISRUPTIVE PORTIONS OF WORK) SHOULD NOT EXCEED OSHA's PERMISSIBLE EXPOSURE LIMIT (PEL) FOR NOISE DURING WORKING HOURS (7:00 AM TO 5:00 PM). ANY CONSTRUCTION WORK EXCEEDING OSHA NOISE THRESHOLD SHOULD BE DONE DURING NON–WORKING HOURS INCLUDING WEEKENDS, HOLIDAYS, EVENINGS AND NIGHTS.

54. COORDINATE ANY NECESSARY ELECTRICAL OR OTHER SYSTEM SHUTDOWN WITH THE COUNTY OF SAN MATEO AT LEAST 30 DAYS IN ADVANCE. PROVIDE ALL NECESSARY LIFE SAFETY, SECURITY AND MONITORING DURING SHUTDOWN.

55. PROTECT ALL EXISTING ITEMS AND FINISHES TO PROTECT THEM FROM DAMAGE DURING DEMOLITION AND CONSTRUCTION.

56. PROTECT EXISTING TREES AND VEGETATION TO REMAIN.

57. PROTECT EXISTING WATER VALVE, IRRIGATION WIRING, UTILITIES, COMMUNICATION AND OTHER SITE ATTRIBUTES AS REQUIRED DURING DEMOLITION AND NEW CONSTRUCTION.

58. REPLACE ALL (E) ITEMS TO REMAIN THAT ARE DAMAGED/REMOVED BY CONSTRUCTION ACTIVITIES, AT NO ADDITIONAL COST TO COUNTY OF SAN MATEO.

59. PROVIDE ANY NECESSARY OFF–SITE STORAGE AND STAGING.

60. MAINTAIN 6'–0" HIGH CONSTRUCTION BARRIERS (FENCE WITH VISUAL CONTROLS) AT ALL TIMES. ALL CONSTRUCTION BARRIERS ARE DIAGRAMMATIC. ADJUST LOCATION AND CONFIGURATION OF CONSTRUCTION BARRIERS DURING THE PROJECT AS NECESSARY. PROVIDE ADEQUATE SAFETY BARRICADES AT NO ADDITIONAL COST TO THE COUNTY OF SAN MATEO.

61. MAINTAIN FREE AND UNOBSTRUCTED PATHWAYS AND DESIGNATE ALTERNATE PATHWAY WHEN REQUIRED.

62. KEYED NOTES AND SCHEDULED MAINTENANCE CLEANUP PHASES OF START AND STOP DEPEND UPON ACTUAL CONSTRUCTION SEQUENCE BY CONTRACTOR.

63. REMOVE HAZARDOUS MATERIALS FROM BUILDING/SITE PRIOR TO FULL BUILDING DEMOLITION. SEE SPECIFICATIONS FOR TESTING REPORT.

64. DRAWINGS AND SPECIFICATIONS ARE COMPLIMENTARY TO EACH, NOT SELF–SUFFICIENT. ALL THAT IS MENTIONED IN SPECIFICATIONS AND NOT SHOWN ON DRAWINGS OR SHOWN ON DRAWINGS AND NOT MENTIONED IN SPECIFICATIONS SHALL BE AS IF SHOWN ON OR MENTIONED IN BOTH.

65. CONTRACTOR SHALL PROVIDE DESIGN BUILD FOR SPRINKLER SYSTEM. THE PURPOSE OF CONTRACT DOCUMENTS IS TO CONVEY TO THE BIDDING CONTRACTOR THE CONCEPT OF THE SPRINKLER SYSTEM SUCH THAT THE CONTRACTOR CAN DESIGN THE SYSTEM, PREPARE, AND SUBMIT THEIR BID. CONTRACTOR RESPONSIBLE FOR FIELD VERIFYING ALL INFORMATION SHOWN WITHIN CONTRACT DOCUMENTS AND INFORM THE OWNER AND PROJECT ENGINEER OF ANY DISCREPANCIES IN A TIMELY MANNER BEFORE SUBMITTAL OF BID.

66. CONTRACTOR SHALL PROVIDE DESIGN BUILD FOR FIRE ALARM SYSTEM. THE PURPOSE OF THE CONTRACT DOCUMENTS IS TO CONVEY TO THE BUILDING CONTRACTOR THE CONCEPT OF THE FIRE ALARM SYSTEM SUCH THAT THE CONTRACTOR CAN DESIGN THE SYSTEM, PREPARE AND SUBMIT THEIR BID. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL INFORMATION SHOWN WITHIN CONTRACT DOCUMENTS AND INFORM THE OWNER AND PROJECT ENGINEER OF ANY DISCREPANCIES IN A TIMELY MANNER BEFORE SUBMITTAL OF BID.

67. CONTRACTOR SHALL MEET APPLICABLE PROVISION OF CFC CHAPTER 33.

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Revisions:
2 11–16–2020

BID SET

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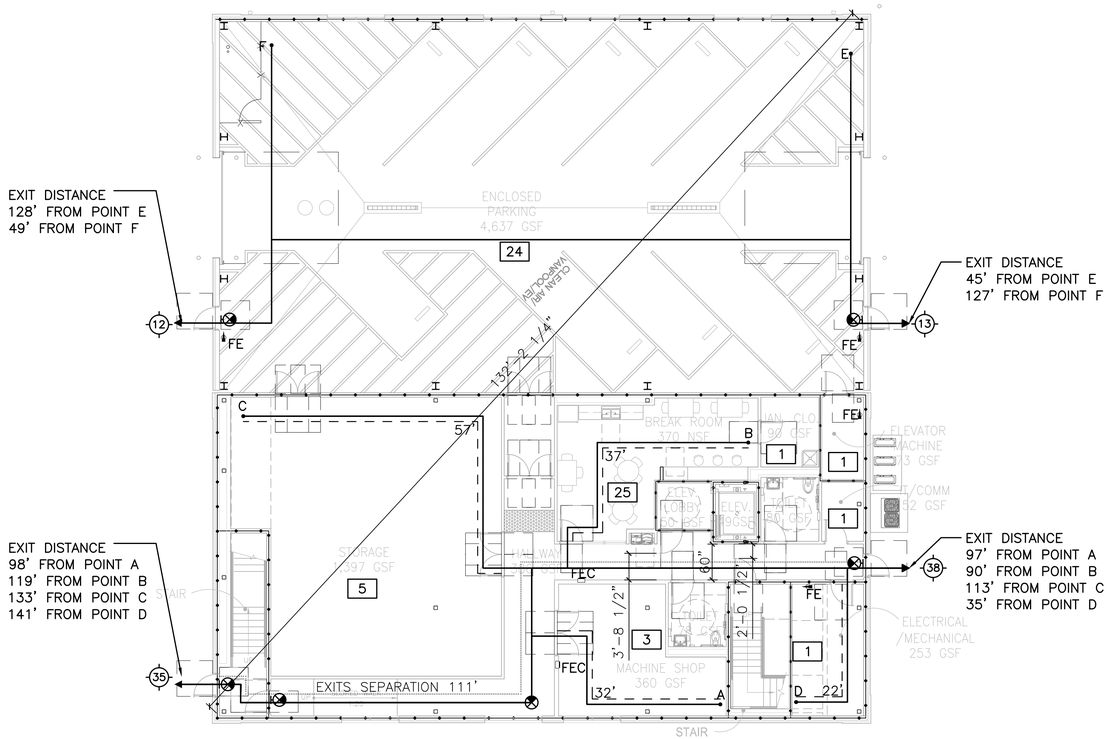
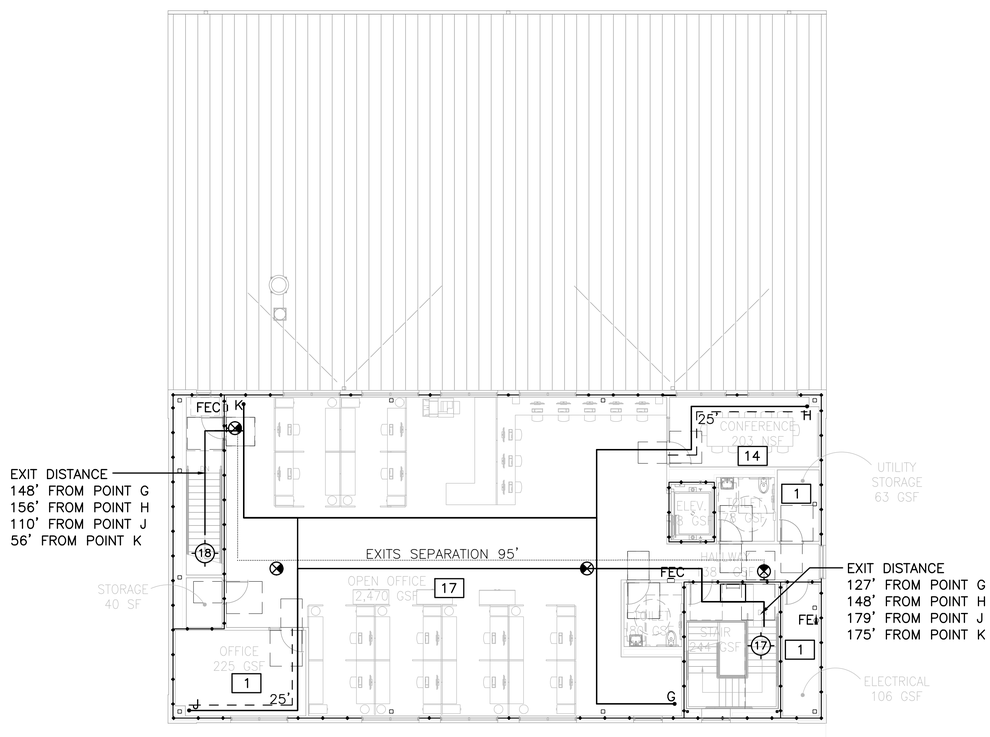
APN Number: 054–063–180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
GENERAL NOTES

Sheet Number:
G002





APPLICABLE BUILDING CODES:

BUILDING CODE:	2019 CALIFORNIA BUILDING CODE
STRUCTURAL CODE:	2019 CALIFORNIA BUILDING CODE
PLUMBING CODE:	2019 CALIFORNIA PLUMBING CODE
MECHANICAL CODE:	2019 CALIFORNIA MECHANICAL CODE
ELECTRICAL CODE:	2019 CALIFORNIA ELECTRIC CODE
	NFPA 70 – 2017 NATIONAL ELECTRICAL CODE
FIRE PROTECTION:	2019 CALIFORNIA FIRE CODE
	NFPA 13 – 2019
ENERGY CODE:	2019 CALIFORNIA ENERGY CODE
SUSTAINABILITY:	2019 CALIFORNIA GREEN BUILDING STANDARDS

1. USE AND OCCUPANCY CLASSIFICATION

SECTION 302 OCCUPANCY GROUPS
SECTION 508 MIXED USE OCCUPANCY
SECTION 304 BUSINESS GROUP B
SECTION 311 LOW–HAZARD STORAGE GROUP S–2
SECTION 406 MOTOR–VEHICLE RELATED OCCUPANCY
508.3 NONSEPARATED OCCUPANCIES

2. FIRE PROTECTION SYSTEMS

907.2.2 – GROUP B
A MANUAL FIRE ALARM SYSTEM IS NOT REQUIRED

406.6 – ENCLOSED PARKING GARAGE: AUTOMATIC SPRINKLER SYSTEM REQUIRED

CFC 906.1 – GROUP B & S–2
PORTABLE FIRE EXTINGUISHERS ARE REQUIRED
TABLE 906.3(1) CLASS A – 75' MAX. TO EXTINGUISHER (2–A)

SAN MATEO COUNTY ORDINANCE – ORDINANCE 04767, SECTION 9135
NON–RESIDENTIAL BUILDINGS OF OVER 1,000 SF SHALL HAVE AN AUTOMATIC FIRE SPRINKLER SYSTEM

3. OCCUPANCY SEPARATIONS

506.2.4 – MIXED–OCCUPANCY, MULTISTORY BUILDING

508.3 – NONSEPARATED OCCUPANCY
508.2, 508.3 OCCUPANCIES DO NOT REQUIRE SEPARATION
508.3.2 GROUP B USED TO LIMIT (HEIGHT/AREA)
(MOST RESTRICTIVE)

4. BUILDING CONSTRUCTION TYPE

TABLES 601 – CONSTRUCTION CLASSIFICATION	TYPE II–B
PRIMARY STRUCTURAL FRAME	0 HOUR
BEARING WALLS – EXTERIOR	0 HOUR
BEARING WALLS – INTERIOR	0 HOUR
NON–BEARING WALLS AND PARTITIONS – INTERIOR	0 HOUR
FLOOR CONSTRUCTION AND SECONDARY MEMBERS	0 HOUR
ROOF CONSTRUCTION AND SECONDARY MEMBERS	0 HOUR
TABLE 602 – FIRE RESISTIVE RATINGS (SITE RELATED)	
EXTERIOR BEARING WALLS (NONE)	0 HOUR
EXTERIOR WALLS X>30' (EAST–NORTH PART, NORTH–2ND FLOOR & WEST)	0 HOUR
EXTERIOR WALLS X<10' (NORTH–1ST FLOOR, SOUTH AND EAST–NEAR FENCE)	1 HOUR
705.8 – EXTERIOR OPENING PROTECTION REQUIRED WHERE OPENINGS ARE PROVIDED IN EXCESS OF THE FOLLOWING:	
1ST FLOOR (UP,S)	
EAST–NORTH PART, WEST – 20'+	NO LIMIT
NORTH, SOUTH & EAST–NEAR FENCE	
– 5' TO LESS THAN 10'	25%
– ACTUAL OPENING	8% MAX.
2ND FLOOR (UO.S)	
NORTH, EAST–NORTH PART, WEST – 20'+	NO LIMIT
SOUTH & EAST–NEAR FENCE	
– 5' TO LESS THAN 10'	25%
– ACTUAL OPENING	8% MAX.
SEE G004 FOR ADJACENT EXISTING STORAGE BUILDING INFORMATION.	
–5' TO LESS THAN 10'	1 HOUR

5. BUILDING HEIGHT AND AREA

504 – BUILDING HEIGHT AND NUMBER OF STORIES	
TABLE 504.3 – ALLOWABLE BUILDING HEIGHT	75'
ACTUAL BUILDING HEIGHT	30' MAX.
TABLE 504.4 – ALLOWABLE NUMBER OF STORIES	6
ACTUAL NUMBER OF STORIES	2
506 – BUILDING AREA	
TABLE 506.2 ALLOWABLE AREA	
TYPE II–B, B OCCUPANCY, SM	69,000 SF
TYPE II–B, S–2 OCCUPANCY, SM	78,000 SF
NEW BUILDING AREA	13,409 SF

6. DESIGN OCCUPANT LOAD AND EXIT ACCESS

	TABLE 1004.5	LOAD FACTOR	AREA	OCCUPANTS
1ST FLOOR	ENCLOSED PARKING	200 GROSS	4,637 GSF	24
	STORAGE	300 GROSS	1,397 GSF	5
	BREAK ROOM	15 NET	370 NSF	25
	MACHINE SHOP	150 GROSS	360 GSF	3
	JANITOR CLOSET	300 GROSS	90 GSF	1
	ELEVATOR MACHINE RM	300 GROSS	73 GSF	1
	ELECTRICAL & IT	300 GROSS	253 GSF	1
	ELEVATOR LOBBY	150 GROSS	50 GSF	1
	JANITOR CLOSET	300 GROSS	90 GSF	1
	1ST FLOOR TOTAL			62
2ND FLOOR	OPEN OFFICE	150 GROSS	2,470 GSF	17
	OFFICE	150 GROSS	225 GSF	2
	CONFERENCE	15 NET	203 NSF	14
	ACCESSORY AREAS	300 GROSS	148 GSF	2
	2ND FLOOR TOTAL			35
BUILDING TOTAL				97

CHAPTER 10 – MEANS OF EGRESS
TABLE 1006.2.1&1006.3.3(2) – EXITS & COMMON PATH OF TRAVEL

LEVEL	REQUIRED EXITS	PROVIDED	COMMON PATH
FIRST	2	3	100' MAX.
SECOND	1	2	100' MAX.

TABLE 1017.2 – TRAVEL DISTANCE
GROUP S–2 400' W/ SPRINKLER SYSTEM
GROUP B 300' W/ SPRINKLER SYSTEM
ALL EXIT DISTANCES < 200'

1005.3.1 STAIRWAY WIDTH 0.3"/OCCUPANT (W/ SPRINKLER) 29.1"
1011.2 WIDTH AND CAPACITY

	REQUIRED	PROVIDED
1ST FLOOR	44" MIN.	49" MIN.
2ND FLOOR	36" MIN.	49" MIN.

1005.3.2 EXIT WIDTH 0.2"/OCCUPANT (W/ SPRINKLER) 19.4"
ACTUAL PROVIDED 24" MIN

7. INTERIOR FINISHES

PER TABLE 803.13 – INTERIOR WALL AND CEILING FINISHES (CLASS C)

8 ROOF ASSEMBLY

705.11 PARAPETS, EXCEPTION 6 – A PARAPET NEED NOT BE PROVIDED ON AN EXTERIOR WALL

1505.1 ROOF ASSEMBLIES
TYPE II–B – CLASS C ROOF ASSEMBLY

9. PLUMBING FIXTURES

SEE SHEET G003A FOR INFORMATION

10. AUTHORITY HAVING JURISDICTION (AHJ)

FIRE PROTECTION AND ALARM SYSTEMS – COUNTY OF SAN MATEO, THE CITY OF REDWOOD CITY FIRE DEPARTMENT

FIRE MARSHAL – FIRE CODE OFFICIAL OF THE BUREAU OF FIRE PREVENTION, REDWOOD CITY FIRE DEPARTMENT

LEGEND:

- LONGEST EGRESS DISTANCE FROM ROOM
- (0) OCCUPANT LOAD AT EXIT
- NEW EXIT SIGNS
- [1] OCCUPANCY LOAD WITHIN SUITE/ROOM
- COMMON PATH OF TRAVEL
- RATED WALLS – 1 HR (FIRE)
- FEC FIRE EXTINGUISHER CABINET
- FE FIRE EXTINGUISHER

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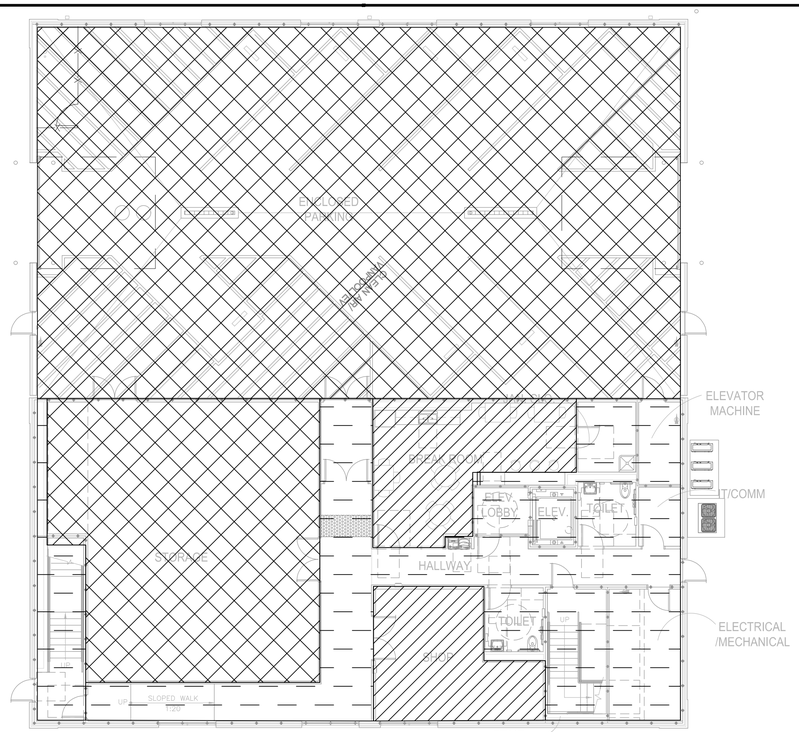
Revisions:
2 11–16–2020

BID SET

Client Project Number: P30J1
APN Number: 054–063–180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
CODE COMPLIANCE

Sheet Number:
G003

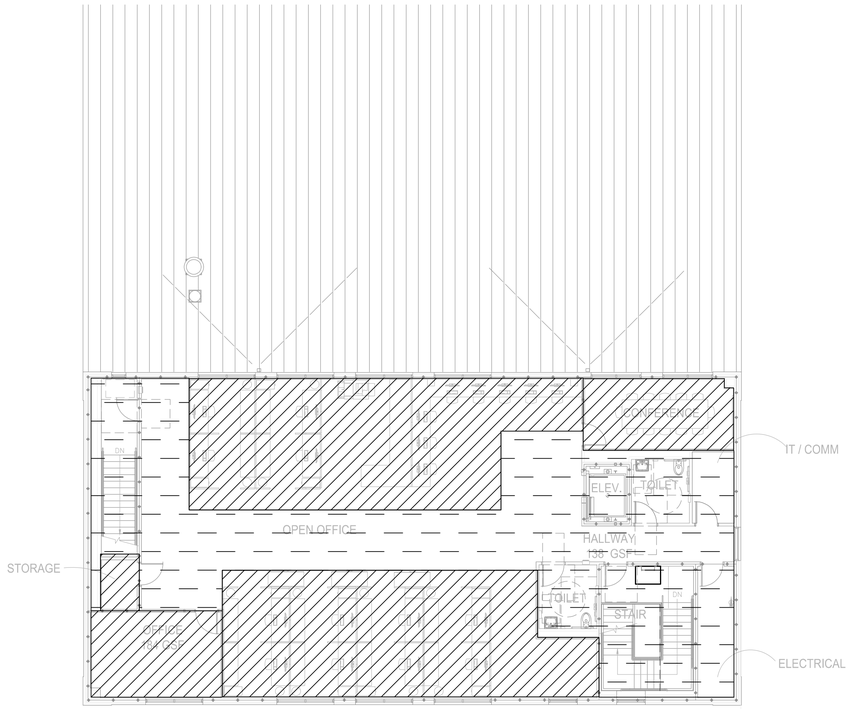


TRUE NORTH

1 FIRST FLOOR CODE PLAN - PLUMBING

1" = 10'-0"

0 5 10 20



TRUE NORTH

2 SECOND FLOOR CODE PLAN - PLUMBING

1" = 10'-0"

0 5 10 20

1. AREAS

GROUP B AREA
3,005 SF

AREA S-2 AREA
6,070 SF

ACCESSORY SPACES (INCLUDING HALLS, PASSAGE, CIRCULATION, TOILETS, UTILITY, ELECTRICAL, IT ROOMS)
4,334 SF

TOTAL BUILDING AREA: 13,409 SF

2. PLUMBING FIXTURES

CPC TABLE A:	AREA	LOAD FACTOR	TOTAL M OR F OCCUPANTS
GROUP B	3,005 SF	200	16 (15.025)
GROUP S-2	6,070 SF	5,000	2 (1.214)

CALIFORNIA PLUMBING CODE – TABLE 422.1

FIXTURE	(S-2)REQUIRED 2 OCCUPANTS		(B)REQUIRED 16 OCCUPANTS		PROVIDED	
	M	W	M	W	M	W
WATER CLOSETS	1	1	1*		2	2
URINALS	–	–	1**		–	–
LAVATORIES	1	1	1		2	2
DRINKING FOUNTAIN	1		1		2	
SERVICE SINKS	1		1		1	

* CPC 422.2, EXCEPTION (3): IN BUSINESS AND MERCANTILE OCCUPANCIES WITH A TOTAL OCCUPANT LOAD OF 50 OR LESS INCLUDING CUSTOMERS AND EMPLOYEES, ONE TOILET FACILITY, DESIGNED FOR USE BY NO MORE THAN ONE PERSON AT A TIME, SHALL BE PERMITTED FOR USE BY BOTH SEXES.

**CBC CHAPTER 2 DEFINITION: SINGLE-ACCOMMODATION SANITARY FACILITY. A ROOM THAT HAS NOT MORE THAN ONE OF EACH TYPE OF SANITARY FIXTURE, IS INTENDED FOR USE BY ONLY ONE PERSON AT A TIME, HAS NO PARTITION AROUND THE TOILET, AND HAS A DOOR THAT CAN BE LOCKED ON THE INSIDE BY THE ROOM OCCUPANT.

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APN Number: 054-063-180
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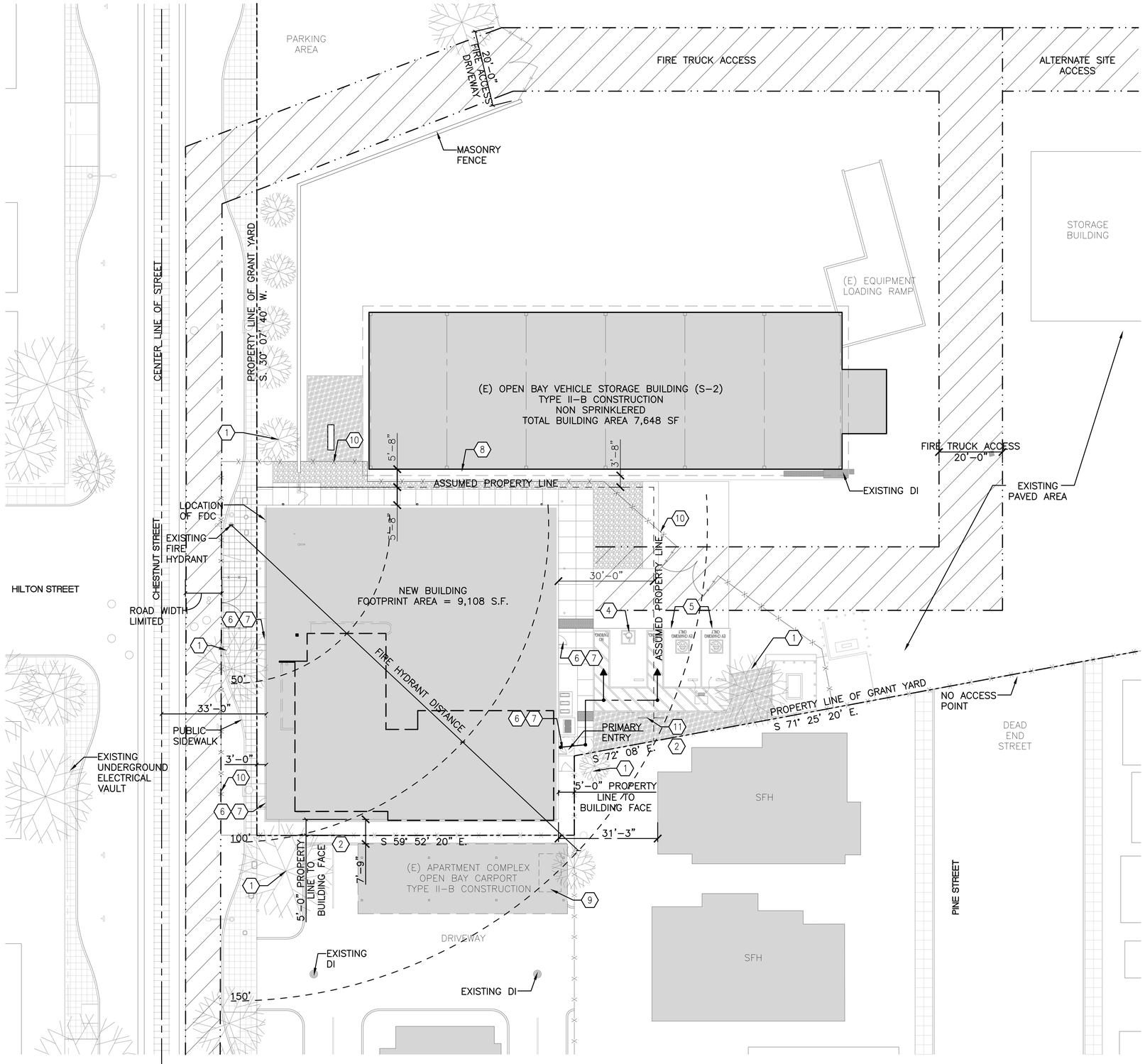
Sheet Title:
CODE COMPLIANCE - PLUMBING

Sheet Number:
G003A



PLAN NORTH

1 SITE RESTRICTIONS PLAN
1/16" = 1'-0"
0 8' 16' 32'

GENERAL NOTES:

1. CONTRACTOR SHALL ESTABLISH LOCATIONS AS DEFINED IN KEYED NOTES PRIOR TO DEMOLITION OF EXISTING BUILDING. PROVIDE COUNTY WITH BEARING AND NEW BUILDING PROJECT BASE POINT.
2. THE ENTIRE SITE AND ADJACENT DEVELOPED LOTS ARE ON COUNTY GRANT YARD PROPERTY.
3. MAINTAIN LESS THAN 2% (1:48) CROSS SLOPE AND LESS THAN 1:20 RUNNING SLOPE ALONG ALL ACCESSIBLE ROUTES.
4. SEE C101 & C502 FOR SITE SIGNAGE INFORMATION.

KEYED NOTES:

1. PROTECT (E) TREE
2. PROTECT ADJACENT PROPERTY, OWNER'S PROPERTY, STRUCTURES, UTILITIES AND EQUIPMENT
3. BEARING OF BUILDING: N30° 07' 40" E
4. VAN ACCESSIBLE PARKING STALL
5. ELECTRIC VEHICLE PARKING STALL (1 VAN INCLUDED)
6. MAINTAIN MAXIMUM 2% SLOPE IN ANY DIRECTION AT EXTERIOR DOOR LANDING
7. MAINTAIN SAME ELEVATION AT EXTERIOR LANDING AND INTERIOR LANDING AT ALL EXTERIOR DOOR
8. NEW 1 HOUR RATED FIRE ASSEMBLY, SEE DETAIL 7/A503
9. EXISTING APARTMENT COMPLEX WASTE CONTAINERS – DO NOT USE
10. TEMPORARY CONSTRUCTION FENCE
11. BIKE RACK, 7 BIKE CAPACITY

LEGEND:

- 20' MINIMUM FIRE TRUCK ACCESS
- ACTUAL PROPERTY LINE, PER PLAT MAPS
- ASSUMED PROPERTY LINE, FOR SETBACKS
- ACCESSIBLE ROUTE

1. ASSUMED PROPERTY LINE

CBC 705.3 REQUIRES SETTING ASSUMED PROPERTY LINES BETWEEN BUILDINGS WHEN MULTIPLE BUILDINGS ARE LOCATED ON A SINGLE LOT.

2. ADJACENT EXISTING STORAGE BLDG

CONSTRUCTION TYPE II-B, S-2 OCCUPANCY
TABLES 601 & 602 TYPE OF CONSTRUCTION

TYPE II-B	
PRIMARY STRUCTURAL FRAME	0 HOUR
BEARING WALLS – EXTERIOR	0 HOUR
BEARING WALLS – INTERIOR	0 HOUR
NON-BEARING WALLS AND PARTITIONS – INTERIOR	0 HOUR
FLOOR CONSTRUCTION AND SECONDARY MEMBERS	0 HOUR
ROOF CONSTRUCTION AND SECONDARY MEMBERS	0 HOUR
FIRE SEPARATION DISTANCE – EXTERIOR WALLS	
SOUTH – X >/_ 5' SEPARATION	1 HOUR

705.8– EXTERIOR OPENING PROTECTION REQUIREMENT

ALLOWABLE AREA OF OPENINGS	
SOUTH 5' TO PROPERTY LINE (UP,NS)	10%
ACTUAL AREA OF OPENINGS	0%

705.2– PROJECTIONS

MINIMUM DISTANCE FROM LINE USED TO DETERMINE FSD		
FIRE SEPARATION DISTANCE–FSD	REQUIRED	PROVIDED
5 OR GREATER	40"	44"

3. PARKING

NUMBER OF SPACES PROVIDED	12	SPACES (9 ENCLOSED)
ACCESSIBLE PARKING REQUIRED PER CBC TABLE 11B-208.2		
VAN ACCESSIBLE	1	SPACES, MINIMUM
PROVIDED VAN ACCESSIBLE	1	SPACES
CLEAN AIR VEHICLES SPACE REQUIRED PER CALGREEN 5.106.5.2		
REQUIRED CLEAN AIR	1	SPACE
PROVIDED CLEAN AIR	1	SPACE (ENCLOSED)
EV CHARGING SPACE REQUIRED PER CALGREEN 5.106.5.3		
REQUIRED CHARGING	1	SPACES, MINIMUM
ACCESSIBLE CBC 11B-228.3.2	1	VAN SPACE, MINIMUM
PROVIDED EV CHARGING	2	SPACES
	(1	VAN INCLUDED)

NUMEROUS ADDITIONAL STALLS AT GRANT YARD SITE

4. BICYCLE PARKING

BICYCLE PARKING PROVIDED 7 BIKE CAPACITY

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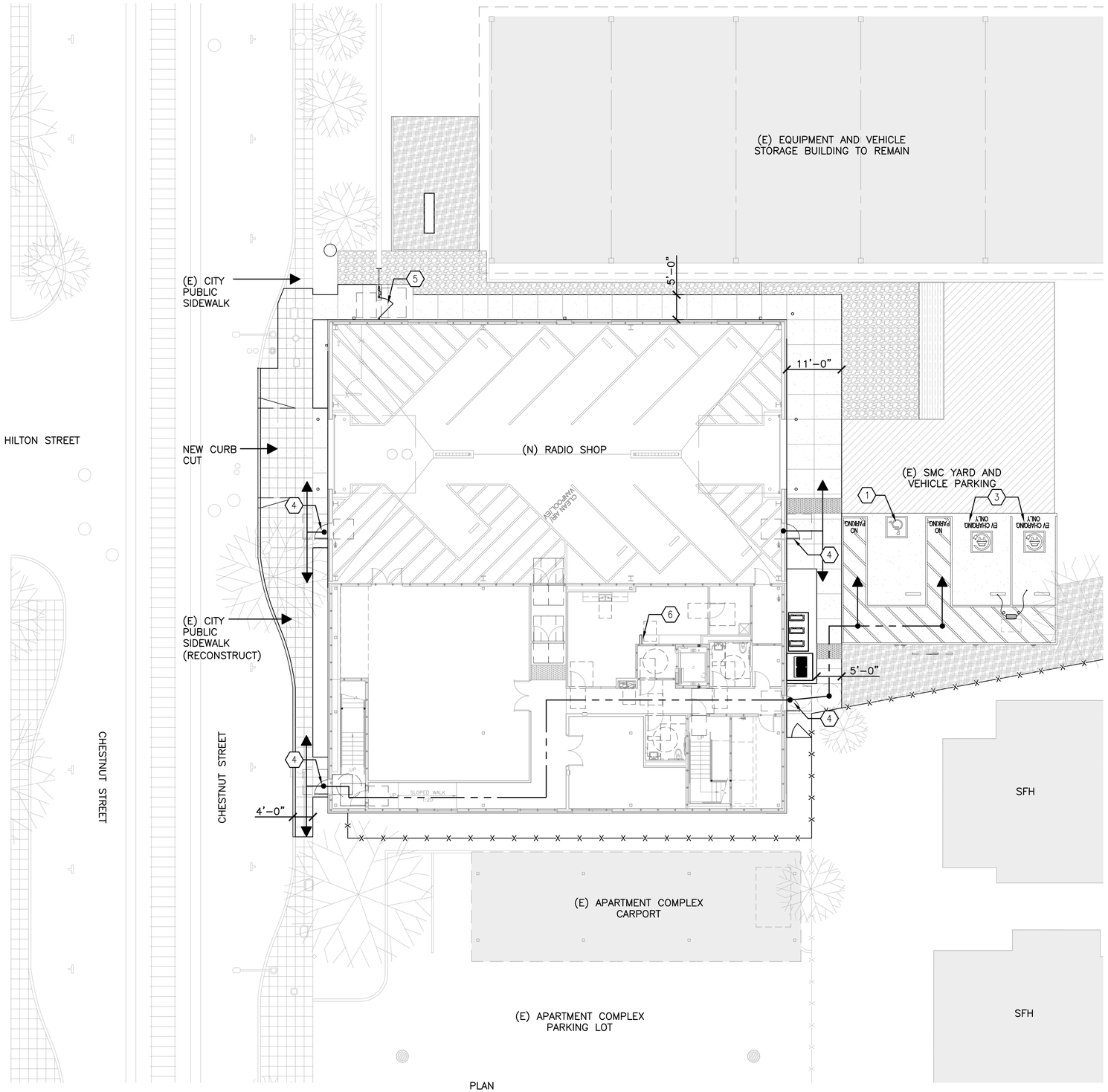
Sheet Title:
SITE RESTRICTIONS

Sheet Number:
G004



PLAN NORTH

1 **ACCESSIBILITY PLAN**
3/32" = 1'-0"

0 8' 16' 24'

GENERAL NOTES:

1. MAINTAIN LESS THAN 2% (1:48) CROSS SLOPE AND LESS THAN 1:20 RUNNING SLOPE ALONG ALL ACCESSIBLE ROUTE.
2. MAINTAIN SAME HEIGHT ELEVATION AT EXTERIOR STOOP AND LANDING AT ALL EXTERIOR DOORS.
3. SEE SHEET C101 & A604 FOR ADA SIGNAGE INFORMATION.
4. MAINTAIN 2% SLOPE AT ALL DIRECTIONS 5'X5' EACH SIDE GATE AT CHESTNUT STREET.
5. SEE SHEET A401, A402 AND A212 FOR ACCESSIBLE TOILET ROOMS
6. SEE SHEET A401, A405 FOR ACCESSIBLE ELEVATOR.

LEGEND:

- ACCESSIBLE ROUTE
- CONCRETE SIDEWALK
- CONCRETE PAVING
- DETECTABLE WARNING SURFACE

KEYED NOTES:

1. VAN ACCESSIBLE PARKING SPACE
2. ACCESSIBLE PARKING SPACE
3. ELECTRIC VEHICLE PARKING STALL
4. ACCESSIBLE ENTRY
5. ACCESSIBLE GATE, SEE 9/C502
6. SEE DETAIL 2/A211 FOR ACCESSIBLE COUNTER

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RENEWAL DATE 3/28/2021
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

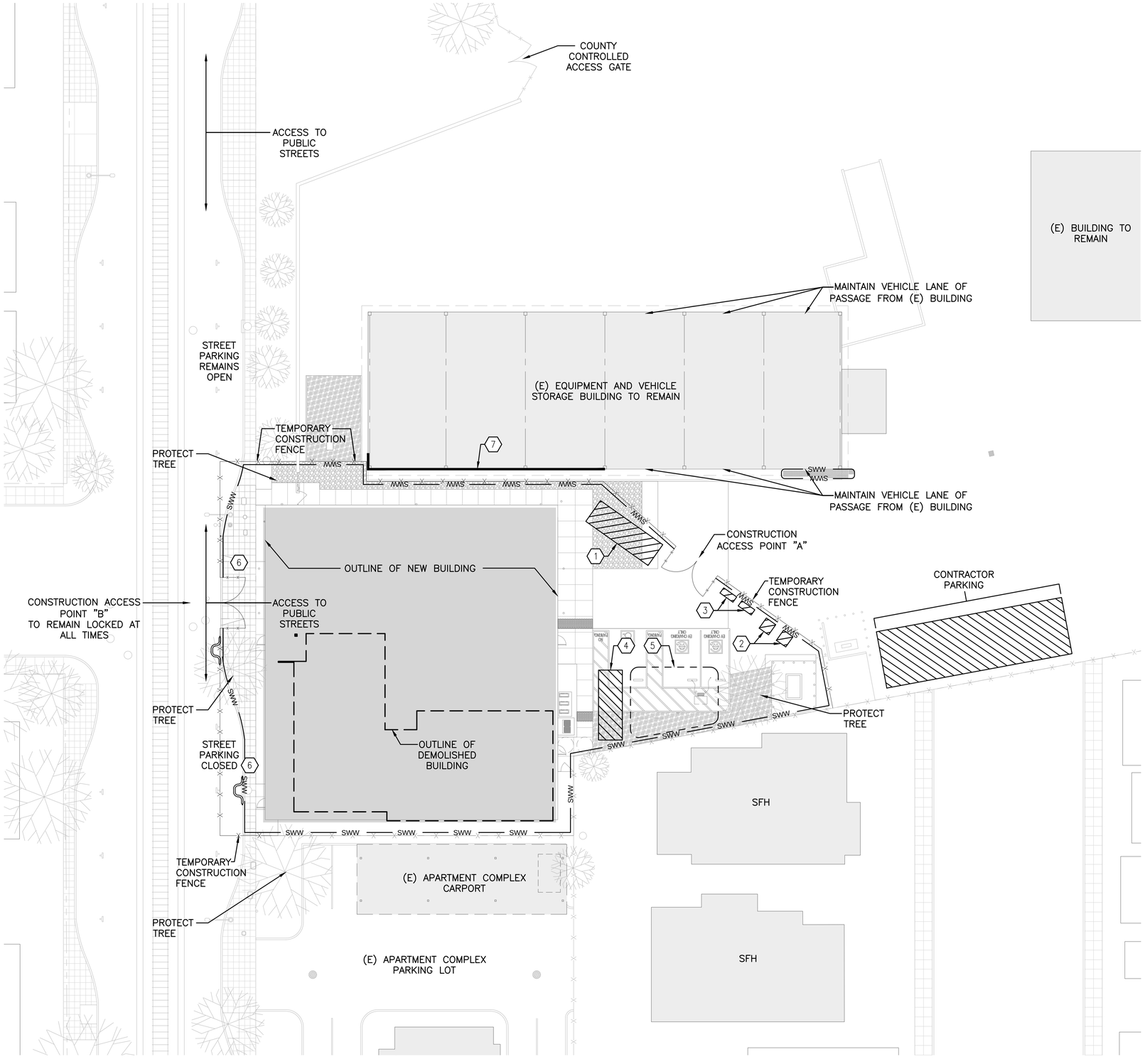
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
SITE ACCESSIBILITY PLAN

Sheet Number:
G005



PLAN NORTH

1 SITE OPERATIONS PLAN

1/16" = 1'-0"

0 8' 16' 32'

GENERAL NOTES:

1. THIS DRAWING SHOWS THE GENERAL SITE LAYOUT. CONTRACTOR MAY MODIFY LAYOUT TO SUIT CONSTRUCTION NEEDS. CONTRACTOR SHALL SUBMIT OPERATIONS AND LAYOUT PLAN AND UPDATE AS SITE CONDITIONS CHANGE DURING CONSTRUCTION.
2. EXISTING PAVEMENT SHALL REMAIN IN PLACE UNTIL NEW PAVEMENT WORK COMMENCES.
3. PROTECT EXISTING TREES SEE DETAIL Z-14/G501.
4. SEE SHEET G007 FOR ADDITIONAL EROSION CONTROL MEASURES. ADJUST MEASURES TO MAINTAIN SITE AS REQUIRED AS CONSTRUCTION OPERATIONS CHANGE.
5. DISPOSE OF DEBRIS DAILY.
6. PROVIDE CRANE PLAN 60 DAYS PRIOR TO OPERATIONS.
7. RELOCATE SITE FENCE AND SITE ACCESS AS NECESSARY TO MAINTAIN SAFE AND SECURE SITE, INCLUDING NOTIFICATION AND WARNING SIGNAGE.
8. ADJUST SEDIMENT, EROSION AND SITE CONTROLS FOR UTILITY EXCAVATION, TRENCHES AND SOIL STOCKPILES.
9. SEE SECTION 03 30 00 FOR CONCRETE PLACEMENT AND CLEANING.
10. ACCESS TO COUNTY PARKING AREA REQUIRES COUNTY APPROVAL.
11. CONTRACTOR SHALL COORDINATE WITH REDWOOD CITY TO OBTAIN PERMIT AND MEET CITY REQUIREMENTS, INCLUDING PEDESTRIAN CONTROLS AND SIGNAGE TO CLOSE ADJACENT PUBLIC SIDEWALK AT CHESTNUT STREET.
12. FENCE AT WEST SIDE OF BUILDING SHALL BE RELOCATED DURING CONSTRUCTION TO MAINTAIN SIDEWALK ACCESS PER CITY REQUIREMENTS. FENCE IS CURRENTLY SHOWN AS ONE POSSIBLE CONFIGURATION.
13. PROVIDE SITE SAFETY SIGNAGE AND PEDESTRIAN INFORMATION /WARNING SIGNAGE FOR CLOSURE OF PUBLIC SIDEWALK AND PARKING STALLS IN WORK ZONE AT CHESTNUT STREET.
14. COORDINATE UTILITY WORK TO STREET WITH CITY, OBTAIN PERMITS.

KEYED NOTES:

1. 8' X 24' CONSTRUCTION TRAILER
2. PORTABLE TOILETS / POTABLE WATER
3. CONTRACTOR TOOL BOXES
4. CONSTRUCTION WASTE CONTAINER
5. MATERIAL LAYDOWN AREA
6. MAINTAIN (E) SIDEWALK, REPLACEMENT UNTIL LAST CONSTRUCTION PHASE.
7. NEW PARTITION WALL

LEGEND:

SWW — STORM WATER WATTLE

TEMPORARY CONSTRUCTION FENCE

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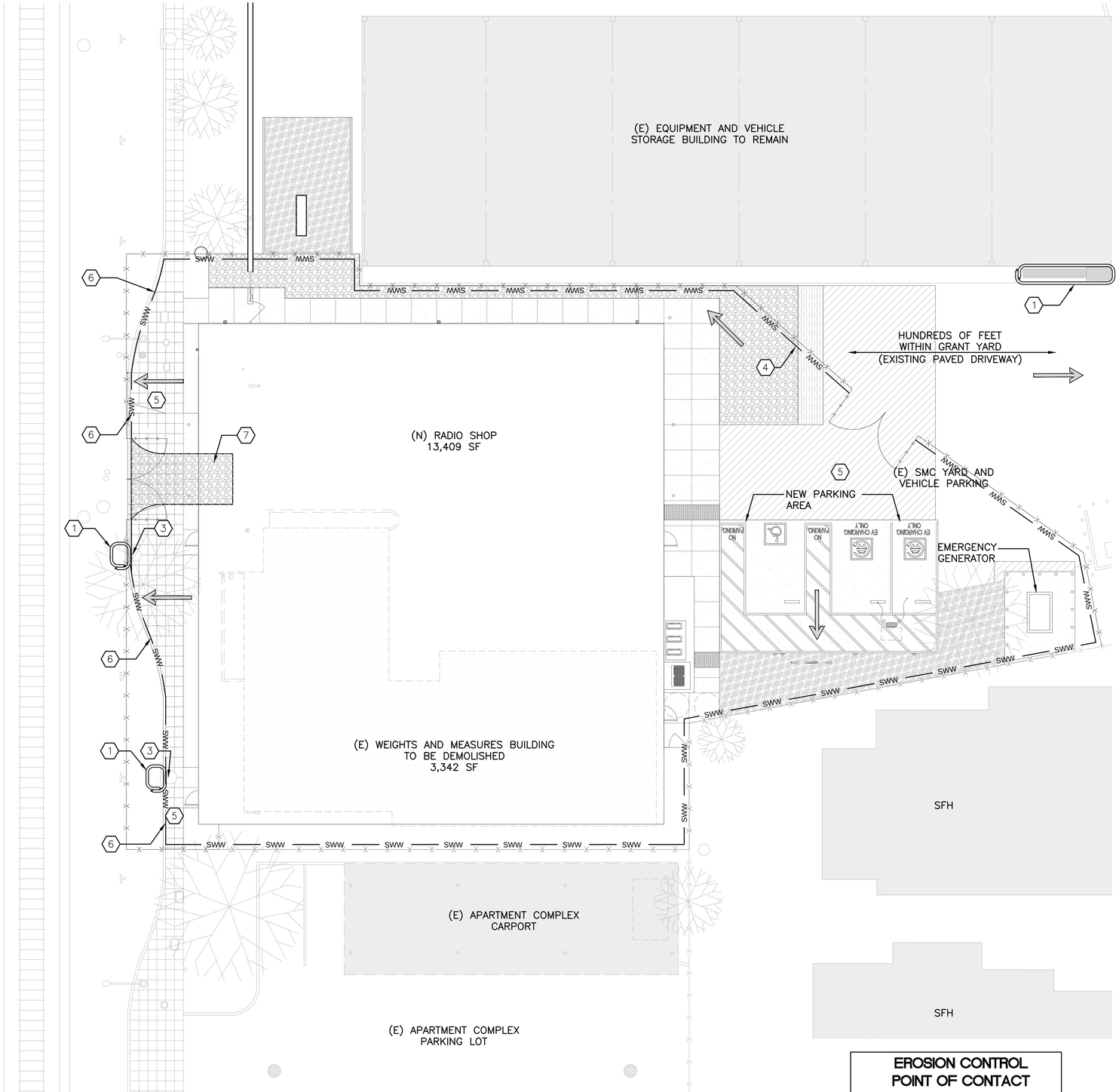
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
SITE OPERATIONS PLAN

Sheet Number:
G006



PLAN NORTH

1 SITE EROSION CONTROL BASE PLAN
3/32" = 1'-0"
0 8' 16' 24'

EROSION CONTROL POINT OF CONTACT

NAME:

COMPANY:

PHONE NO.:

GENERAL NOTES:

1. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AS NECESSARY THROUGHOUT THE DURATION OF THE PERMIT TO BE EFFECTIVE.
2. CONTRACTOR REVISED PLAN TO MEET CONSTRUCTION OPERATIONS AND CONSTRUCTION ACTIVITIES SHALL BE SUBMITTED FOR REVIEW AND APPROVAL.
3. CONTROL AND PREVENT THE DISCHARGE OF ALL POTENTIAL POLLUTION, INCLUDING PAVEMENT CUTTING WASTES, PART, CONCRETE, PETROLEUM PRODUCTS, CHEMICALS, WASH WATERS OR SEDIMENTS AND NON-STORMWATER DISCHARGES TO STORM DRAINS AND WATERCOURSES.
4. NO SITE DEWATERING IS ANTICIPATED. NO SOIL STOCKPILE ON SITE. NO CONSTRUCTION PAVEMENT STOCKPILE ON SITE.
5. CONTRACTOR SHALL SUBMIT A CONSTRUCTION LAYOUT PLAN 10 DAYS AFTER NOTICE TO PROCEED, WHICH INCLUDES THE FOLLOWING:
   PORTABLE TOILET
   STOCKPILE
   TEMP WASTE PILE
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN CONTROL OF THE ENTIRE CONSTRUCTION OPERATION AND TO KEEP THE ENTIRE SITE IN COMPLIANCE WITH STATE AND LOCAL SOIL EROSION CONTROL LAWS AND MEASURES.
7. THIS PLAN IS INTENDED TO ONLY BE USED FOR EROSION AND SEDIMENT CONTROL FOR YEAR-ROUND SITE CONSTRUCTION, INCLUDING DEMOLITION, EARTHWORK OPERATION AND SITE IMPROVEMENTS. EROSION MEASURES ARE TO BE IN PLACE PRIOR TO START OF CONSTRUCTION. ALL SLOPES SHALL BE PROTECTED IMMEDIATELY FOLLOWING EARTHWORK GRADING. PROTECT IRRIGATION DISCHARGE.
8. THE PLAN COVERS THE CONSTRUCTION OPERATION FOR THE OVERALL PROJECT. ADJUSTMENTS SHALL BE MADE TO THIS PLAN AS NECESSARY TO WORK WITH THE CONSTRUCTION PHASING OF THE PROJECT. SUBMIT PLAN TO THE COUNTY FOR APPROVAL OF EROSION AND SEDIMENT CONTROL ADJUSTMENT.
9. THIS EROSION AND SEDIMENT CONTROL PLAN MAY NOT COVER ALL THE SITUATIONS THAT MAY ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. VARIATIONS AND ADDITIONS MAY BE MADE BY THE CONTRACTOR TO THIS PLAN WITH APPROVAL BY THE COUNTY.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING & MAINTAINING EROSION AND SEDIMENT CONTROL MEASURES PRIOR, DURING AND AFTER STORM EVENTS. INSPECT CONTROLS EACH DAY.
11. ALL EROSION CONTROL WORKS SHALL BE IN ACCORDANCE TO THIS PLAN AND THE CALIFORNIA STORMWATER QUALITY ASSOCIATION 2014 STORMWATER BEST MANAGEMENT PRACTICE HANDBOOK PORTAL: CONSTRUCTION, HEREBY REFERRED TO AS "THE HANDBOOK" AND PER SPECIFICATION SECTION 31 25 00 EROSION AND SEDIMENT CONTROLS.
    BASIC EROSION CONTROL MEASURE SHALL INCLUDE, BUT NOT BE LIMITED TO:
    WATERING FOR DUST CONTROL
    INSTALLATION OF PERIMETER STORM WATTLE
    SEDIMENT PROTECTION AT STORM DRAIN INLETS
    GRAVEL BAG CHECK DAMS
12. CONTRACTOR SHALL CARRY OUT CONSTRUCTION OPERATIONS IN SUCH A MANNER THAT EROSION AND WATER POLLUTION WILL BE MINIMIZED. EXERCISE REASONABLE CARE WHEN HAULING ANY CONSTRUCTION DEBRIS OVER EXISTING ROADWAYS. SHOULD ANY BLOW, SPILL OR TRACK OVER AND UPON SAID PUBLIC OR ADJACENT PRIVATE PROPERTY, IMMEDIATELY REMEDY THE SITUATION BY USING PROPER CLEANING PROCEDURES. CONTRACTOR SHALL KEEP ALL PAVED AREAS CLEAR OF EARTH, MATERIAL AND DEBRIS. PROVIDE STREET SWEEPING AS NECESSARY, PER BMP FACT SHEET SE-7 OF "THE HANDBOOK".
    MAINTAIN AN INSPECTION SCHEDULE FOR THE IMPLEMENTED SEDIMENT AND EROSION BMP MEASURES AT LEAST ONCE A WEEK AND/OR 24 HOURS BEFORE AND AFTER A FORECASTED RAIN EVENT.
13. CONTRACTOR SHALL PREPARE AND MAINTAIN THE FACES OF CUT AND FILL SLOPES TO CONTROL EROSION.
14. CONTRACTOR SHALL PROVIDE DUST CONTROL AS REQUIRED BY THE APPROPRIATE FEDERAL, STATE AND LOCAL AGENCY REQUIREMENTS, AND IN ACCORDANCE WITH BMP FACT SHEET OF "THE HANDBOOK".
15. CONTRACTOR SHALL FOLLOW "THE HANDBOOK" FACT SHEET BMPs FOR ALL APPLICABLE ON-SITE STORMWATER MANAGEMENT CONSTRUCTION ACTIVITIES, ON-SITE WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL CONSTRUCTION ACTIVITIES.
16. ALL DAMAGE TO BMPs CAUSED BY SOIL EROSION OR CONSTRUCTION SHALL BE REPAIRED AT THE END OF EACH WORK DAY.
17. CONTRACTOR SHALL COORDINATE EROSION CONTROL PHASING OF CONSTRUCTION WITH THE ROADWAY IMPROVEMENTS. PROVIDE GUIDANCE FOR EROSION CONTROL PRIOR TO CONSTRUCTION. PROVIDE A FINAL SITE CONDITION, WHICH MAY VARY BASED ON CONSTRUCTION SEQUENCING, SEE NOTE 3 ABOVE.
18. SEE DRAWING G002 FOR ADDITIONAL REQUIREMENTS.
19. REMOVE EROSION CONTROL AT END OF PROJECT.
20. PROVIDE PROJECT SCHEDULE FOR CLEARING, GRUBBING, UTILITY EXCAVATIONS, SUBGRADE EXCAVATIONS AND PAVEMENT SEQUENCE.
21. PROVIDE ADDITIONAL PROVISIONS WHEN WORKING OUTSIDE CONSTRUCTION FENCE.

KEYED NOTES:

1. DRAIN INLET PROTECTION TO ENCOMPASS DRAIN INLET, SEE DETAIL SE-10/G501 AND 2/G501.
2. STORM WATER WATTLE RUNNING ALONG TEMPORARY SECURITY FENCE LINE, TYP.
3. PAINT AT NEW PAVEMENT, "NO DUMPING! FLOWS TO BAY". 12 INCH HIGH, WHITE
4. ADD STORM WATER STRAW WATTLE AT REPAVEMENT AREA DURING THAT CONSTRUCTION PHASE.
5. RETAIN EXISTING PAVED PARKING AREAS, SIDEWALKS AND CURBS DURING UTILITY DEMOLITION AND CONSTRUCTION OF BUILDING. PROJECT SHALL BE PHASED TO COMPLETE PARKING LOT REPAVING AFTER NEW BUILDING CONSTRUCTION TOP REDUCE SITE EROSION.
6. GRAVEL BAG BERM, SEE 1/G501
7. STABILIZED CONSTRUCTION ENTRANCE/EXIT, SEE TC-1/G501

LEGEND:

SWW SWW — STORM WATER WATTLE

TEMPORARY SECURITY FENCE

DIRECTION OF RUNOFF WATER FLOW

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2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
EROSION CONTROL BASE PLAN

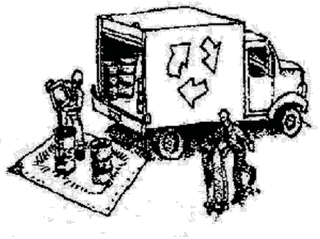
Sheet Number:
G007

SAN MATEO COUNTYWIDE
Water Pollution Prevention Program
Clean Water. Healthy Community.

Construction Best Management Practices (BMPs)

Construction projects are required to implement the stormwater best management practices (BMP) on this page, as they apply to your project, all year long.

Materials & Waste Management



Non-Hazardous Materials

- ❑ Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 days.
- ❑ Use (but don't overuse) reclaimed water for dust control.

Hazardous Materials

- ❑ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state and federal regulations.
- ❑ Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- ❑ Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- ❑ Arrange for appropriate disposal of all hazardous wastes.

Waste Management

- ❑ Cover waste disposal containers securely with tarps at the end of every work day and during wet weather.
- ❑ Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Never hose down a dumpster on the construction site.
- ❑ Clean or replace portable toilets, and inspect them frequently for leaks and spills.
- ❑ Dispose of all wastes and debris properly. Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.)
- ❑ Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.

Construction Entrances and Perimeter

- ❑ Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- ❑ Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.

Equipment Management & Spill Control

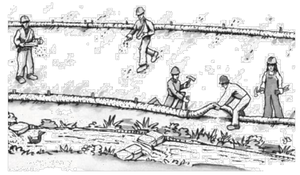
Maintenance and Parking

- ❑ Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage.
- ❑ Perform major maintenance, repair jobs, and vehicle and equipment washing off site.
- ❑ If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.
- ❑ If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.
- ❑ Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment.

Spill Prevention and Control

- ❑ Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times.
- ❑ Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are made.
- ❑ Clean up spills or leaks immediately and dispose of cleanup materials properly.
- ❑ Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).
- ❑ Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury them.
- ❑ Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- ❑ Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

Earthmoving

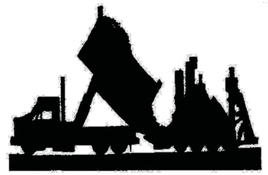


- ❑ Schedule grading and excavation work during dry weather.
- ❑ Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- ❑ Remove existing vegetation only when absolutely necessary, and seed or plant vegetation for erosion control on slopes or where construction is not immediately planned.
- ❑ Prevent sediment from migrating offsite and protect storm drain inlets, gutters, ditches, and drainage courses by installing and maintaining appropriate BMPs, such as fiber rolls, silt fences, sediment basins, gravel bags, berms, etc.
- ❑ Keep excavated soil on site and transfer it to dump trucks on site, not in the streets.

Contaminated Soils

- ❑ If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
  - Unusual soil conditions, discoloration, or odor.
  - Abandoned underground tanks.
  - Abandoned wells
  - Buried barrels, debris, or trash.

Paving/Asphalt Work



- ❑ Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.
- ❑ Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc.
- ❑ Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.
- ❑ Do not use water to wash down fresh asphalt concrete pavement.

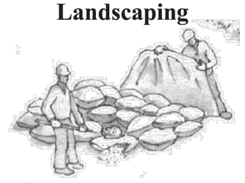
Sawcutting & Asphalt/Concrete Removal

- ❑ Protect nearby storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry out of the storm drain system.
- ❑ Shovel, abosorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- ❑ If sawcut slurry enters a catch basin, clean it up immediately.

Concrete, Grout & Mortar Application

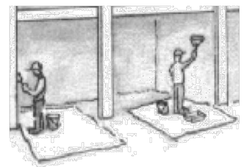
- ❑ Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff, and wind.
- ❑ Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and in a manner that will prevent leaching into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as garbage.
- ❑ When washing exposed aggregate, prevent washwater from entering storm drains. Block any inlets and vacuum gutters, hose washwater onto dirt areas, or drain onto a bermed surface to be pumped and disposed of properly.

Landscaping



- ❑ Protect stockpiled landscaping materials from wind and rain by storing them under tarps all year-round.
- ❑ Stack bagged material on pallets and under cover.
- ❑ Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

Painting & Paint Removal



Painting Cleanup and Removal

- ❑ Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.
- ❑ For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer. Never pour paint down a storm drain.
- ❑ For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.
- ❑ Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.
- ❑ Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury, or tributyltin must be disposed of as hazardous waste. Lead based paint removal requires a state-certified contractor.

Dewatering

- ❑ Discharges of groundwater or captured runoff from dewatering operations must be properly managed and disposed. When possible send dewatering discharge to landscaped area or sanitary sewer. If discharging to the sanitary sewer call your local wastewater treatment plant.
- ❑ Divert run-on water from offsite away from all disturbed areas.
- ❑ When dewatering, notify and obtain approval from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ❑ In areas of known or suspected contamination, call your local agency to determine whether the ground water must be tested. Pumped groundwater may need to be collected and hauled off-site for treatment and proper disposal.

Storm drain polluters may be liable for fines of up to $10,000 per day!

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BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
BEST MANAGEMENT PRACTICES

Sheet Number:
G008

A5.602
***CALGreen* VERIFICATION GUIDELINES**
MANDATORY MEASURES CHECKLIST

Application: This checklist shall be used for nonresidential projects that meet one of the following: new construction, building additions of 1,000 square feet or greater, or building alterations with a permit valuation of $200,000 or more pursuant to Section 301.3 AND do not trigger a Tier 1 or Tier 2 requirement:

Y = Yes (section has been selected and/or included)
N/A = Not Applicable (code section does not apply to the project—mainly used for additions and alterations)
O = Other (provide explanation)
[N] = New construction pursuant to Section 301.3
[A] = Additions and/or Alterations pursuant to Section 301.3

CHAPTER 5 DIVISIONS		SECTION TITLE	CODE SECTION	Y	N/A	O	PLAN SHEET, SPEC, OR ATTACH REFERENCE
DIVISION 5.1 Planning and Design	Mandatory	Storm water pollution prevention for projects that disturb less than 1 acre of land	5.106.1 through 5.106.2	Y			G007, G008
	Mandatory	Short-term bicycle parking (with exception)	5.106.4.1.1	Y			G004
	Mandatory	Long-term bicycle parking	5.106.4.1.2 through 5.106.4.1.5	Y			G004
	Mandatory	Designated parking for clean air vehicles	5.106.5.2	Y			1/C101 &A101
	Mandatory	Parking stall marking	5.106.5.2.1	Y			1/C101 &A101
	Mandatory	Single charging space requirements	5.106.5.3.1	Y			1/C101
	Mandatory	Multiple charging space requirements [N]	5.106.5.3.2		N/A		
	Mandatory	EV charging space calculation [N] (with exceptions)	5.106.5.3.3	Y			G004
	Mandatory	[N] Identification	5.106.5.3.4	Y			C141, E0.0
	Mandatory	[N] Future charging spaces	5.106.5.3.5	Y			1/C101 &A101
	Mandatory	Light pollution reduction [N] (with exceptions and notes)	5.106.8	Y			E0.0
	Mandatory	Grading and paving (exception for additions and alterations not altering the drainage path)	5.106.10	Y			C121
DIVISION 5.2 Energy Efficiency	Mandatory	Meet the minimum energy efficiency standard	5.201.1	Y			DRAWINGS &SPECS
DIVISION 5.3 Water Efficiency and Conservation (continued)	Mandatory	Separate meters (new buildings or additions > 50,000 sf that consume more than 100 gal/day)	5.303.1.1		N/A		
	Mandatory	Separate meters (for tenants in new buildings or additions that consume more than 1,000 gal/day)	5.303.1.2		N/A		
	Mandatory	Water closets shall not exceed1.28 gallons per flush (gpf)	5.303.3.1	Y			P0.1 - FIXTURE SCHEDULE

(continued)

CHAPTER 5 DIVISIONS		SECTION TITLE	CODE SECTION	Y	N/A	O	PLAN SHEET, SPEC, OR ATTACH REFERENCE
(continued) **DIVISION 5.3 Water Efficiency and Conservation**	Mardatory	Wall-mounted urinals shall not exceed 0.125 gpf	5.303.3.2.1		N/A		
	Mardatory	Floor-mounted urinals shall not exceed 0.5 gpf	5.303.3.2.2		N/A		
	Mardatory	Single showerhead shall have maximum flow rate of 1.8 gpm (gallons per minute) at 80 psi	5.303.3.3.1		N/A		
	Mardatory	Multiple showerheads serving one shower shall have a combined flow rate of 1.8 gpm at 80 psi	5.303.3.3.2		N/A		
	Mardatory	Nonresidential lavatory faucets	5.303.3.4.1		N/A		
	Mardatory	Kitchen faucets	5.303.3.4.2		N/A		
	Mardatory	Wash fountains	5.303.3.4.3		N/A		
	Mardatory	Metering faucets	5.303.3.4.4		N/A		
	Mardatory	Metering faucets for wash fountains	5.303.3.4.5		N/A		
	Mardatory	Food waste disposers	5.303.4.1		N/A		
	Mardatory	Areas of additions or alterations	5.303.5		N/A		
	Mardatory	Standards for plumbing fixtures and fittings	5.303.6	Y			P0.1 - FIXTURE SCHEDULE
	Mardatory	Outdoor potable water use in landscape areas (with notes)	5.304.1	Y			L111
	Mardatory	Outdoor water supply systems (with Exceptions 1-4)	5.305.1.1		N/A		
	Mardatory	Technical requirements for outdoor recycled water supply systems	5.305.1.2		N/A		
DIVISION 5.4 Material Conservation and Resource Efficiency (continued)	Mardatory	Weather protection	5.407.1	Y			A301, A302, A310 &A311
	Mardatory	Moisture control: sprinklers	5.407.2.1	Y			L111
	Mardatory	Moisture control: exterior door protection	5.407.2.2.1	Y			A101
	Mardatory	Moisture control: flashing	5.407.2.2.2	Y			A311
	Mardatory	Construction waste management—comply with either: Sections 5.408.1.1, 5.408.1.2, 5.408.1.3 or more stringent local ordinance	5.408.1.1, 5.408.1.2, 5.408.1.3	Y			SPEC 01 74 19
	Mardatory	Construction waste management: documentation	5.408.1.4	Y			SPEC 01 74 19
	Mardatory	Universal waste [A]	5.408.2		N/A		
	Mardatory	Excavated soil and land clearing debris (100% reuse or recycle)	5.408.3	Y			SPEC 01 74 19
	Mardatory	Recycling by occupants (with exception)	5.410.1		N/A		
	Mardatory	Recycling by occupants: additions (with exception)	5.410.1.1		N/A		
	Mardatory	Recycling by occupants: sample ordinance	5.410.1.2		N/A		
	Mardatory	Commissioning new buildings (≥ 10,000 sf) [N]	5.410.2	Y			SPEC 23 08 00 23 05 93, 26 08 00
	Mardatory	Owner's or owner representative's Project Requirements (OPR) [N]	5.410.2.1	Y			SPEC 01 00 00
	Mardatory	Basis of Design (BOD) [N]	5.410.2.2	Y			SPEC 01 00 00

(continued)

CHAPTER 5 DIVISIONS		SECTION TITLE	CODE SECTION	Y	N/A	O	PLAN SHEET, SPEC, OR ATTACH REFERENCE
(continued) **DIVISION 5.4 Material Conservation and Resource Efficiency**	Mandatory	Commissioning plan [N]	5.410.2.3	Y			SPEC 23 08 00 & 26 08 00
	Mandatory	Functional performance testing [N]	5.410.2.4	Y			SPEC 23 05 93
	Mandatory	Documentation and training [N]	5.410.2.5	Y			SPEC 23 05 93
	Mandatory	Systems manual [N]	5.410.2.5.1	Y			SPEC 23 05 93
	Mandatory	Systems operation training [N]	5.410.2.5.2	Y			SPEC 23 05 93
	Mandatory	Commissioning report [N]	5.410.2.6	Y			SPEC 23 05 93
	Mandatory	Testing and adjusting for new buildings < 10,000 sf or new systems that serve additions or alterations [A]	5.410.4		N/A		
	Mandatory	System testing plan for renewable energy, landscape irrigation and water reuse [A]	5.410.4.2		N/A		
	Mandatory	Procedures for testing and adjusting	5.410.4.3		N/A		
	Mandatory	Procedures for HVAC balancing	5.410.4.3.1		N/A		
	Mandatory	Reporting for testing and adjusting	5.410.4.4		N/A		
	Mandatory	Operation and maintenance (O&M) manual	5.410.4.5		N/A		
	Mandatory	Inspection and reports	5.410.4.5.1		N/A		
DIVISION 5.5 Environmental Quality (continued)	Mandatory	Fireplaces	5.503.1		N/A		
	Mandatory	Woodstoves	5.503.1.1		N/A		
	Mandatory	Temporary ventilation	5.504.1		N/A		
	Mandatory	Covering of ducts openings and protection of mechanical equipment during construction	5.504.3	Y			SPEC 23 07 13
	Mandatory	Adhesives, sealants, and caulks	5.504.4.1	Y			SPEC 09 90 00
	Mandatory	Paints and coatings	5.504.4.3	Y			SPEC 09 90 00
	Mandatory	Aerosol paints and coatings	5.504.4.3.1	Y			SPEC 09 90 00
	Mandatory	Aerosol paints and coatings: verification	5.504.4.3.2	Y			
	Mandatory	Carpet systems	5.504.4.4	Y			SPEC 09 68 13
	Mandatory	Carpet cushion	5.504.4.4.1	Y			SPEC 09 68 13
	Mandatory	Carpet adhesives per Table 5.504.4.1	5.504.4.4.2	Y			SPEC 09 68 13
	Mandatory	Composite wood products	5.504.4.5	Y			SPEC 06 40 23
	Mandatory	Composite wood products: documentation	5.504.4.5.3	Y			SPEC 06 40 23
	Mandatory	Resilient flooring systems	5.504.4.6	Y			SPEC 09 65 00
	Mandatory	Resilient flooring: verification of compliance	5.504.4.6.1	Y			SPEC 09 65 00
	Mandatory	Filters (with exceptions)	5.504.5.3	Y			
	Mandatory	Filters: labeling	5.504.5.3.1	Y			
	Mandatory	Environmental tobacco smoke (ETS) control	5.504.7	Y			BY OWNER
	Mandatory	Indoor moisture control	5.505.1	Y			

(continued)

CHAPTER 5 DIVISIONS		SECTION TITLE	CODE SECTION	Y	N/A	O	PLAN SHEET, SPEC, OR ATTACH REFERENCE
(continued) **DIVISION 5.5 Environmental Quality**	Mandatory	Outside air delivery	5.506.1	Y			M0.1
	Mandatory	Carbon dioxide (CO_2) monitoring	5.506.2	Y			M0.2 & M0.4
	Mandatory	Acoustical control (with exception)	5.507.4	Y			A301, A302, A310 & A311
	Mandatory	Exterior noise transmission, prescriptive method (with exceptions)	5.507.4.1	Y			A301, A302, A310 & A311
	Mandatory	Noise exposure where noise contours are not readily available	5.507.4.1.1		N/A		
	Mandatory	Performance method	5.507.4.2		N/A		
	Mandatory	Site features	5.507.4.2.1		N/A		
	Mandatory	Documentation of compliance	5.507.4.2.2		N/A		
	Mandatory	Interior sound transmission (with note)	5.507.4.3	Y			A141
	Mandatory	Ozone depletion and greenhouse gas reductions	5.508.1	Y			M0.1
	Mandatory	Chlorofluorocarbons (CFCs)	5.508.1.1	Y			M0.1
	Mandatory	Halons	5.508.1.2	Y			F101 & F102
	Mandatory	Supermarket refrigerant leak reduction for retail food stores 8,000 square feet or more Sections 5.508.2 through 5.508.2.6.3	5.508.2 through 5.508.2.6.3		N/A		
		END OF MANDATORY PROVISIONS					

Documentation Author's / Responsible Designer's Declaration Statement

☐ **Mandatory:** I attest that this mandatory provisions checklist is accurate and complete.

Signature:	
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RENEWAL DATE 3/26/2021
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
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Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
CALGREEN CHECKLIST

Sheet Number:
G101

STATE OF CALIFORNIA
Envelope Component Approach
NRCC-ENV-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ENV-E
Project Name: Grant Yard Radio Shop - Office	Report Page: Page 1 of 8
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared: 2020-05-12

This document is used to demonstrate compliance with mandatory requirements in §110.8(g) and §120.7(b) for newly constructed buildings, and §141.0(b)1 for alterations, related to roof, wall and floor assemblies. It is also used to demonstrate compliance with prescriptive requirements in §140.3 for newly constructed buildings, and §141.0 for additions and alterations, related to roof, wall, floor, door, fenestration and daylighting requirements.

A. GENERAL INFORMATION

01	Project Location (city)	Redwood City	05	# of Stories (Habitable Above Grade)	2
02	Zipcode	94063	06	Total Conditioned Floor Area (ft²)	8,602
03	Climate Zone	3	07	Total Unconditioned Floor Area (ft²)	0
04	Occupancy Types Within Project (select all that apply): If one occupancy constitutes ≥ 80% of the conditioned floor area, the entire building envelope may be designed to comply with the provisions of that occupancy per §100.0(f).		08	☐ Project includes unconditioned enclosed space(s) > 5,000ft² under a roof with a ceiling height of at least 15ft.[1]	

☑ All Nonresidential, including Relocatable Public School Building certified for use in one climate zone Occupancy: A / B / E / F / H / M / S / U	☐ Relocatable Public School Building for use in all climate zones Occupancy: E	☐ High-Rise Residential Occupancy: R-2 / R-3	☐ Hotel/Motel Guest Rooms Occupancy: R-1

[1] *FOOTNOTE: Enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft in climate zones 2 through 15 are required to meet the minimum daylighting requirements defined in §140.3(c). Compliance with §140.3(c) is documented in Table L. This is the only prescriptive requirement which applies to unconditioned spaces.*

B. PROJECT SCOPE

Table Instructions: Include any building envelopes that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in §140.3, and §141.0(a)1 and §141.0(b)1 and 2 for additions and alterations.

My project consists of (check all that apply)	Component Types		
01	02		
☑ New Construction or Newly Conditioned Space	☑ Roof	☑ Walls	☑ Exterior Doors
☐ One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft		☐ Floors	☑ Fenestration/Glazed Door[1]
☐ Addition of conditioned space	☐ Roof	☐ Walls	☐ Exterior Doors
☐ One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft		☐ Floors	☐ Fenestration/Glazed Door[1]
☐ Alteration of conditioned space	☐ Roof Assembly	☐ Walls	Exterior Doors NA for Alts.
☐ One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft and lighting system installed for the first time	☐ Roofing Material	☐ Floors	☐ Fenestration

[1] *FOOTNOTE: Doors that are more than one-half glass in area are considered Glazed Doors and should be documented on Table K with fenestration.*

STATE OF CALIFORNIA
Envelope Component Approach
NRCC-ENV-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ENV-E
Project Name: Grant Yard Radio Shop - Office	Report Page: Page 2 of 8
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared: 2020-05-12

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Opaque Envelope Components					Fenestration	Daylighting Spaces > 5,000 ft²	Compliance Results
Roof Assembly	Roofing Materials	Walls	Floors	Doors			
01	02	03	04	05	06	07	08
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	
Yes	Yes	Yes		Yes	Yes		COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. ROOF ASSEMBLY SCHEDULE

Table Instructions: Complete this table to demonstrate compliance with prescriptive roof assembly requirements in §140.3(a)1B for new construction or additions, or §141.0(b)2Biii for alterations.

01	Indicate roof types included in the project:	☐ Framed	☐ SIPs	☑ Span Deck & Concrete	☐ Metal Panels	☐ Metal Building

Span Deck & Concrete Roof Assemblies

01	☐	Include Span Deck & Concrete Roof assemblies in Area-Weighted Average U-factor Calculation[1]			
02	03	04	05		06
Tag / Plan Detail ID	Name / Description	Status	Exception to Roof Insulation Requirements in §141.0(b)2Biii (Alts. Only)		Occupancy Type
A103	Roof Plan	New			Nonresidential/ Relocatable 1 CZ

Table Continued

STATE OF CALIFORNIA
Envelope Component Approach
NRCC-ENV-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ENV-E
Project Name: Grant Yard Radio Shop - Office	Report Page: Page 3 of 8
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared: 2020-05-12

07	08	09	10	11	12	13	14		15
Tag / Plan Detail ID	How Design U-factor was determined	Fireproofing	Concrete Topping Thickness (in)	Continuous Insulation per Design	Thermal Performance Unit	Required Thermal Performance[2]	U-factor per Design		Net Area[3] (ft²)
A103	JA4 Tables (default)	No	None	R-30 c.i.	U-factor	0.034	per JA4	0.031	
				R-			per Software/ Other		

[1] *FOOTNOTE: If any individual assembly is non-compliant, assemblies may show compliance using an area-weighted calculation. Metal building roofs may not be combined with other roof types. The area-weighted compliance option is not available for alterations demonstrating compliance with R-values in Table 141.0-C.*
[2] *If "R-value" is shown in cell 12 as the Thermal Performance Unit, the R-value shown here is for continuous insulation per Table 141.0-C.*
[3] *Roof area minus any fenestration/skylight area.*

G. RATED ROOFING MATERIAL (COOL ROOF)

Table Instructions: Complete this table to demonstrate compliance with prescriptive roof material requirements in §140.3(a)1A for new construction or additions, or §141.0(b)2B for alterations.

01	02	03	04	05		06		07
Tag / Plan Detail ID	Name / Description / Location	Status	Occupancy Type	Roof Slope		Roof Material		Compliance Method
A103	Roof Plan	New	Nonresidential/ Relocatable 1 CZ	≤ 2:12 (Low)		Single-Ply		Solar Reflectance Index (SRI)
				08		09		10
				Required Minimum Material Performance		Designed Material Performance		U-factor of Assembly
				Reflectance		Reflectance[1]		
				Emittance		Emittance		
				SRI	75	SRI	82	

[1] *FOOTNOTE: If Solar Reflectance (Initial) is indicated in column 07, enter the Initial Reflectance here and the form will convert it to a "Calculated Aged Solar Reflectance" when determining compliance.*

STATE OF CALIFORNIA
Envelope Component Approach
NRCC-ENV-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ENV-E
Project Name: Grant Yard Radio Shop - Office	Report Page: Page 4 of 8
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared: 2020-05-12

H. WALL ASSEMBLY SCHEDULE

Table Instructions: Complete this table to demonstrate compliance with prescriptive wall assembly requirements in §140.3(a)2 and §140.3(a)3 for new construction or additions, or mandatory wall assembly requirements in §141.0(b)1B for alterations.

01	Indicate wall types included in the project:[1]	☑ Framed	☐ Mass (new only)	☐ Concrete Sandwich Panel (new only)	☐ SIPs	☐ ICF (new only)
		☐ Metal Panel	☐ Metal Building	☐ Spandrel/ Curtain Wall	☐ Straw Bale	☐ Log Home (new only)

[1] *FOOTNOTE: Wall types indicated above as "(new only)" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be clicked above and compliance demonstrated within this table.*

Framed Walls

01	☐	Calculate Area-Weighted Average U-factor for Metal Framed Walls[1]									
02	☐	Include Wood Framed Walls in Area-Weighted Average U-factor Calculation[1]									
03	04	05	06	07	08	09	10	11	12		13
Tag/Plan Detail ID	Occupancy & Status	How Design U-factor was determined	Location	Frame Material, Spacing & Depth	Cavity Insulation per Design	Continuous Insulation per Design	Thermal Performance Unit	Required Thermal Performance[2]	U-factor per Design		Net Area[3] (ft²)
A101 & A102	Nonresidential / Relocatable 1 CZ: New	JA4 Tables	Exterior	Metal 16" OC & 2x6	R-19	R-15 c.i.	U-factor	0.082	per JA4	0.049	
					R-	R-			per Software/ Other		

[1] *FOOTNOTE: If any individual assembly is non-compliant, assemblies may show compliance using an area-weighted calculation. Metal framed walls may not be combined with other wall types. Wood framed walls are combined with SIPs, spandrel & curtain, metal panel and straw bale wall types. The area-weighted compliance option is not available for alterations demonstrating compliance with R-values in Table 141.0-C.*
[2] *If "R-value" is shown in cell 10 as the Thermal Performance Unit, the R-value shown here is for cavity insulation per §141.0(b)2B.*
[3] *Wall area minus any fenestration area.*

I. FLOOR ASSEMBLY SCHEDULE

This Section Does Not Apply

J. EXTERIOR DOOR SCHEDULE

Table Instructions: Complete this table to demonstrate compliance with prescriptive exterior door requirements in §140.3(a)7 for new construction or additions. Doors which are being replaced (alterations) do not need to be documented in this table because there are no Title 24, Part 6 requirements that apply. Exterior doors separate conditioned space from unconditioned space or from ambient air. Doors that are more than one-half glass in area are considered Glazed Doors and should be documented on Table K with fenestration per Table B.

Table Continued

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Revisions:
2 11–16–2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
CEC-NRCC DOCUMENTS

Sheet Number:
G104

STATE OF CALIFORNIA
Envelope Component Approach
NRCC-ENV-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: Grant Yard Radio Shop - Office	Report Page:	Page 5 of 8
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-05-12

Table Continued

01	02	03	04	05	06	07	
Tag/Plan Detail ID	Name/Description	Occupancy Type	Door Type	Door Insulation	Maximum Allowed U-factor	U-factor per Design	
A101	FIRST FLOOR PLAN	Nonresidential/ Relocatable 1 CZ	Swinging	Insulated metal swing doors	0.7	per JA4	0.5

K. FENESTRATION AND GLAZED DOOR SCHEDULE

Table Instructions: Complete this table to demonstrate compliance with prescriptive fenestration requirements in §140.3(a)5 for new construction or additions, or §141.0(b)2A for alterations. Exterior doors that are more than one-half glass in area are considered Glazed Doors and should be documented on this table with fenestration.

01	Indicate fenestration types included in the project:[1]	☐ Vertical (alteration)	☑ Vertical (new)	☐ Skylights	☐ Glazed Doors (new only)

[1] FOOTNOTE: Fenestration types indicated above as "(new only)" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be clicked above and compliance demonstrated within this table.

Vertical Fenestration and Glazed Doors - Total Building & West Facing Area (New Construction & Additions Only)

01	02	03	04	05
Elevation Item Tag/ Description	Orientation (Azimuth)[1]	Gross Exterior Wall Area[2] (ft²)	Display Perimeter Length[2] (ft)	Vertical Fenestration Area per Design[3] (ft²)
A201 EXTERIOR ELEVATIONS	North	1,120	208.5	125
A201 EXTERIOR ELEVATIONS	East	1,410	154	42
A201 EXTERIOR ELEVATIONS	South	2,783	245	199

06	Maximum Allowed Vertical Fenestration (ft²)- All Orientations	3,645	07	Total Vertical Fenestration (ft²) per Design- All Orientations	366
08	Maximum Allowed Vertical Fenestration (ft²)-West Facing		09	Total Vertical Fenestration (ft²) per Design- West Facing	

[1] FOOTNOTE: Orientation between 226 deg and 315 deg are considered "West Facing". A diagram has been provided in the Nonresidential Compliance Manual for visual reference.
[2] Do not include demising walls per §140.3(a)5.
[3] Includes glazed door fenestration area.

Table Continued

STATE OF CALIFORNIA
Envelope Component Approach
NRCC-ENV-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: Grant Yard Radio Shop - Office	Report Page:	Page 6 of 8
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-05-12

Table Continued

Vertical Fenestration- U-factor, Solar Heat Gain Coefficient (RSHGC/SHGC), Visible Transmittance (VT)

01	☑	Calculate Area-Weighted Average U-factor for Vertical Fenestration[1]
02	☑	Calculate Area-Weighted Average SHGC for Vertical Fenestration[1]
03	☑	Calculate Area-Weighted Average VT for Vertical Fenestration[1]

04	05	06	07	08	09		10	11	12	13
Tag/Plan Detail ID	Fenestration Type	Occupancy & Status	(R)SHGC Compliance Method	VT Compliance Method	Calculation Method for Performance Values per Design[2]		Product Performance Unit	Required Product Performance	Product Performance per Design	Area (ft²)
GL2	Fixed Window	Nonresidential/ Relocatable 1 CZ: New	Table 140.3-B/C/D	Table 140.3-B/C/D	NFRC Certified		U-factor (max)	0.36	0.29	290
					☐	Overhang used for RSHGC	(R)SHGC(max)	0.25	0.24	
							VT(min)	0.42	0.47	
GL3	Fixed Window	Nonresidential/ Relocatable 1 CZ: New	Table 140.3-B/C/D	Table 140.3-B/C/D	NFRC Certified		U-factor (max)	0.36	0.29	76
					☐	Overhang used for RSHGC	(R)SHGC(max)	0.25	0.28	
							VT(min)	0.42	0.24	

[1] FOOTNOTE: If any individual fenestration product is non-compliant, products may show compliance using an area-weighted calculation. Chromogenic glazing is not included in area-weighted calculations. Area-weighted calculations shown in separate area-weighted table below.
[2] The NA6 Default Calculation can only be used for buildings with less than 200 ft² of site built glazing. If the project has greater than 200 ft², the only options for determining fenestration values are NFRC Certification or the Default Tables in §110.6.
[3] Overhangs must extend past the left and right window the same distance as the depth of the overhang or greater to show an affect on the RSHGC. If an overhang does not meet this requirement, the affect of the overhang will be ignored.
[4] Projecting includes casement and awning windows.

Area-Weighted Average U-factor, SHGC, VT Compliance Calculation for Vertical Fenestration and Glazed Doors

01	02	03		04	05
Product Performance Unit	Total Area of Fenestration (ft²)	Area-weighted Calculation for Fenestration			Compliance Results Using Area-Weighted Calculation Option
		Required		Designed	
U-Factor	366	0.36		0.29	COMPLIES
(R)SHGC	366	0.25		0.2483	COMPLIES
VT	366	0.42		0.4222	COMPLIES

STATE OF CALIFORNIA
Envelope Component Approach
NRCC-ENV-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: Grant Yard Radio Shop - Office	Report Page:	Page 7 of 8
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-05-12

L. DAYLIGHT IN LARGE ENCLOSED SPACES

This Section Does Not Apply

M. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, form user must provide an explanation to be added to Table D Exceptional Conditions. These documents must be provided to the building inspector during construction and can be found online at http://www.energy.ca.gov/2015publications/CEC-400-2015-033/appendices/forms/NRCI

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
◉	○	NRCI-ENV-01-E - Must be submitted for all buildings.	☐	☐

N. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, form user must provide an explanation to be added to Table D Exceptional Conditions. These documents must be provided to the building inspector during construction and can be found online at http://www.energy.ca.gov/2015publications/CEC-400-2015-033/appendices/forms/NRCA/. Individuals who perform the field testing and verification work, and provide the information required for completion of the fenestration Certificate of Acceptance documentation are not required to be licensed professionals. However, the person who signs the Certificate of Acceptance document to certify compliance with the acceptance requirements shall be licensed as specified in Standards Section 10-103(a)4 and NA7.3.1.

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
◉	○	NRCA-ENV-02-F - Must be submitted for all new, added or altered fenestration.	☐	☐
		NRCA-ENV-03-F - Daylighting design indoor lighting power adjustment factors (PAF). Note: The requirement for this NRCA is indicated on the NRCC-LTI (prescriptive) or NRCC-PRF (performance) because it is only relevant if a PAF is used for clerestories, daylight redirection devices or horizontal slats.		

STATE OF CALIFORNIA
Envelope Component Approach
NRCC-ENV-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: Grant Yard Radio Shop - Office	Report Page:	Page 8 of 8
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-05-12

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Agnes Gao	Documentation Author Signature:	Agnes Gao (Digitally signed by Agnes Gao Date: 2020.05.12 10:43:21 -07'00')
Company:	The KPA Group	Signature Date:	2020-05-12
Address:	6700 Koll Center Parkway, Suite 125	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	Pleasanton, CA 94566	Phone:	925.223.8217 ext 211

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Paul Powers	Responsible Designer Signature:	Paul Powers
Company :	The KPA Group	Date Signed:	2020-05-12
Address:	6700 Koll Center Parkway, Suite 125	License:	C-29713
City/State/Zip:	Pleasanton, CA 94566	Phone:	925.223.8217 ext 207

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engineers ▪ surveyors ▪ planners ▪ scientists

PHARIS ENGINEERING

LICENSED ARCHITECT
PAUL W. POWERS
C-29713
RENEWAL DATE 3/26/2021
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11-16-2020
BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
CEC-NRCC DOCUMENTS

Sheet Number:
G105

STATE OF CALIFORNIA

Envelope Component Approach

NRCC-ENV-E (Created 11/19) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ENV-E

This document is used to demonstrate compliance with mandatory requirements in §110.8(g) and §120.7(b) for newly constructed buildings, and §141.0(b)1 for alterations, related to roof, wall and floor assemblies. It is also used to demonstrate compliance with prescriptive requirements in §140.3 for newly constructed buildings, and §141.0 for additions and alterations, related to roof, wall, floor, door, fenestration and daylighting requirements.

Project Name: Grant Yard Radio Shop - Garage	Report Page:	Page 1 of 8
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-05-12

A. GENERAL INFORMATION

01	Project Location (city)	Redwood City	05	# of Stories (Habitable Above Grade)	1
02	Zipcode	94063	06	Total Conditioned Floor Area (ft²)	4,807
03	Climate Zone	3	07	Total Unconditioned Floor Area (ft²)	0
04	Occupancy Types Within Project (select all that apply): If one occupancy constitutes ≥ 80% of the conditioned floor area, the entire building envelope may be designed to comply with the provisions of that occupancy per §100.0(f).		08	☐ Project includes unconditioned enclosed space(s) > 5,000ft² under a roof with a ceiling height of at least 15ft.[1]	

☑ All Nonresidential, including Relocatable Public School Building certified for use in one climate zone Occupancy: A / B / E / F / H / M / S / U	☐ Relocatable Public School Building for use in all climate zones Occupancy: E	☐ High-Rise Residential Occupancy: R-2 / R-3	☐ Hotel/Motel Guest Rooms Occupancy: R-1

[1] *FOOTNOTE: Enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft in climate zones 2 through 15 are required to meet the minimum daylighting requirements defined in §140.3(c). Compliance with §140.3(c) is documented in Table L. This is the only prescriptive requirement which applies to unconditioned spaces.*

B. PROJECT SCOPE

Table Instructions: Include any building envelopes that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in §140.3, and §141.0(a)1 and §141.0(b)1 and 2 for additions and alterations.

My project consists of (check all that apply)	Component Types		
01	02		
☑ New Construction or Newly Conditioned Space	☑ Roof	☑ Walls	☑ Exterior Doors
☐ One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft		☐ Floors	☑ Fenestration/Glazed Door[1]
☐ Addition of conditioned space	☐ Roof	☐ Walls	☐ Exterior Doors
☐ One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft		☐ Floors	☐ Fenestration/Glazed Door[1]
☐ Alteration of conditioned space	☐ Roof Assembly	☐ Walls	Exterior Doors NA for Alts.
☐ One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft and lighting system installed for the first time	☐ Roofing Material	☐ Floors	☐ Fenestration

[1] *FOOTNOTE: Doors that are more than one-half glass in area are considered Glazed Doors and should be documented on Table K with fenestration.*

STATE OF CALIFORNIA

Envelope Component Approach

NRCC-ENV-E (Created 11/19) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ENV-E
Project Name: Grant Yard Radio Shop - Garage	Report Page: Page 2 of 8
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared: 2020-05-12

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Opaque Envelope Components					Fenestration	Daylighting Spaces > 5,000 ft²	Compliance Results
Roof Assembly	Roofing Materials	Walls	Floors	Doors			
01	02	03	04	05	06	07	08
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	
Yes	Yes	Yes		Yes	Yes		COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. ROOF ASSEMBLY SCHEDULE

Table Instructions: Complete this table to demonstrate compliance with prescriptive roof assembly requirements in §140.3(a)1B for new construction or additions, or §141.0(b)2Biii for alterations.

01	Indicate roof types included in the project:	☐ Framed	☐ SIPs	☐ Span Deck & Concrete	☐ Metal Panels	☑ Metal Building

Metal Building Roof Assemblies

01	☐	Calculate Area-Weighted Average U-factor for Metal Building Roof[1]			
02	03	04	05		06
Tag / Plan Detail ID	Name / Description	Status	Exception to Roof Insulation Requirements in §141.0(b)2Biii (Alts. Only)		Occupancy Type
A103 & A310	Roof Plan & Wall Section	New			Nonresidential/ Relocatable 1 CZ

Table Continued

STATE OF CALIFORNIA

Envelope Component Approach

NRCC-ENV-E (Created 11/19) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ENV-E
Project Name: Grant Yard Radio Shop - Garage	Report Page: Page 3 of 8
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared: 2020-05-12

07	08	09	10	11	12	13	14		15
Tag / Plan Detail ID	How Design U-factor was determined	Insulation System	Cavity Insulation per Design	Continuous Insulation per Design	Thermal Performance Unit	Required Thermal Performance[2]	U-factor per Design		Net Area[3] (ft²)
A103 & A310	JA4 Tables (default)	Standing Seam-1 Layer of insulation	R-19	R-19	U-factor	0.041	per JA4	0.032	
			R-	R-			per Software/ Other		

[1] *FOOTNOTE: If any individual assembly is non-compliant, assemblies may show compliance using an area-weighted calculation. Metal building roofs may not be combined with other roof types. The area-weighted compliance option is not available for alterations demonstrating compliance with R-values in Table 141.0-C.*
[2] *If "R-value" is shown in cell 12 as the Thermal Performance Unit, the R-value shown here is for continuous insulation per Table 141.0-C.*
[3] *Roof area minus any fenestration/skylight area.*

G. RATED ROOFING MATERIAL (COOL ROOF)

Table Instructions: Complete this table to demonstrate compliance with prescriptive roof material requirements in §140.3(a)1A for new construction or additions, or §141.0(b)2B for alterations.

01	02	03	04	05		06		07
Tag / Plan Detail ID	Name / Description / Location	Status	Occupancy Type	Roof Slope		Roof Material		Compliance Method
A103	Roof Plan	New	Nonresidential/ Relocatable 1 CZ	≤ 2:12 (Low)		Metal		Solar Reflectance Index (SRI)
				08		09		10
				Required Minimum Material Performance		Designed Material Performance		U-factor of Assembly
				Reflectance		Reflectance[1]		
				Emittance		Emittance		
				SRI	75	SRI	82	

[1] *FOOTNOTE: If Solar Reflectance (Initial) is indicated in column 07, enter the Initial Reflectance here and the form will convert it to a "Calculated Aged Solar Reflectance" when determining compliance.*

STATE OF CALIFORNIA

Envelope Component Approach

NRCC-ENV-E (Created 11/19) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ENV-E
Project Name: Grant Yard Radio Shop - Garage	Report Page: Page 4 of 8
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared: 2020-05-12

H. WALL ASSEMBLY SCHEDULE

Table Instructions: Complete this table to demonstrate compliance with prescriptive wall assembly requirements in §140.3(a)2 and §140.3(a)3 for new construction or additions, or mandatory wall assembly requirements in §141.0(b)1B for alterations.

01	Indicate wall types included in the project:[1]	☑ Framed	☐ Mass (new only)	☐ Concrete Sandwich Panel (new only)	☐ SIPs	☐ ICF (new only)
		☐ Metal Panel	☐ Metal Building	☐ Spandrel/ Curtain Wall	☐ Straw Bale	☐ Log Home (new only)

[1] *FOOTNOTE: Wall types indicated above as "(new only)" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be clicked above and compliance demonstrated within this table.*

Framed Walls

01	☐	Calculate Area-Weighted Average U-factor for Metal Framed Walls[1]									
02	☐	Include Wood Framed Walls in Area-Weighted Average U-factor Calculation[1]									
03	04	05	06	07	08	09	10	11	12		13
Tag/Plan Detail ID	Occupancy & Status	How Design U-factor was determined	Location	Frame Material, Spacing & Depth	Cavity Insulation per Design	Continuous Insulation per Design	Thermal Performance Unit	Required Thermal Performance[2]	U-factor per Design		Net Area[3] (ft²)
A101 & A102	Nonresidential / Relocatable 1 CZ: New	JA4 Tables	Exterior	Metal 16" OC & 2x6	R-19	R-15 c.i.	U-factor	0.082	per JA4	0.049	
					R-	R-			per Software/ Other		

[1] *FOOTNOTE: If any individual assembly is non-compliant, assemblies may show compliance using an area-weighted calculation. Metal framed walls may not be combined with other wall types. Wood framed walls are combined with SIPs, spandrel & curtain, metal panel and straw bale wall types. The area-weighted compliance option is not available for alterations demonstrating compliance with R-values in Table 141.0-C.*
[2] *If "R-value" is shown in cell 10 as the Thermal Performance Unit, the R-value shown here is for cavity insulation per §141.0(b)2B.*
[3] *Wall area minus any fenestration area.*

I. FLOOR ASSEMBLY SCHEDULE

This Section Does Not Apply

J. EXTERIOR DOOR SCHEDULE

Table Instructions: Complete this table to demonstrate compliance with prescriptive exterior door requirements in §140.3(a)7 for new construction or additions. Doors which are being replaced (alterations) do not need to be documented in this table because there are no Title 24, Part 6 requirements that apply. Exterior doors separate conditioned space from unconditioned space or from ambient air. Doors that are more than one-half glass in area are considered Glazed Doors and should be documented on Table K with fenestration per Table B.

Table Continued

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engineers ▪ surveyors ▪ planners ▪ scientists

PHARIS ENGINEERING

LICENSED ARCHITECT
PAUL W. POWERS
C-29713
RENEWAL DATE 3/26/2021
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11–16–2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
CEC-NRCC DOCUMENTS

Sheet Number:
G106

STATE OF CALIFORNIA
Envelope Component Approach
NRCC-ENV-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: Grant Yard Radio Shop - Garage	Report Page:	Page 5 of 8
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-05-12

Table Continued

01	02	03	04	05	06	07	
Tag/Plan Detail ID	Name/Description	Occupancy Type	Door Type	Door Insulation	Maximum Allowed U-factor	U-factor per Design	
A101	FIRST FLOOR PLAN	Nonresidential/ Relocatable 1 CZ	Swinging	Insulated metal swing doors	0.7	per JA4	0.5
A101	FIEST FLOOR PLAN	Nonresidential/ Relocatable 1 CZ	Non-swinging	Insulated single layer metal sectional doors with EPS	1.45	per JA4	0.179

K. FENESTRATION AND GLAZED DOOR SCHEDULE

Table Instructions: Complete this table to demonstrate compliance with prescriptive fenestration requirements in §140.3(a)5 for new construction or additions, or §141.0(b)2A for alterations. Exterior doors that are more than one-half glass in area are considered Glazed Doors and should be documented on this table with fenestration.

01	Indicate fenestration types included in the project:[1]	☐ Vertical (alteration)	☑ Vertical (new)	☐ Skylights	☐ Glazed Doors (new only)

[1] FOOTNOTE: Fenestration types indicated above as "(new only)" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be clicked above and compliance demonstrated within this table.

Vertical Fenestration and Glazed Doors - Total Building & West Facing Area (New Construction & Additions Only)

01	02	03	04	05
Elevation Item Tag/ Description	Orientation (Azimuth)[1]	Gross Exterior Wall Area[2] (ft^2)	Display Perimeter Length[2] (ft)	Vertical Fenestration Area per Design[3] (ft^2)
A201 EXTERIOR ELEVATIONS	North	1,430	215	96
A201 EXTERIOR ELEVATIONS	East	876	138	70
A202 EXTERIOR ELEVATIONS	West	885	138	59

06	Maximum Allowed Vertical Fenestration (ft^2)- All Orientations	2,946	07	Total Vertical Fenestration (ft^2) per Design- All Orientations	225
08	Maximum Allowed Vertical Fenestration (ft^2)-West Facing	828	09	Total Vertical Fenestration (ft^2) per Design- West Facing	59

Table Continued

STATE OF CALIFORNIA
Envelope Component Approach
NRCC-ENV-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: Grant Yard Radio Shop - Garage	Report Page:	Page 6 of 8
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-05-12

Table Continued

[1] FOOTNOTE: Orientation between 226 deg and 315 deg are considered "West Facing". A diagram has been provided in the Nonresidential Compliance Manual for visual reference.
[2] Do not include demising walls per §140.3(a)5.
[3] Includes glazed door fenestration area.

Vertical Fenestration- U-factor, Solar Heat Gain Coefficient (RSHGC/SHGC), Visible Transmittance (VT)

01	☐	Calculate Area-Weighted Average U-factor for Vertical Fenestration[1]
02	☐	Calculate Area-Weighted Average SHGC for Vertical Fenestration[1]
03	☐	Calculate Area-Weighted Average VT for Vertical Fenestration[1]

04	05	06	07	08	09		10	11	12	13
Tag/Plan Detail ID	Fenestration Type	Occupancy & Status	(R)SHGC Compliance Method	VT Compliance Method	Calculation Method for Performance Values per Design[2]		Product Performance Unit	Required Product Performance	Product Performance per Design	Area (ft^2)
GL2	Fixed Window	Nonresidential/ Relocatable 1 CZ: New	Table 140.3-B/C/D	Table 140.3-B/C/D	NFRC Certified		U-factor (max)	0.36	0.29	284
					☐	Overhang used for RSHGC	(R)SHGC(max)	0.25	0.24	
							VT(min)	0.42	0.47	

[1] FOOTNOTE: If any individual fenestration product is non-compliant, products may show compliance using an area-weighted calculation. Chromogenic glazing is not included in area-weighted calculations. Area-weighted calculations shown in separate area-weighted table below.
[2] The NA6 Default Calculation can only be used for buildings with less than 200 ft^2 of site built glazing. If the project has greater than 200 ft^2, the only options for determining fenestration values are NFRC Certification or the Default Tables in §110.6.
[3] Overhangs must extend past the left and right window the same distance as the depth of the overhang or greater to show an affect on the RSHGC. If an overhang does not meet this requirement, the affect of the overhang will be ignored.
[4] Projecting includes casement and awning windows.

L. DAYLIGHT IN LARGE ENCLOSED SPACES

This Section Does Not Apply

STATE OF CALIFORNIA
Envelope Component Approach
NRCC-ENV-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: Grant Yard Radio Shop - Garage	Report Page:	Page 7 of 8
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-05-12

M. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, form user must provide an explanation to be added to Table D Exceptional Conditions. These documents must be provided to the building inspector during construction and can be found online at http://www.energy.ca.gov/2015publications/CEC-400-2015-033/appendices/forms/NRCI

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
◉	○	NRCI-ENV-01-E - Must be submitted for all buildings.	☐	☐

N. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, form user must provide an explanation to be added to Table D Exceptional Conditions. These documents must be provided to the building inspector during construction and can be found online at http://www.energy.ca.gov/2015publications/CEC-400-2015-033/appendices/forms/NRCA/. Individuals who perform the field testing and verification work, and provide the information required for completion of the fenestration Certificate of Acceptance documentation are not required to be licensed professionals. However, the person who signs the Certificate of Acceptance document to certify compliance with the acceptance requirements shall be licensed as specified in Standards Section 10-103(a)4 and NA7.3.1.

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
◉	○	NRCA-ENV-02-F - Must be submitted for all new, added or altered fenestration.	☐	☐
		NRCA-ENV-03-F - Daylighting design indoor lighting power adjustment factors (PAF). Note: The requirement for this NRCA is indicated on the NRCC-LTI (prescriptive) or NRCC-PRF (performance) because it is only relevant if a PAF is used for clerestories, daylight redirection devices or horizontal slats.		

STATE OF CALIFORNIA
Envelope Component Approach
NRCC-ENV-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ENV-E
Project Name: Grant Yard Radio Shop - Garage	Report Page:	Page 8 of 8
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-05-12

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Agnes Gao	Documentation Author Signature:	Agnes Gao (Digitally signed by Agnes Gao, Date: 2020.05.12 10:46:44 -07'00')
Company:	The KPA Group	Signature Date:	2020-05-12
Address:	6700 Koll Center Parkway, Suite 125	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	Pleasanton, CA 94566	Phone:	925.223.8217 ext 211

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Paul Powers	Responsible Designer Signature:	
Company :	The KPA Group	Date Signed:	2020-05-12
Address:	6700 Koll Center Parkway, Suite 125	License:	C-29713
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PHARIS ENGINEERING

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PAUL W. POWERS
C-29713
RENEWAL DATE 2/26/2021
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752 CHESTNUT STREET
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Revisions:
2 11–16–2020
BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
CEC-NRCC DOCUMENTS

Sheet Number:
G107

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 5/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.		
Project Name: Grant Yard Radio Shop	Report Page:	Page 1 of 10
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-5-1

A. GENERAL INFORMATION

01	Project Location (city)	Redwood City	04	Total Conditioned Floor Area	12,696
02	Climate Zone	3	05	Total Unconditioned Floor Area	0
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	2

- ☑ Office (B)
- ☐ Retail (M)
- ☐ Non-refrigerated Warehouse (S)
- ☐ Hotel/ Motel Guest Rooms (R-1)
- ☐ School (E)
- ☐ Healthcare Facility (H)
- ☐ High-Rise Residential (R-2/R-3)
- ☐ Relocatable Class Bldg (E)
- ☐ Other (Write In):

[1] *FOOTNOTES: Climate zone can be determined on the California Energy Commission's website at http://www.energy.ca.gov/maps/renewable/building_climate_zones.html*

B. PROJECT SCOPE

Table Instructions: Include any mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.

My project consists of (check all that apply)

01 Air System(s)	02 Wet System Components	03 Dry System Components
☑ Heating Air System	☐ Water Economizer	☐ Air Economizer
☑ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ Hydronic System Piping	☐ Fan Systems
☑ Mechanical Controls	☐ Cooling Towers	☑ Ductwork
	☐ Chillers	☑ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

01 System Summary §110.1, §110.2, §140.4		02 Pumps §140.4(k)		03 Fans/ Economizers §140.4(c), §140.4(e)		04 System Controls §110.2, §120.2, §140.4(f)		05 Ventilation §120.1		06 Terminal Box Controls §140.4(d)		07 Distribution §120.3, §140.4(l)		08 Cooling Towers §110.2(e)2	09 Compliance Results
(See Table F)	AND	(See Table G)	AND	(See Table H)	AND	(See Table I)	AND	(See Table J)	AND	(See Table K)	AND	(See Table L)	AND	(See Table M)	
No	AND		AND		AND	Yes	AND	Yes	AND		AND	Yes	AND		DOES NOT COMPLY
Mandatory Measures Compliance (See Table Q for Details)															COMPLIES

NRCC-MCH-E
1

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 5/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 2 of 10
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-5-1

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

The permit applicant has indicated on Table J that ventilation calculations have been attached or included elsewhere on the plans.
Please review Table F for compliance: all fields which are not grey must be completed; design or rated efficiency must be greater than or equal to the minimum efficiency required.
Selections made in Table O have been changed by the permit applicant. See Table E. Additional Remarks for permit applicant's explanation.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(k) or §141.0(b)2 for alterations.

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (Btu/h) §140.4 (a&b)						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available[1] §140.4(a)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
HP-1	Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	58.1	137	0	148	144	58.1	131

[1] *FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per §140.4(a). Healthcare facilities are excepted.*
[2] *It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.*
[3] *If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.*
[4] *Authority Having Jurisdiction may ask for load calculations used for compliance per §140.4(b).*

Table Continued

NRCC-MCH-E
2

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 5/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 3 of 10
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Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

01	02	03	04	05	06	07	08	09
		Heating Mode				Cooling Mode		
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency
HP-1	≥135,000 and <240,000	47°Fdb/43°Fwb OSA	COP	3.2	3.75	EER	10.6	
						IEER	13.9	

G. PUMPS

This Section Does Not Apply

H. FAN SYSTEMS & AIR ECONOMIZERS

This Section Does Not Apply

I. SYSTEM CONTROLS

Table Instructions: Complete the following Table to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(f) and (n) or requirements in §141.0(b)2E for altered space conditioning systems.

01 System Name	02 System Zoning	03 Conditioned Floor Area Being Served (ft²)	04 Thermostats §110.2(b) & (c)[1], §120.2(a) or §141.0(b)2E	05 Shut-Off Controls §120.2(e)	06 Isolation Zone Controls §120.2(e)	07 Demand Response §110.12 and §120.2(b)	08 Supply Air Temp. Reset §140.4(f)	09 Window Interlocks per §140.4(n)
BAS	multi-zone	≤ 25,000 ft²	EMCS	EMCS	EMCS	EMCS	Included	NA: No operable windows

[1] *FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.*
** NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.*
EX: System 1: SA Temp Reset: Exempt because zones compliant with §140.4(d); EXCEPTION 1 to §140.4(f)

NRCC-MCH-E
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STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 4 of 10
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-5-1

J. VENTILATION AND INDOOR AIR QUALITY

Table Instructions: Complete the following Table to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)3B for all nonresidential, high-rise residential and hotel/motel occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☑	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☐	Check this box if the project includes new or altered high-rise residential dwelling units.
03	☐	Check the box if the project is using natural ventilation in any spaces to meet required ventilation rates per §120.1(c)2.

Nonresidential and Hotel/ Motel Ventilation Systems

04 System Name:	05 System Design OA CFM Air Flow[1]:	06 System Design Transfer Air CFM:	07 Air Filtration per §120.1(c) and §141.0(b)2[2]

08	09	10	11	12	13	14	15	16	
	Mechanical Ventilation Required per §120.1(c)3[3]					Exh. Vent. per §120.1(c)4		DCV or Occupant Sensor Controls per §120.1(d)3, §120.1(d)5 & §120.2(e)3[6]	
Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of showerheads/ toilets	# of people[5]	Required Min OA CFM	Required Minimum CFM	Provided per Design CFM	DCV	
								Occ Sensor	

17	Total System Required Min OA CFM		18	Ventilation for this System Complies?	

[1] *FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system.*
[2] *Air filtration requirements apply to the following three system types per §120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.*
[3] *Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.*
[4] *See Standards Tables 120.1-A and 120.1-B*
[5] *For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.*
[6] *§120.2(e)3 requires systems serving rooms that are required by §130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by*

NRCC-MCH-E
4

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LICENSED ARCHITECT
PAUL W. POWERS
C-29713
RENEWAL DATE 3/26/2021
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11-16-2020
BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
CEC-NRCC DOCUMENTS

Sheet Number:
G108

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 5/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
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§130.1(c).

K. TERMINAL BOX CONTROLS

This Section Does Not Apply

L. DISTRIBUTION (DUCTWORK AND PIPING)

Table Instructions: Complete the following tables to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(l) for duct leakage testing.

Duct Leakage Sealing

The answers to the questions below apply to the following duct system(s):			Duct leakage testing triggered for these systems?	No
11	No	The scope of the project includes only duct systems serving healthcare facilities.		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	No	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	No	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:		
		☐ Outdoors		
		☐ In a space directly under a roof that has a U-factor greater than the U-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces		
		☐ In an unconditioned crawlspace		
		☐ In other unconditioned spaces		
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		
17		Duct system shall be sealed in accordance with the California Mechanical Code.		

M. COOLING TOWERS

This Section Does Not Apply

STATE OF CALIFORNIA
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N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
◉		NRCI-MCH-01-E - Must be submitted for all buildings.	☐	☐

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 5/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 7 of 10
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◉	○	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. *Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.*	☐	☐
○	◉	NRCA-MCH-03-A Constant Volume Single Zone HVAC NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".	☐	☐
○	◉	NRCA-MCH-04-A Air Distribution Duct Leakage	☐	☐
○	◉	NRCA-MCH-05-A Air Economizer Controls	☐	☐
○	◉	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.	☐	☐
○	◉	NRCA-MCH-07-A Supply Fan Variable Flow Controls	☐	☐
○	◉	NRCA-MCH-08-A Valve Leakage Test	☐	☐
○	◉	NRCA-MCH-09-A Supply Water Temperature Reset Controls	☐	☐
○	◉	NRCA-MCH-10-A Hydronic System Variable Flow Controls	☐	☐
○	◉	NRCA-MCH-11-A Automatic Demand Shed Controls	☐	☐
○	◉	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	☐	☐
○	◉	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance	☐	☐
○	◉	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance *NOTE: This form does not automatically move to "Yes". If Distributed Energy Storage DX AC Systems are included in the scope, permit applicant should move this form to "Yes".*	☐	☐
○	◉	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance *NOTE: This form does not automatically move to "Yes". If Chilled Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External Melt, Ice Harvester, Brine, Ice-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapsulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".*	☐	☐
◉	○	NRCA-MCH-16-A Supply Air Temperature Reset Controls	☐	☐
○	◉	NRCA-MCH-17-A Condenser Water Temperature Reset Controls	☐	☐
◉	○	NRCA-MCH-18 Energy Management Control Systems	☐	☐
○	◉	NRCA-MCH-19 Occupancy Sensor Controls	☐	☐
○	◉	NRCA-MCH-20 Multi-Family Ventilation	☐	☐
○	◉	NRCA-MCH-21 Multi-Family Envelope Leakage	☐	☐

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 5/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
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P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
○	◉	NRCV-MCH-04-H Duct Leakage Test *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-24 Enclosure Air Leakage Worksheet *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-27 High-rise Residential *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-32 Local Mechanical Exhaust *NOTE: Must be completed by a HERS Rater*	☐	☐

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PHARIS ENGINEERING

LICENSED ARCHITECT
PAUL W. POWERS
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RENEWAL DATE 3/26/2021
STATE OF CALIFORNIA

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GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11-16-2020
BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
CEC-NRCC DOCUMENTS

Sheet Number:
G109

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 5/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 9 of 10
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-5-1

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

Table Instructions: Indicate where mandatory measures are documented in the plan set or construction documentation. For any mandatory measures that do not apply, mark the plan sheet or construction document location as "N/A", any active cells that are left blank will result in non-compliance in Table C.

01	02
	Plan sheet or construction document location
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block: Yes	M0.4

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 5/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 10 of 10
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-5-1

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Tom Coburn	Documentation Author Signature:	
Company:	Morrison Maierle, Inc.	Signature Date:	5-1-2020
Address:	125 Schoolhouse Loop	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	Kalispell/MT/59901	Phone:	406-752-2216

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. **The information provided on this Certificate of Compliance is true and correct.**
2. **I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)**
3. **The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.**
4. **The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.**
5. **I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.**

Responsible Designer Name:	Jody Waverek	Responsible Designer Signature:	
Company :	Morrison Maierle, Inc.	Date Signed:	5-1-2020
Address:	125 Schoolhouse Loop	License:	M32827
City/State/Zip:	Kalispell/MT/59901	Phone:	406-752-2216

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
This document is used to demonstrate compliance for nonresidential occupancies with requirements in §110.1, §110.3, §120.3, and §140.5, and with requirements in §141.0 for additions and alterations, for domestic water heating scopes using the prescriptive path. For high-rise residential and hotel/motel occupancies, compliance is demonstrated with requirements in §110.1, §110.3, §120.3, §150.0 and §150.1(c)8, and with requirements in §150.2 for additions and alterations.		
Project Name: Grant Yard Radio Shop	Report Page:	Page 1 of 6
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-5-1

A. GENERAL INFORMATION

01	Project Location (city)	Redwood City	02 Climate Zone	3

03 Occupancy Types Within Project (select all that apply):

☑ Nonresidential ☐ High-Rise Residential ☐ Hotel/ Motel
☐ State Building ☐ Healthcare Facility ☐ Other (Write In):

B. PROJECT SCOPE

Table Instructions: Include any domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in §140.5, §150.1(c)8, and §141.0(a), or §141.0(b)2N for additions or alterations. Solar water heating systems should be documented on the NRCC-SRA compliance document. Combined hydronic water heating systems should be documented on the NRCC-MCH compliance document.

01	02	03		
My project consists of (check all that apply):	System Type[1,2]	System Components		
☑ New System (DHW system being installed for the first time in newly constructed building)	Central System (serving nonresidential spaces)	☑ Equipment	☑ Distribution	☑ Controls
☐ System Alteration (equipment, distribution or controls)		☐ Equipment	☐ Distribution	☐ Controls

[1] *FOOTNOTE: Point of use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems.*
[2] *Dwelling units refers to hotel/ motel guest rooms and units in a high-rise residential occupancy.*

C. COMPLIANCE RESULTS

Table Instructions: Table C will indicate if the project data input into the compliance document is compliant with water heating requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance.

01	02	03	04
Domestic Hot Water Equipment	Distribution Systems	Controls	**Compliance Results**
(See Table F)	(See Table G)	(See Table H)	
Yes	Yes	Yes	**COMPLIES**

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 2 of 6
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-5-1

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. DOMESTIC HOT WATER EQUIPMENT

Table Instructions: Complete the following table to demonstrate compliance with mandatory equipment requirements in §110.1 and §110.3. For high-rise residential and hotel/ motel occupancies, compliance with prescriptive requirements in §150.1(c)8 must also be demonstrated and with §150.2 for addition and alteration scopes.

Equipment Schedule: Central Systems

07 Name or Item Tag	08 Equipment Type	09 Volume (gal)	10 Rated Input Capacity (Btu/h)	11 Rated Efficiency	12 Minimum Efficiency Required	13 Efficiency Unit	14 Designed Standby Loss[1]	15 Maximum Standby Loss[1]
DWH-1	Gas Storage Water Heater	40	40,000	84	80	%	80	2,250

[1] *FOOTNOTE: For gas water heaters/ boilers, standby loss is in BTUH. For electric storage water heaters, standby loss is in %/hr.*

Water Heating Equipment All Occupancies

	Yes	No	Not Applicable	Requirement
18	◉	○	○	Unfired storage tank insulation shall have Internal + External ≥ R-16 OR External ≥ R-12. Label required per §110.3(c)3
19	○	○	◉	New state buildings 60% of energy for service water heating from site solar energy or recovered energy per §110.3(c)5
20	○	○	◉	Isolation valves for instantaneous water heater with input rating > 6.8 kBTUH or 2 kW has been specified per §110.3(c)6

G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM

Table Instructions: Complete the following table to demonstrate compliance for nonresidential occupancies with distribution requirements in §120.3 and §140.5. For high-rise residential and hotel/motel occupancies, compliance is demonstrated with requirements in §110.3(c), §120.3, §150.0, §150.1.

Recirculation Loops in Central Systems Serving Dwelling Units or Nonresidential Spaces

Table Continued

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CEC-NRCC DOCUMENTS

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G110

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 3 of 6
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-5-1

Table Continued

	Yes	No	Not Applicable	Requirement
01	◉	○	○	Air release valve or vertical pump installation per §110.3(c)4A
02	◉	○	○	Check valve or similar located between recirculation pump and water heating equipment to prevent backflow per §110.3(c)4B
03	◉	○	○	Hose bibb installed between pump and equipment and isolation valve between hose bibb and equipment per §110.3(c)4C
04	◉	○	○	Isolation valves on both sides of the pump per §110.3(c)4D.
05	◉	○	○	Cold water and recirculation loop piping shall not be connected to the hot water storage tank drain port per §110.3(c)4E
06	◉	○	○	Check valve installed on cold water supply between hot water system and next closest tee on cold water supply per §110.3(c)4F
07	○	○	◉	For central systems serving multiple dwelling units, design includes two or more recirculation loops serving separate dwelling units per §150.1(c)8Bii unless building has ≤ 8 dwelling units.
Mandatory Pipe Insulation All Occupancies				
12	☑			For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per §120.3: - Recirculating system piping, including supply and return piping of the water heater - The first 8 ft of hot and cold outlet piping for a nonrecirculating storage system - Pipes that are externally heated
13	☑			Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service per §120.3(b) and §150.0(j)3

TABLE 120.3-A PIPE INSULATION THICKNESS

Fluid Temperature Range (°F)	Conductivity Range (Btu-in per hour per ft² per °F)	Insulation Mean Rating Temp (°F)	Nominal Pipe Diameter (in)		
			<1	1 to < 1.5	1.5 to < 4
			Minimum Insulation Required		
105-140	0.22-0.28	100	**1.0 in or R-7.7**	**1.5 in or R-12.5**	**1.5 in or R-11**

H. DOMESTIC HOT WATER SYSTEM CONTROLS

Table Instructions: Complete the following table to demonstrate compliance with controls requirements in §110.3 for all occupancies. For high-rise residential and hotel/motel occupancies, compliance is demonstrated with requirements in §150.1(c)8.

	Yes	No	Not Applicable	Requirement

Table Continued

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 4 of 6
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-5-1

Table Continued

01	◉	○	○	Construction documents require manufacturer certification that service water-heating systems are equipped with automatic temperature controls capable of adjusting temperature settings per §110.3(a)
02	○	○	◉	Systems with capacity > 167,000 BTUH equipped with outlet temperature controls per §110.3(c)1 unless covered by California Plumbing Code Section 613.0.
03	◉	○	○	Controls for circulating pumps or electrical heat trace systems are capable of automatically turning off the system per §110.3(c)2 unless system serves healthcare facility.
04	○	○	◉	For recirculation systems serving multiple dwelling units, design includes automatic pump controls per §150.1(c)8Bii, or §150.2 for additions or alterations
05	○	○	◉	For recirculation systems serving individual dwelling units, design includes manual on/off controls as specified in Reference Appendix RA 4.4.9 per §150.1(c)8.
06	○	○	◉	For replacement single heat pump water heaters serving individual dwelling units in climate zones 1-15, design includes communication interface that meets demand responsive control requirements of §110.12(a) per §150.2(b)1Hiii.

I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
◉		NRCI-PLB-01-E - Must be submitted for all buildings	☐	☐
○	◉	NRCI-PLB-02-E - Must be submitted for high-rise residential and hotel/ motel central hot water distribution systems to be recognized for compliance.	☐	☐
○	◉	NRCI-PLB-03-E - Must be submitted for high-rise residential and hotel/ motel single dwelling unit hot water distribution systems to be recognized for compliance.	☐	☐

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no Certificates of Acceptance applicable to service water heating requirements.

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 5 of 6
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-5-1

K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
○	◉	NRCV-PLB-21-H High-rise Residential Central Hot Water Distribution HERS Verification	☐	☐
○	◉	NRCV-PLB-22-H High-rise Residential Individual Dwelling Unit Hot Water Distribution HERS Verification	☐	☐

STATE OF CALIFORNIA
Domestic Water Heating System
NRCC-PLB-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-PLB-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 6 of 6
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-5-1

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete

Documentation Author Name:	Tom Coburn	Documentation Author Signature:	
Company:	Morrison Maierle, Inc.	Signature Date:	5-1-2020
Address:	125 Schoolhouse Loop	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	Kalispell/MT/59901	Phone:	406-752-2216

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. **The information provided on this Certificate of Compliance is true and correct.**
2. **I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)**
3. **The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.**
4. **The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.**
5. **I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.**

Responsible Designer Name:	Jody Waverek	Responsible Designer Signature:	
Company :	Morrison Maierle, Inc.	Date Signed:	5-1-2020
Address:	125 Schoolhouse Loop	License:	M32827
City/State/Zip:	Kalispell/MT/59901	Phone:	406-752-2216

KPA ENGINEERS ARCHITECTS
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Morrison Maierle
engineers ▪ surveyors ▪ planners ▪ scientists

PHARIS ENGINEERING

LICENSED ARCHITECT
PAUL W. POWERS
C-29713
RENEWAL DATE 3/26/2021
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11-16-2020
BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
CEC-NRCC DOCUMENTS

Sheet Number:
G111

STATE OF CALIFORNIA

Electrical Power Distribution

NRCC-ELC-E (Created 01/20) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name:	Report Page: Page 1 of 5
Project Address:	Date Prepared:

This document is used to demonstrate compliance with mandatory requirements in §130.5 for electrical systems in newly constructed nonresidential, high-rise residential and hotel/motel occupancies. Additions and alterations to electrical service systems in these occupancies will also use this document to demonstrate compliance per §141.0(a) or §141.0(b)2P for alterations.

A. GENERAL INFORMATION

01 Project Location (city)		02 Occupancy Types Within Project:			
☐ Office	☐ Retail	☐ Warehouse	☐ Hotel/ Motel	☐ School	☐ Support Areas
☐ Parking Garage	☐ High-Rise Residential	☐ Relocatable	☐ Healthcare Facilities	☑ Other (Write In):	RADIO REPAIR SHOP

B. PROJECT SCOPE

Table Instructions: Include any electrical service systems that are within the scope of the permit application.

01 Electrical Service Designation/ Description	02 Scope of Work[1]	03 Rating (kVA)	04 Utility Provided Metering System Exception to §130.5(a)[2]	05 System subject to CA Elec Code Article 517 Exception to §130.5(a)&(b)	06 Demand Response Controls
MDP/ELECT RM 101	New electrical service equipment & meter	126.5	☑	☐	Where required, demand response controls must be specified which are capable of receiving and automatically responding to at least one standards based messaging protocol which enables demand response after receiving a demand response signal. Sections §120.2, §130.1 and §130.3 and compliance documents NRCC-MCH, NRCC-LTI and NRCC-LTS will indicate when demand response controls are required.

[1] *FOOTNOTES: Adding only new feeders and branch circuits triggers Voltage Drop 130.5(c), no other requirements from 130.5 are required.*
[2] *Applicable if the utility company is providing a metering system that indicates instantaneous kW demand and kWh for a utility-defined period.*

C. COMPLIANCE RESULTS

Table Instructions: If this table says "DOES NOT COMPLY" refer to Table D. for guidance and review the Table that indicates "No".

01		02		03		04	05
Service Electrical Metering §130.5(a)	AND	Separation for Monitoring §130.5(b)	AND	Voltage Drop §130.5(c)	AND	Controlled Receptacles §130.5(d)	**Compliance Results**
(See Table F)		(See Table G)		(See Table H)		(See Table I)	
	AND	Yes	AND	Yes	AND	Yes	**COMPLIES with Exceptional Conditions**

STATE OF CALIFORNIA

Electrical Power Distribution

NRCC-ELC-E (Created 01/20) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name:	Report Page: Page 2 of 5
Project Address:	Date Prepared:

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Table B indicates the project is exempt from §130.5(a) Service Electrical Metering requirements because the utility company has provided the project a metering system that indicates instantaneous kW demand and kWh for a utility-definied period.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. SERVICE ELECTRICAL METERING

This Section Does Not Apply

G. SEPARATION OF ELECTRICAL CIRCUITS FOR ENERGY MONITORING

Table Instructions: Complete this table for entirely new or complete replacement electrical power distribution systems to demonstrate compliance with §130.5(b). Using the dropdown choices in column 01, indicate the load types included for each service. Any load types that are not included in the service do not need to be shown.

Electrical Service Designation/Description: **MDP/ELECT RM 101**

01 Load Type per Table 130.5-B[1]	02 Minimum Required Separation of Load per Table 130.5-B	03 Compliance Method[2]	04 Location of Requirements in Construction Documents	05 Field Inspector Pass	Fail
Lighting including exit, egress and exterior	All lighting in aggregate	Method 2	Drawing E3.1, E4.1	☐	☐
HVAC systems and components	All HVAC in aggregate	Method 2	Drawing E3.1, E4.1	☐	☐
Plug Loads and appliances < 25kVA	All plug load in aggregate Groups of plug loads exceeding 25 kVA connected load in an area less than 5000 sf	Method 2	Drawing E3.1, E4.1	☐	☐

** NOTES: If "Other*" is selected under Compliance Method above, please indicate how compliance has been achieved in the space provided below.*

Table Continued

STATE OF CALIFORNIA

Electrical Power Distribution

NRCC-ELC-E (Created 01/20) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name:	Report Page: Page 3 of 5
Project Address:	Date Prepared:

Electrical Service Designation/Description: **MDP/ELECT RM 101**

01 Load Type per Table 130.5-B[1]	02 Minimum Required Separation of Load per Table 130.5-B	03 Compliance Method[2]	04 Location of Requirements in Construction Documents	05 Field Inspector Pass	Fail
Lighting including exit, egress and exterior	All lighting in aggregate	Method 2	Drawing E3.1, E4.1	☐	☐
HVAC systems and components	All HVAC in aggregate	Method 2	Drawing E3.1, E4.1	☐	☐
Plug Loads and appliances < 25kVA	All plug load in aggregate Groups of plug loads exceeding 25 kVA connected load in an area less than 5000 sf	Method 2	Drawing E3.1, E4.1	☐	☐

** NOTES: If "Other*" is selected under Compliance Method above, please indicate how compliance has been achieved in the space provided below.*

[1] *FOOTNOTES: For each separate load type, up to 10% of the connected load may be of any type.*
[2] *Method 1: Switchboards/ motor control centers/ panelboard loads disaggregated for each load type*
Method 2: Switchboards/ motor control centers/ panelboard supply other distribution equipment with loads disaggregated for each load type
Method 3: Branch circuits serve load types individually & provisions for adding future branch curcuit monitoring
Method 4: Complete metering system measures and reports loads by type
See Chapter 8 of the Nonresidential Compliance Manual for more detail on Compliance Methods.

H. VOLTAGE DROP

Table Instructions: Please complete this table for entirely new or complete replacement electrical power distribution systems, or alterations that add, modify or replace both feeders and branch circuits to demonstrate compliance with §130.5(c). For alterations, only the altered circuits must demonstrate compliance per §141.0(b)2Piii.

01 Electrical Service Designation/ Description	02 Combined Voltage Drop on Installed Feeder/Branch Circuit Conductors Compliance Method		03 Location of Voltage Drop Calculations[1]	04 Sheet Number for Voltage Drop Calculations in Construction Documents	05 Field Inspector Pass	Fail
	☑ Voltage drop < 5%	☐ Permitted by CA Elec Code (Exception to §130.5(c))*	In construction documents	E4.2	☐	☐
MDP/ELECT RM 101	☑ Voltage drop < 5%	☐ Permitted by CA Elec Code (Exception to §130.5(c))*	In construction documents	E4.2	☐	☐
**NOTES If "Permitted by CA Elec Code*" is selected under Compliance Method above, please indicate where the exception applies in the space provided below.*						
RP1/ELECT. RM 101	Explain here why item with asterisk complies					

STATE OF CALIFORNIA

Electrical Power Distribution

NRCC-ELC-E (Created 01/20) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-ELC-E
Project Name:	Report Page: Page 4 of 5
Project Address:	Date Prepared:

[1] *FOOTNOTES: Voltage drop calculations may be attached to the permit application outside the construction documents if allowed by the Authority Having Jurisdiction. Select "attached" if applicable. If calculations will be the responsibility of the installing contractor, select "Contractor Responsible".*

I. CIRCUIT CONTROLS FOR 120-VOLT RECEPTACLES AND CONTROLLED RECEPTACLES

Table Instructions: Please complete this table for entirely new or complete replacement electrical power distribution systems to demonstrate compliance with §130.5(d). Both controlled and uncontrolled receptacles must be provided in office areas, lobbies, conference rooms, kitchen areas in office spaces, copy rooms and hotel/motel guest rooms.

01 Room Name or Description	02 Location/ Type of Controlled Receptacles	03 Shut-Off Controls	04 Permanent Durable Marking Will be Used	05 Location of Requirements in Construction Documents	06 Field Inspector Pass	Fail
OFFICE AREAS	Split-wired receptacles	Occupancy Sensor	☑	YES	☐	☐
BREAK ROOM	Split-wired receptacles	Occupancy Sensor	☑	YES	☐	☐
CONFERENCE ROOM	Within 6ft of uncontrolled receptacles	Occupancy Sensor	☑	YES	☐	☐
				Add Row	Remove Last	

** If "Other*" is selected under Compliance Method above, please indicate how compliance has been achieved in the space provided below.*

J. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://ww2.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

YES	NO	Form/Title	Field Inspector Pass	Fail
◉	○	NRCI-ELC-01-E - Must be submitted for all buildings.	☐	☐

K. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no Certificates of Acceptance applicable to electrical power distribution requirements.

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PHARIS ENGINEERING

LICENSED ARCHITECT
PAUL W. POWERS
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RENEWAL DATE 3/26/2021
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COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
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Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
CEC-NRCC DOCUMENTS

Sheet Number:
G112

STATE OF CALIFORNIA

Electrical Power Distribution

NRCC-ELC-E (Created 01/20) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-ELC-E
Project Name:	Report Page:	Page 5 of 5
Project Address:	Date Prepared:	

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Paul W. Powers	Documentation Author Signature:	Paul W. Powers
Company:	The KPA Group	Signature Date:	08/24/2020
Address:	6700 Koll Center Pkwy, Suite 125	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	Pleasanton, CA 94566	Phone:	925-872-0244

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. **The information provided on this Certificate of Compliance is true and correct.**
2. **I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)**
3. **The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.**
4. **The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.**
5. **I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.**

Responsible Designer Name:	Keith A. Pharis, PE	Responsible Designer Signature:	Keith A. Pharis, PE
Company :	Pharis Engineering	Date Signed:	05/13/2020
Address:	7110 Austinwood Rd	License:	17740
City/State/Zip:	Louisville, KY 40214	Phone:	502-471-7963

Digitally signed by Keith A. Pharis, PE
Date: 2020.05.13 12:42:56 -04'00'

STATE OF CALIFORNIA

Indoor Lighting

NRCC-LTI-E (Created 01/20) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	Report Page:	Page 2 of 7
Project Address:	Date Prepared:	

Controls Compliance (See Table H for Details)	**COMPLIES with Exceptional Conditions**
Rated Power Reduction Compliance (See Table Q for Details)	**Not Applicable**

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Table H Indoor Lighting Controls Permit Applicant Notes:
rest rooms: Restrooms are exempt
stairs: Stairwell lighting is exempt from manual switching

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. INDOOR LIGHTING FIXTURE SCHEDULE

Table Instructions: Include all permanent designed lighting and all portable lighting in offices.

Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[1]	How Wattage is determined	Total number luminaires	Exempt per §140.6(a)3	Design Watts	Field Inspector	
									Pass	Fail
D1	6" LED DOWNLIGHT	☐	☐	13	Mfr. Spec[2]	3	☐	39	☐	☐
T2	2'X2' RECESSED LED	☐	☐	30	Mfr. Spec[2]	89	☐	2,670	☐	☐
W1	2' WALL MOUNTED LED	☐	☐	18	Mfr. Spec[2]	4	☐	72	☐	☐
Z1	8' LED STRIP FIXTURE	☐	☐	36	Mfr. Spec[2]	30	☐	1,080	☐	☐
Z2	4' LED STRIP FIXTURE	☐	☐	28	Mfr. Spec[2]	31	☐	868	☐	☐
		☐	☐		Mfr. Spec[2]		☐	0	☐	☐
						Total Designed Watts CONDITIONED SPACES:		**4,729**		

STATE OF CALIFORNIA

Indoor Lighting

NRCC-LTI-E (Created 01/20) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	Report Page:	Page 1 of 7
Project Address:	Date Prepared:	

This document is used to demonstrate compliance with requirements in §110.9, §110.12(c), §130.0, §130.1, §140.6, and §141.0(b)2 for indoor lighting scopes using the prescriptive path.

A. GENERAL INFORMATION

01	Project Location (city)		04	Total Conditioned Floor Area (ft²)	
02	Climate Zone		05	Total Unconditioned Floor Area (ft²)	
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	

☑ Office ☐ Retail ☐ Warehouse ☐ Hotel/Motel ☐ School ☐ Support Areas
☐ Parking Garage ☐ High-Rise Residential ☐ Relocatable ☐ Healthcare ☐ Other (write in):

B. PROJECT SCOPE

Table Instructions: Include any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.0(b)2 for alterations. WARNING: Changing the Calculation Method in this table will result in the deletion of data previously input. If you need to change the calculation method, please open a new form or use "Save As".

Scope of Work	**Conditioned Spaces**		**Unconditioned Spaces**	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☑ New Lighting System	Area Category	12,550		
☐ Altered Lighting System				
Total Area of Work (ft²)	**12,550**			

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)1.	**Allowed Lighting Power per §140.6(b) (Watts)**						**Adjusted Lighting Power per §140.6(a) (Watts)**				**Compliance Results**
	01	02	03	04		05		06	07	08	09
	Complete Building §140.6(c)1	Area Category §140.6(c)2	Area Category Additional §140.6(c)2G (+)	Tailored §140.6(c)3 (+)	=	**Total Allowed** (Watts)	≥	Total Designed (Watts)	Adjustments PAF Control Credits §140.6(a)2 (-)	=	**Total Adjusted** (Watts) *Includes Adjustments	**05 Must be ≥ 08** §140.6
	(See Table I)	(See Table I)	(See Table J)	(See Table K)				(See Table F)	(See Table P)		
Conditioned:		5,015.1			=	**5,015.1**	≥	4,729		=	**4,729**	**COMPLIES**
Unconditioned:					=		≥			=		

Table Continued

STATE OF CALIFORNIA

Indoor Lighting

NRCC-LTI-E (Created 01/20) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	Report Page:	Page 3 of 7
Project Address:	Date Prepared:	

[1] FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per §140.6(a)4B is adjusted to be 75% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.
[2] Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c) Wattage used must be the maximum rated for the luminaire, not the lamp.

G. MODULAR LIGHTING SYSTEMS

This Section Does Not Apply

H. INDOOR LIGHTING CONTROLS (Not Including PAFs)

*Table Instructions: Please include lighting controls for conditioned and unconditioned spaces in this table. When an option having a * is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*

Building Level Controls

01	02	03	
Mandatory Demand Response §110.12(c)	Shut-Off Controls §130.1(c)	Field Inspector	
		Pass	Fail
Required > 10,000 SF	See Area/Space Level Controls	☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary/Skylit Daylighting §130.1(d)	Secondary Daylighting §140.6(d)	Interlocked Systems §140.6(a)1	Field Inspector	
								Pass	Fail
vehicle storage	Parking Garage - Parking Area	Manual ON/ OFF	Dimmer	Occ. Sensor	NA	NA	☐	☐	☐
storage	Commercial and Industrial Storage	Manual ON/ OFF	Dimmer	Occ. Sensor	NA	NA	☐	☐	☐
elect/mech/telcom	Electrical, Mechanical, Telephone Rooms	Manual ON/ OFF	Dimmer	Occ. Sensor	NA	NA	☐	☐	☐
rest rooms	Restroom	Exempt*	Exempt*	Occ. Sensor	NA	NA	☐	☐	☐
stairs	Stairwell	Exempt*	Dimmer	Occ. Sensor	NA	NA	☐	☐	☐
offices	Office (open)	Manual ON/ OFF	Dimmer	Occ. Sensor	Included	NA	☐	☐	☐

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Morrison Maierle
engineers ▪ surveyors ▪ planners ▪ scientists

PHARIS ENGINEERING

LICENSED ARCHITECT
PAUL W. POWERS
C-29713
RENEWAL DATE 2/28/2021
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
CEC-NRCC DOCUMENTS

Sheet Number:
G113

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E (Created 01/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	Report Page:	Page 4 of 7
Project Address:	Date Prepared:	

corridors	Corridor	Manual ON/ OFF	Dimmer	Occ. Sensor	NA	NA	☐	☐	☐
breakroom	Lounge/Waiting (Low Vision)	Manual ON/ OFF	Dimmer	Occ. Sensor	NA	NA	☐	☐	☐
shop/work room	General Commercial and Industrial Work - Low Bay	Manual ON/ OFF	Dimmer	Occ. Sensor	NA	NA	☐	☐	☐

*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.
EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting;
EXCEPTION 1 to §130.1(d)2

13
Plan Sheet Showing Daylit Zones:

rest rooms	*Restrooms are exempt*
stairs	*Stairwell lighting is exempt from manual switching*

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Table Instructions: Complete the table for each area complying using the Complete Building or Area Category Methods per §140.6(b). Indicate if additional lighting power allowances per §140.6(c) or adjustments per §140.6(a) are being used.

Conditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowances / Adjustment	
					Area Category	PAF
vehicle storage	Parking Garage - Parking Area	0.1	4,588	458.8	☐	☐
storage	Commercial and Industrial Storage	0.6	1,550	930	☐	☐
elect/mech/telcom	Electrical, Mechanical, Telephone Rooms	0.4	590	236	☐	☐
rest rooms	Restroom	0.65	292	189.8	☐	☐
stairs	Stairwell	0.5	875	437.5	☐	☐
offices	Office (open)	0.6	3,000	1,800	☐	☐
corridors	Corridor	0.6	590	354	☐	☐
breakroom	Lounge/Waiting (Low Vision)	0.75	332	249	☐	☐
shop/work room	General Commercial and Industrial Work - Low Bay	0.6	600	360	☐	☐
		TOTAL:	**12,417**	**5,015.1**	See Tables J or P for detail	

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E (Created 01/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	Report Page:	Page 5 of 7
Project Address:	Date Prepared:	

J. ADDITIONAL LIGHTING ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM
This Section Does Not Apply

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE
This Section Does Not Apply

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY
This Section Does Not Apply

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING
This Section Does Not Apply

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS
This Section Does Not Apply

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE
This Section Does Not Apply

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))
This Section Does Not Apply

Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS
This Section Does Not Apply

R. 80% LIGHTING POWER FOR ALTERATIONS - CONTROLS EXCEPTIONS
This Section Does Not Apply

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)
This Section Does Not Apply

T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E (Created 01/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	Report Page:	Page 6 of 7
Project Address:	Date Prepared:	

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E .Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://ww2.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
◉	○	NRCI-LTI-01-E - Must be submitted for all buildings	☐	☐
○	◉	NRCI-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐	☐
○	◉	NRCI-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room, or a theater to be recognized for compliance.	☐	☐
○	◉	NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance.	☐	☐
○	◉	NRCI-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance.	☐	☐

U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E .Additional Remarks. These documents must be provided to the building inspector during construction and any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
◉	○	NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	☐	☐
◉	○	NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	☐	☐
◉	○	NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	☐	☐
○	◉	NRCA-LTI-05-A - Must be submitted for institutional tuning power adjustment factor (PAF).	☐	☐
○	◉	NRCA-ENV-03-F - Must be submitted for daylighting design power adjustment factors (PAF).	☐	☐

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E (Created 01/20) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name:	Report Page:	Page 7 of 7
Project Address:	Date Prepared:	

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete

Documentation Author Name:	Paul W. Powers	Documentation Author Signature:	_____
Company:	The KPA Group	Signature Date:	08/24/2020
Address:	6700 Koll Center Pkwy, Suite 125	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	Pleasanton, CA 94566	Phone:	925-872-0244

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Keith A. Pharis, PE	Responsible Designer Signature:	Keith A. Pharis
Company :	Pharis Engineering	Date Signed:	05/13/2020
Address:	7110 Austinwood Rd	License:	17740
City/State/Zip:	Louisville, KY 40214	Phone:	502-471-7963

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engineers ▪ surveyors ▪ planners ▪ scientists

PHARIS ENGINEERING

LICENSED ARCHITECT
PAUL W. POWERS
C-29713
RENEWAL DATE 3/26/2021
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11–16–2020
BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
CEC-NRCC DOCUMENTS

Sheet Number:
G114

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E (Created 11/19) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
This document is used to demonstrate compliance with requirements in §110.9, §130.0, §130.2, §140.7, and §141.0(b)2L for outdoor lighting scopes using the prescriptive path.		
Project Name:	Report Page:	Page 1 of 5
Project Address:	Date Prepared:	

A. GENERAL INFORMATION

01	Project Location (city)		04	Total Illuminated Hardscape Area (ft²)
02	Climate Zone			

03 Outdoor Lighting Zone per Title 24, Part 1 §10-114 or as designated by Authority Having Jurisdiction (AH):

☐ LZ-0: Very Low - Undeveloped Parkland	☐ LZ-2: Moderate - Rural Areas	☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval
☐ LZ-1: Low - Developed Parkland	☑ LZ-3: Moderately High - Urban Areas	

B. PROJECT SCOPE

Table Instructions: Include any outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)2L for alterations.

My project consists of:

01	02
☑ New Lighting System	Must Comply with Allowances from §140.7.
☐ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? ◉ Yes ○ No

03	04	05
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100*

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Calculation of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)2L										Compliance Results		
01		02		03		04		05	06	07		08	09
General Hardscape Allowance §140.7(d)1	+	Per Application §140.7(d)2	+	Sales Frontage §140.7(d)2	+	Ornamental §140.7(d)2	+	Per Specific Area §140.7(d)2	OR Existing Power §141.0(b)2L	= **Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 Must be ≥ 08**
(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)	(See Table N)			(See Table F)	
	+		+		+		+		OR	=	≥	100	**COMPLIES**
Cutoff Compliance (See Table G for Details)										**Not Applicable**			
Controls Compliance (See Table H for Details)										**COMPLIES**			

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E (Created 11/19) — CALIFORNIA ENERGY COMMISSION19

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	Report Page:	Page 2 of 5
Project Address:	Date Prepared:	

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Table F. indicates a dropdown selection with a * requiring a note describing the compliance approach, but no notes have been entered.
Table F. Outdoor Lighting Fixture Schedule Permit Applicant Notes:
OL1: null

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

Table Instructions: For new or altered lighting systems demonstrating compliance with §140.7 (ie Table I has expanded for input), include all luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)2L (ie Table N has expanded for input), include only new luminaires being installed and replacement luminaires being installed as part of the project scope (ie, do not include existing luminaires remaining or existing luminaires being moved).

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1,2]	How Wattage is determined	Total number luminaires[2]	Luminaire Status[3]	Excluded per §140.7(a)	Design Watts	Cutoff Req. ≥ 6,200 initial lumen output §130.2(b)[4]	Field Inspector	
										Pass	Fail
OL1	LED WALL MOUNTED	☐ Linear	25	Mfr. Spec[1]	4	New	☐	100	NA: <6,200 lumens	☐	☐
						Total Designed Watts:		**100**			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b).

Reset | Add Row | Remove Last

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet for the luminaire should be indicated in column 05 instead of number of luminaires.*
[3] *Select "New" for new luminaires in a new outdoor lighting project or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope*
[4] *Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output ≥ 6,200 unless exempted by §130.2(b)*

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E (Created 11/19) — CALIFORNIA ENERGY COMMISSI19

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	Report Page:	Page 3 of 5
Project Address:	Date Prepared:	

G. CUTOFF REQUIREMENTS (BUG)

This Section Does Not Apply

H. OUTDOOR LIGHTING CONTROLS

Table Instructions: Complete this table demonstrating compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
*When an option having a * is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank. For each requirement in columns 02 through 04, do not leave the field blank, instead select NA or Exempt* from the dropdown list to indicate not applicable or an exemption.*

Mandatory Controls

01	02	03	04	05	
Area Description	Shut-Off §130.2(c)1	Auto-Schedule §130.2(c)2	Motion Sensor §130.2(c)3	Field Inspector	
				Pass	Fail
BUILDING ENTRANCES/EXITS	Photocontrol	Yes	NA: Wall ≤ 24ft	☐	☐

*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.
EX: Not permitted by health & safety to be turned off; EXCEPTION 1 to §130.2(c).

Reset | Add Row | Remove Last

I. LIGHTING POWER ALLOWANCE (per §140.7)

Table Instructions: Please complete this table for areas using the allowance calculations per §140.7. General Hardscape Allowance is per Table 140.7-A while "Use it or lost it" Allowances are per Table 140.7-B. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.	01				
	☐ General Hardscape Allowance	"Use it or lose it" Allowances (select all that apply)			
		☐ Per Application	☐ Sales Frontage	☐ Ornamental	☐ Per Specific Area
	Table I (below)	Table J	Table K	Table L	Table M

J. LIGHTING ALLOWANCE: PER APPLICATION

This Section Does Not Apply

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E (Created 11/19) — CALIFORNIA ENERGY COMMISSI19

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	Report Page:	Page 4 of 5
Project Address:	Date Prepared:	

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This Section Does Not Apply

L. LIGHTING ALLOWANCE: ORNAMENTAL

This Section Does Not Apply

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This Section Does Not Apply

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This Section Does Not Apply

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
◉	○	NRCI-LTO-01-E - Must be submitted for all buildings.	☐	☐
◉	○	NRCI-LTO-02-E - Must be submitted for a lighting control system; or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐	☐

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
◉	○	NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls area added to ≤ 20 luminaires.	☐	☐

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Morrison Maierle
engineers ▪ surveyors ▪ planners ▪ scientists

PHARIS ENGINEERING

LICENSED ARCHITECT
PAUL W. POWERS
C-29713
RENEWAL DATE 2/28/2021
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11–16–2020
BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
CEC-NRCC DOCUMENTS

Sheet Number:
G115

STATE OF CALIFORNIA

Outdoor Lighting

NRCC-LTO-E (Created 11/19) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
Project Name:	Report Page:	Page 5 of 5
Project Address:	Date Prepared:	

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete

Documentation Author Name:	Paul W. Powers	Documentation Author Signature:	Paul W. Powers
Company:	The KPA Group	Signature Date:	08/24/2020
Address:	6700 Koll Center Pkwy, Suite 125	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	Pleasanton, CA 94566	Phone:	925-872-0244

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. **The information provided on this Certificate of Compliance is true and correct.**
2. **I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)**
3. **The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.**
4. **The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.**
5. **I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.**

Responsible Designer Name:	Keith A. Pharis, PE	Responsible Designer Signature:	Keith A. Pharis, PE
Company :	Pharis Engineering	Date Signed:	05/13/2020
Address:	7110 Austinwood Rd	License:	17740
City/State/Zip:	Louisville, KY 40214	Phone:	502-471-7963

Digitally signed by Keith A. Pharis, PE
Date: 2020.05.13 12:02:08 -04'00'

STATE OF CALIFORNIA

Nonresidential Building Commissioning

NRCC-CXR-E (Created 12/19) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 1 of 5
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-08-18

This document is used to demonstrate compliance with mandatory commissioning requirements in §120.8 for nonresidential buildings and hotel/motel or high-rise residential buildings with nonresidential spaces. This document does not demonstrate compliance with commissioning requirements within Title 24, Part 11, which need to be documented separately if they apply.

A. GENERAL INFORMATION

01	Project Location (city)	Redwood City	04	Building Size (ft²)	12,696
02	Occupancy Type	Nonresidential	05	Nonresidential Conditioned Floor Area (ft²)	< 10,000 ft²
03	Project Type	Newly constructed	06	HVAC System Type	Unitary or packaged equipment each serving one zone

B. PROJECT SCOPE

Table Instructions: Based on project information provided in Table A, Table B indicates which commissioning related requirements apply per §120.8. Table B is not editable by the user.

Commissioning Requirements per §120.8			
01	Table F: Design Review Kickoff	§120.8(d)1 and §120.8(d)2	The design review kickoff meeting establishes who will play the role of the design reviewer, the project schedule and identify owner's requirements. This meeting should be conducted during schematic design.
02	Table G: Owner's Project Requirements (OPR)	§120.8(b)	This requirement does not apply.
03	Table H: Basis of Design (BOD)	§120.8(c)	This requirement does not apply.
04	Table I: Design Review	§120.8(d) and §120.8(e)	The design reviewer(s) reviews the construction documents for clarity, completeness, and adherence to the owner's goals. Commissioning measures must be included in the construction documents to facilitate the design review and commissioning process. For projects with ≥ 10,000 ft² of nonresidential conditioned floor area, or with complex mechanical systems, the design review is for adherence with the Owner's Project Requirements (OPR) and Basis of Design (BOD). This should be conducted during design.
05	Table J: Commissioning Plan	§120.8(f)	This requirement does not apply.
06	Table K: Functional Performance Testing	§120.8(g)	This requirement does not apply.
07	Table L: Documentation and Training	§120.8(h)	This requirement does not apply.
08	Table M: Commissioning Report	§120.8(i)	This requirement does not apply.

STATE OF CALIFORNIA

Nonresidential Building Commissioning

NRCC-CXR-E (Created 12/19) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 2 of 5
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-08-18

C. COMPLIANCE RESULTS

Table Instructions: Table C will indicate if the project data input into the compliance document is compliant with commissioning requirements per §120.8. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

01	02	03	04	05	06	07	08	09
Design Review Kickoff	Owner's Project Requirements	Basis of Design	Design Review	Commissioning Plan	Functional Performance Testing	Documentation and Training	Commissioning Report	Compliance Results
Table F	Table G	Table H	Table I	Table J	Table K	Table L	Table M	
Yes			Yes					**COMPLIES**
10	Design Reviewer(s) for the project include:			Paul Powers				**COMPLIES**

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Table I. indicates that a Design Review document is attached to the permit application.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. DESIGN REVIEW KICKOFF MEETING

Table Instructions: Complete this table to indicate that the design reviewer meets the qualification requirements per Title 24, Part 1 Section 10-103(a)1 and to demonstrate compliance with design review kickoff requirements per §120.8(d)2. This meeting should occur during the Schematic Design phase of the project.

Design Review Kickoff Meeting Details

01	Date of Design Review Kickoff Meeting	Jan 22, 2020
02	Meeting Attendees: (one person may play multiple roles)	

☒	Owner/ Facility Manager: Tory Newman	☐	Design Reviewer(s):
☒	Project Manager: Paul Powers	☐	Design Architect/ Engineer(s):
☐	Contractor:	☐	Certified Acceptance Test Tech(s):
☐	Commissioning Provider:	☐	Energy/ T24 Part 6 Consultant:

Design Reviewer Qualifications per Title 24, Part 1 Section 10-103(a)1

Table Continued

STATE OF CALIFORNIA

Nonresidential Building Commissioning

NRCC-CXR-E (Created 12/19) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 3 of 5
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-08-18

Table Continued

	The design reviewer(s) must be licensed professional engineers or licensed architects, or licensed contractors representing services performed by or under the direct supervision of a licensed engineer or architect, as specified in the provisions of Division 3 of the Business and Professions Code.	Do the Design Reviewer(s) meet these qualifications?	
03	In addition, for buildings with < 10,000 ft², the design reviewer(s) may be the engineer or architect of record. The design reviewer(s) may also be a qualified in-house engineer or architect with no other project involvement or a third party engineer, architect or contractor.	YES ◉	NO ○
04	The design reviewer(s) for this project will be:	Paul Powers	

Preliminary Construction Schedule			
		Start Date	**Completion Date**
05	Schematic Design	2019-12-26	2020-02-04
06	Design Development	2020-02-05	2020-03-19
07	Construction Documents	2020-03-20	2020-06-25
08	Construction	yyyy-mm-dd	yyyy-mm-dd
09	Building Turnover	yyyy-mm-dd	yyyy-mm-dd
Project Goals Related to Energy Efficiency			
10	Operational Costs	*Reduce operational costs by reducing energy usage.*	
11	Desired Building Lifespan	*50 to 70 years*	
12	Equipment Lifecycle	*Limited gas appliances used. Replaceable easy to acces mechanical systems utilized.*	
13	Project Energy Efficiency Goals	*Code compliance.*	
14	Envelope Goals	*Better than code.*	
15	HVAC System Goals	*Building Management Systems with occpuancy user schedule controls.*	
16	Indoor Lighting System Goals	*Reduced number of fixtures.*	
17	Outdoor Lighting System Goals	*Safety lighting only. Cut-off fixtures. LED type for low energy usage.*	
18	Water Heating System Goals	*None*	
19	Equipment and System Specifications	*N/A*	
20	Operations and Maintenance	*Training for dozens of hours specified.*	

G. OWNER'S PROJECT REQUIREMENTS (OPR)

This Section Does Not Apply

KPA ENGINEERS ARCHITECTS
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PHARIS ENGINEERING

LICENSED ARCHITECT
PAUL W. POWERS
C-29713
RENEWAL DATE 2/26/2021
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:

CEC-NRCC DOCUMENTS

Sheet Number:

G116

STATE OF CALIFORNIA
Nonresidential Building Commissioning
NRCC-CXR-E (Created 12/19) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 4 of 5
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-08-18

H. BASIS OF DESIGN (BOD)
This Section Does Not Apply

I. CONSTRUCTION DOCUMENT DESIGN REVIEW CHECKLIST
Table Instructions: The design reviewer(s) may fill out the table below or attach a design review document that lists the items checked by the design reviewer(s) during the construction document review. For buildings with ≥ 10,000 ft² conditioned floor area, the design review will ensure the construction documents meet the Owner's Project Requirements (Table G.) and the Basis of Design Documents (Table H.). For buildings with < 10,000 ft² conditioned floor area, the design review will ensure the construction documents meet the goals documented in Table F. during the Design Review Kickoff.

		YES	NO
01	Attaching Completed Design Review Documentation?	◉	○

J. COMMISSIONING PLAN
This Section Does Not Apply

K. FUNCTIONAL PERFORMANCE TESTING
This Section Does Not Apply

L. DOCUMENTATION AND TRAINING
This Section Does Not Apply

M. COMMISSIONING REPORT
This Section Does Not Apply

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
There are no Certificates of Installation applicable to commissioning requirements.

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
Although there are no "CXR" Certificates of Acceptance required to document commissioning requirements, Certificates of Acceptance may be used to supplement functional performance testing required by §120.8(g).

STATE OF CALIFORNIA
Nonresidential Building Commissioning
NRCC-CXR-E (Created 12/19) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-CXR-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 5 of 5
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-08-18

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
I certify that this Certificate of Compliance documentation is accurate and complete

Documentation Author Name:	Carly Svenvold, EI, LEED AP BD+C	Documentation Author Signature:	Carly Svenvold
Company:	Morrison Maierle, Inc.	Signature Date:	8-18-2020
Address:	2880 Technology Blvd W	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	Bozeman/MT/59718	Phone:	406-587-0721

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:
1. **The information provided on this Certificate of Compliance is true and correct.**
2. **I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)**
3. **The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.**
4. **The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.**
5. **I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.**

Responsible Designer Name:	Jody Waverek	Responsible Designer Signature:	Jody Waverek
Company :	Morrison Maierle, Inc.	Date Signed:	8-18-2020
Address:	125 Schoolhouse Loop	License:	M32827
City/State/Zip:	Kalispell/MT/59901	Phone:	406-752-2216

STATE OF CALIFORNIA
Solar Ready Areas
NRCC-SRA-E (Created 11/19) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SRA-E
This document is used to demonstrate compliance with mandatory requirements in §110.10 for newly constructed buildings which are either high-rise multifamily ten stories or fewer, hotel/motel ten stories or fewer or all other nonresidential buildings three stories or fewer. It is also used to demonstrate compliance for additions to these building types which add more than 2,000 ft² of roof area. Alterations or additions of less than 2,000 ft² of roof area are not required to comply with §110.10.		
Project Name: Grant Yard Radio Shop	Report Page:	Page 1 of 5
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-08-25

A. GENERAL INFORMATION

01	Project Location (city)	Redwood City	04 Building Type	Other nonresidential bldg 3 stories or fewer
02	Climate Zone	3	05 Construction Type	New Construction
03	☐ Roof is designed for vehicle traffic, parking or for heliport			

B. PROJECT SCOPE
Table Instructions: Select the compliance path the project is using to comply per §110.10(b)1B.

My project consists of (check one):

01	
☑ Provide Solar Ready Area no exceptions	The project has allocated a solar zone on the roof plan per requirements in §110.10(b), as documented in Table F.
☐ Exception to Solar Ready Area: Installed Solar Photovoltaic System	The project includes a permanently installed solar electric system having a nameplate DC power rating, measured under Standard Test Conditions, of no less than one watt per square foot of roof area, as documented in Table G.
☐ Exception to Solar Ready Area: Installed Solar Water Heating System	The project is a hotel/motel or high-rise multifamily occupancy and includes a permanently installed domestic solar water-heating system complying with §150.1(c)8Biii and Reference Residential Appendix RA4, as documented in Table H.
☐ Exception to Solar Ready Area: Smart Thermostat and Alternative Energy Efficiency Measure	The project is a high-rise multifamily occupancy where all thermostats in each dwelling unit comply with §110.12(a) AND at least one additional measure listed in Exception 4 to §110.10(b)1B is installed, as documented in Table I.

C. COMPLIANCE RESULTS
Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance or see the applicable Table referenced below

Allocated Solar Zone				Installed PV System				Installed SWH System				Smart Tstat and Alternative EE Measure		Compliance Results
01		02		03		04		05		06		07	08	09
Required Minimum Area (ft²)	≤	Designated Area (ft²)	OR	Required Minimum DC Power Rating (Watts)	≤	Designed DC Power Rating (Watts)	OR	Required Minimum Solar Savings Fraction	≤	Designed/ Rated Solar Savings Fraction	OR	JA5 Compliant Thermostat Specified?	Alternative Energy Efficiency Measure	
(See Table F)				(See Table G)				(See Table H)				(See Table I)		
1,374.9	≤	1,753	OR		≤		OR		≤		OR			COMPLIES
Shown on sheet A103 Location in construction documents showing the location for inverters and metering equipment and a pathway for the routing of conduit/ plumbing to the electrical service/ water heating system per §110.10(c).														COMPLIES

STATE OF CALIFORNIA
Solar Ready Areas
NRCC-SRA-E (Created 11/19) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SRA-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 2 of 5
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-08-25

D. EXCEPTIONAL CONDITIONS
This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS
This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. ALLOCATED SOLAR ZONE
Table Instructions: Complete this table if the project is designating a solar zone to comply with §110.10(b)1B. For new construction consider total roof area; for additions consider newly added roof area.

Required Minimum Solar Zone

01	02	03	04	05	06			07	08
Minimum Solar Zone Area Calculation Method	Total New or Added Roof Area (ft²)	Total New or Added Roof Area Covered with Skylights (ft²)	Minimum Solar Zone Based on Total or Added Roof Area (0.15 x (Roof-Skylt)) (ft²)	Method/Tool(s) Used to Determine Annual Solar Access for Potential Zones[1]	Potential Solar Zone Areas: Roof Areas with ≥ 70% Solar Access			Minimum Solar Zone Based on Potential Zone (0.5 x (Total Potential Zone)) (ft²)	Required Minimum Solar Zone Area (ft²)
					Low-Sloped Area (≤ 2:12 pitch) (ft²)	Steep-Sloped Area (> 2:12 pitch), Oriented 90° - 300° (ft²)	Total Potential Solar Zone Area (ft²)		
Total New or Added Roof Area	9,166	0	1,374.9						1,374.9

Designated Solar Zone Subareas

09	10	11	12	13	14	15	16	17	18	19
Subarea Name or Tag	Building Plan Reference	Roof or Overhang Slope (Low ≤ 2:12 pitch) (Steep > 2:12 pitch)	Is Steep-Sloped Roof or Overhang between 90 and 300 degrees?	Subarea Complies with Title 24, Part 9	Solar Zone Subarea Free of Obstructions per §110.10(b)3A	Subarea is Required Distance from Potential Obstructions per §110.10(b)3B	Is the Smallest Dimension 5 feet or greater?	Min. Area Required per Subarea (ft²)	Designated Area (ft²)	Subarea Complies?

Table Continued

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LICENSED ARCHITECT
PAUL W. POWERS
C-29713
RENEWAL DATE 2/28/2021
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11-16-2020
BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
CEC-NRCC DOCUMENTS

Sheet Number:
G117

STATE OF CALIFORNIA
Solar Ready Areas
NRCC-SRA-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SRA-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 3 of 5
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-08-25

Designated Solar Zone Subareas

09	10	11	12	13	14	15	16	17	18	19
Subarea Name or Tag	Building Plan Reference	Roof or Overhang Slope (Low ≤ 2:12 pitch) (Steep > 2:12 pitch)	Is Steep-Sloped Roof or Overhang between 90 and 300 degrees?	Subarea Complies with Title 24, Part 9	Solar Zone Subarea Free of Obstructions per §110.10(b)3A	Subarea is Required Distance from Potential Obstructions per §110.10(b)3B	Is the Smallest Dimension 5 feet or greater?	Min. Area Required per Subarea (ft^2)	Designated Area (ft^2)	Subarea Complies?
Roof Plan	A103	Low-Sloped		Yes	Yes	Yes	Yes	80	1,753	COMPLIES
								Total Designated Solar Zone Area (ft^2):	**1,753**	

Interconnection Pathways	
Location in construction documents showing the location for inverters and metering equipment and a pathway for the routing of conduit/ plumbing to the electrical service/ water heating system per §110.10(c).	Shown on sheet A103

[1] *FOOTNOTE: This field is used to document how the percentage of annual solar access was determined per §110.10(b)1B. Solar access is the ratio of solar insolation including shade to the solar insolation without shade. Shading from obstructions located on the roof or any other part of the building shall not be included in the determination of annual solar access.*

G. PERMANENTLY INSTALLED SOLAR PHOTOVOLTAIC (PV) SYSTEM
This Section Does Not Apply

H. PERMANENTLY INSTALLED SOLAR HOT WATER SYSTEM
This Section Does Not Apply

I. SMART THERMOSTATS AND ALTERNATIVE EFFICIENCY MEASURE
This Section Does Not Apply

STATE OF CALIFORNIA
Solar Ready Areas
NRCC-SRA-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SRA-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 4 of 5
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-08-25

J. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
○	◉	NRCI-SPV-01-E - Must be submitted for all newly installed Photovoltaic Systems (PV) being used to comply with §110.10(b)1B for high-rise multifamily, Hotel/Motel buildings less than 10 stories and nonresidential buildings less than 4 stories.	☐	☐
○	◉	NRCI-STH-01-E - Must be submitted for all newly installed Solar Water Heating systems being used to comply with §110.10(b)1B for high-rise multifamily, Hotel/Motel buildings less than 10 stories and nonresidential buildings less than 4 stories.	☐	☐

K. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
There are no Certificates of Acceptance applicable to solar ready requirements.

STATE OF CALIFORNIA
Solar Ready Areas
NRCC-SRA-E (Created 11/19) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-SRA-E
Project Name: Grant Yard Radio Shop	Report Page:	Page 5 of 5
Project Address: 752 Chestnut Street, Redwood City, CA 94063	Date Prepared:	2020-08-25

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete

Documentation Author Name:	Agnes Gao	Documentation Author Signature:	Agnes Gao (Digitally signed by Agnes Gao, Date: 2020.08.25 14:24:24 -07'00')
Company:	The KPA Group	Signature Date:	2020-08-25
Address:	6700 Koll Center Parkway, Suite 125	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	Pleasanton, CA 94566	Phone:	925.223.8217 ext 211

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. **The information provided on this Certificate of Compliance is true and correct.**
2. **I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)**
3. **The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.**
4. **The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.**
5. **I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.**

Responsible Designer Name:	Paul Powers	Responsible Designer Signature:	
Company :	The KPA Group	Date Signed:	2020-08-25
Address:	6700 Koll Center Parkway, Suite 125	License:	C-29713
City/State/Zip:	Pleasanton, CA 94566	Phone:	925.223.8217 ext 207

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LICENSED ARCHITECT
PAUL W. POWERS
C-29713
RENEWAL DATE 3/26/2021
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11-16-2020
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Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
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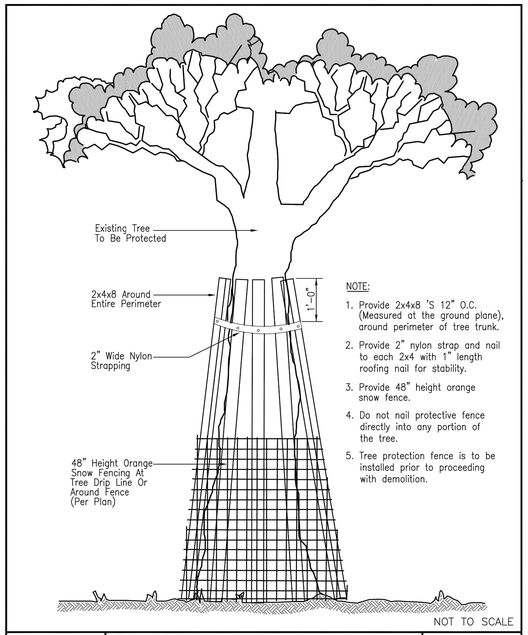
Sheet Title:
CEC-NRCC DOCUMENTS

Sheet Number:
G118



Redwood City California Founded 1867

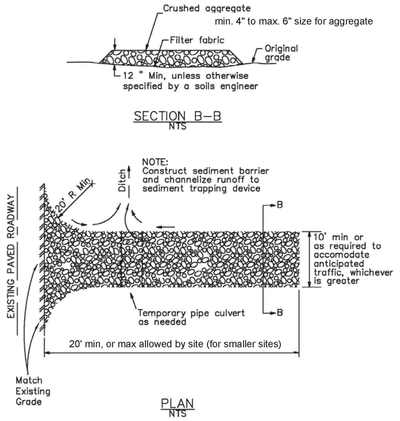
DATE: 06/23/14

CITY OF REDWOOD CITY
ENGINEERING AND TRANSPORTATION

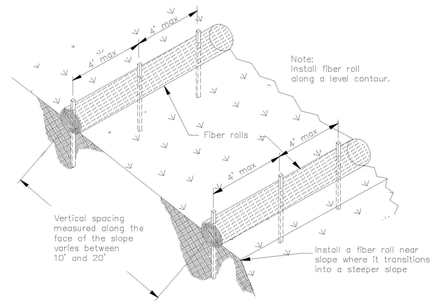
TREE PROTECTION DETAIL

STANDARD DETAIL
Z - 14
SHT 1 OF 1

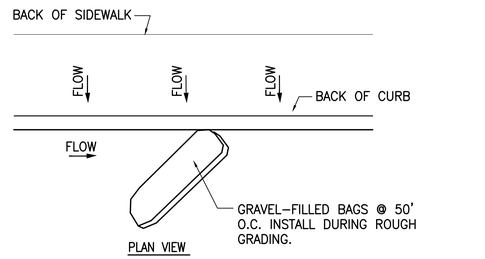
Stabilized Construction Entrance/Exit TC-1



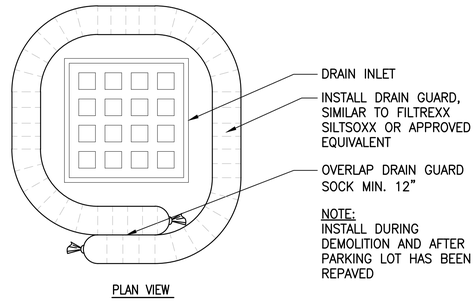
Fiber Rolls SE-5



NOTES:
If more than one fiber roll is placed in a row, the rolls must be overlapped, not abutted.
Turn the ends of the fiber roll up-slope to prevent runoff from going around the roll.

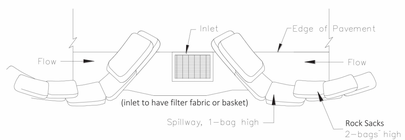


1 GRAVEL BAG BERM
NOT TO SCALE



2 DRAIN INLET PROTECTION
NOT TO SCALE

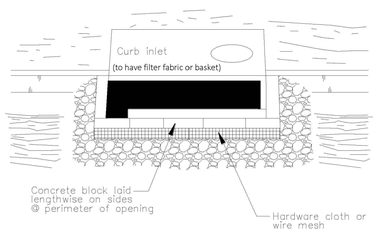
Storm Drain Inlet Protection SE-10

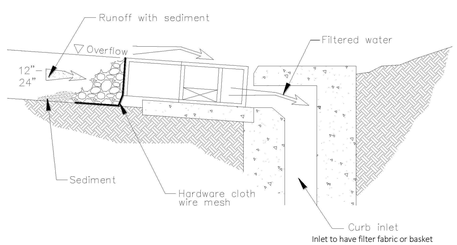


.\PDF Inlet-Protection_Page_3.png

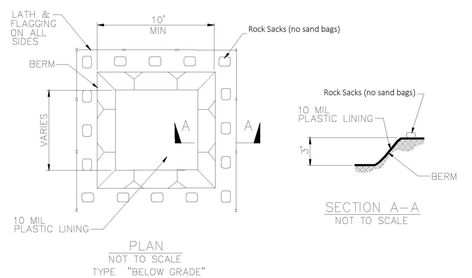
NOTES:
1. Intended for short–term use.
2. Use to inhibit non–storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed.
5. Not applicable in areas with high silts and clays without filter fabric.
6. Protection can be effective even if it is not immediately adjacent to the inlet provided that the inlet is protected from potential sources of pollution.

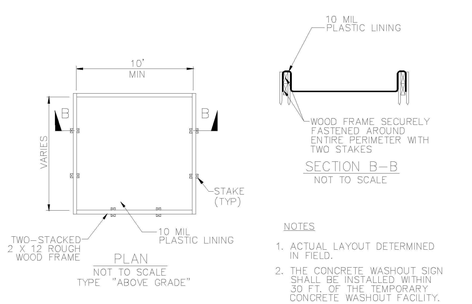
Storm Drain Inlet Protection SE-10





Concrete Waste Management WM-8





NOTES
1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

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BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:

EROSION CONTROL DETAILS

Sheet Number:

G501

1 SURROUNDING SITE FEATURES

LEGEND:

- A — (E) WEIGHTS AND MEASURES BUILDING TO BE DEMOLISHED
- B — (E) COUNTY OWNED BUILDING TO BE IMPACTED DURING CONSTRUCTION PHASE
- C — (E) COUNTY OWNED BUILDING NOT TO BE IMPACTED DURING CONSTRUCTION PHASE
- D — (E) SURROUNDING COMMERCIAL BUILDING
- E — (E) APARTMENT COMPLEX, PARKING LOT, AND CARPORT
- F — (E) SINGLE FAMILY RESIDENCE
- COUNTY YARD PROPERTY LINE
- DESIGNATED CONSTRUCTION ZONE

KEYED NOTES:

1. COUNTY CONTROLLED ENTRANCE TO REMAIN
2. (E) COUNTY CONTROLLED ENTRANCE TO BE REMOVED FROM SERVICE VIA CONSTRUCTION
3. COUNTY VEHICLE / EMPLOYEE PARKING
4. PUBLIC STREET PARKING
5. DEAD END PUBLIC STREET

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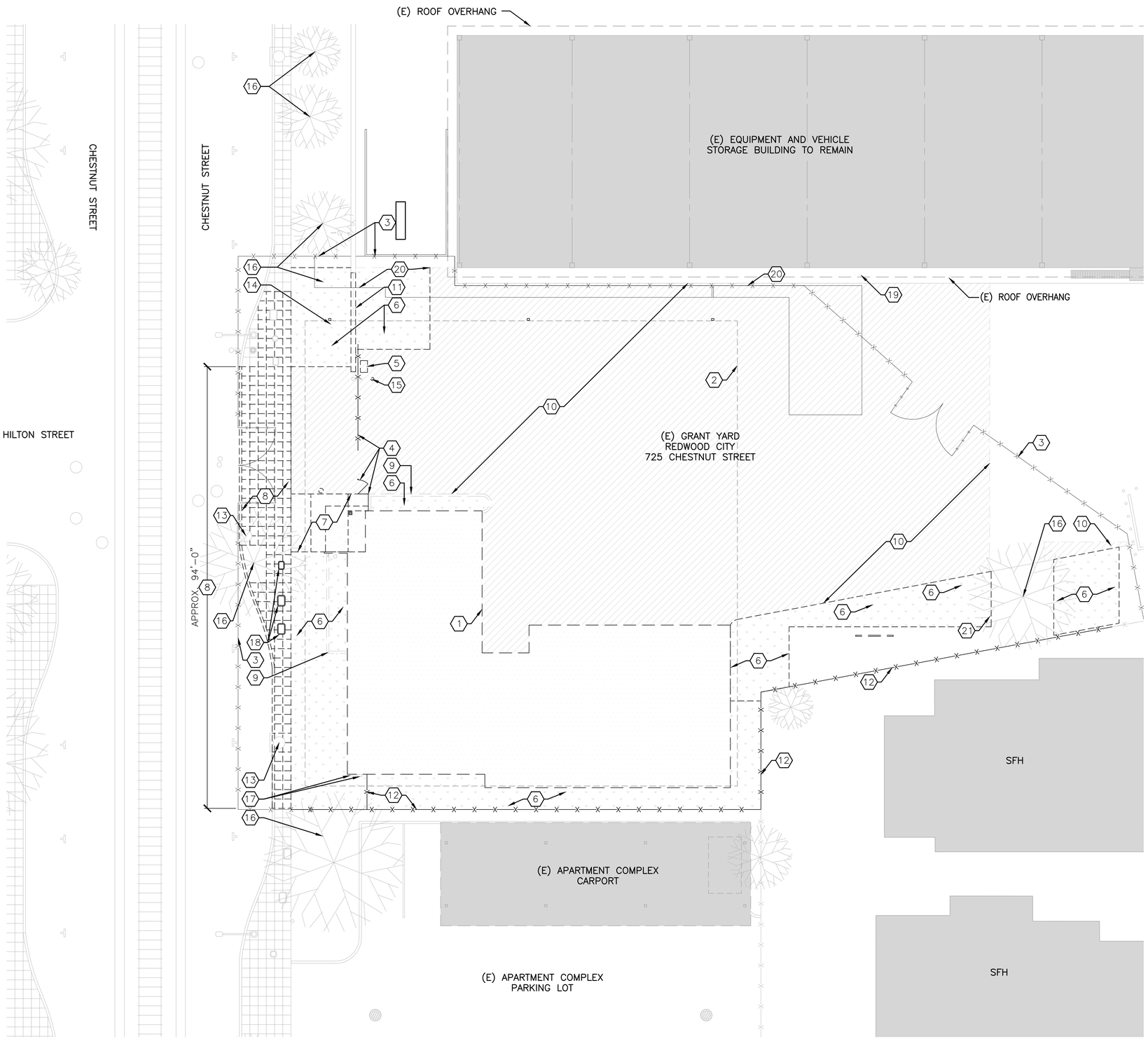
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
SURROUNDING SITE AREA

Sheet Number:
C001



PLAN NORTH

1 SITE DEMOLITION PLAN
3/32" = 1'-0"
0 8' 16' 24'

GENERAL NOTES:

1. VERIFY ALL SITE CONDITIONS TO BE DEMOLISHED. BRING ANY UNFORESEEN CIRCUMSTANCES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR RESOLUTION.
2. DISCONNECT ALL UTILITIES PRIOR TO DEMOLITION OF (E) BUILDING. CAP AND SEAL (E) UTILITIES AT PERIMETER OF ASPHALT REMOVAL LIMITS.
3. SEE SHEET CD141 FOR SITE UTILITY DEMOLITION PLAN.
4. SEE SHEET G001 FOR ALL LEGENDS/SYMBOLS NOT LISTED ON THIS SHEET.
5. FOR ITEMS NOT NOTED AND SHOWN AS DEMOLITION, SEE KEYED NOTES IN DEMOLITION PACKAGE BID SET.
6. EXCAVATE, PREPARE, COMPACT, GRADE EXISTING SITE SOIL PER GEOTECHNICAL REPORT.
7. EXCAVATE AND REMOVE 12 INCHES OF EXISTING SOILS AT NEW LANDSCAPE AREAS.
8. REMOVE UNDERGROUND ABANDONED UTILITIES WITHIN NEW BUILDING FOOTPRINT

KEYED NOTES:

1. ~~OUTLINE OF DEMOLISHED WEIGHTS AND MEASURES BUILDING~~
2. OUTLINE OF NEW BUILDING
3. PROVIDE TEMPORARY SECURITY FENCE AROUND PERIMETER OF SITE WORK, PROVIDE 16'-0 WIDE ACCESS GATES INTO SITE
4. ~~REMOVE (E) CHAIN LINK FENCE, GATE, DOOR AND POSTS, TURN OVER TO COUNTY~~
5. ~~(E) FENCE GATE OPERATOR TO BE DISCONNECTED, REMOVED, AND TURNED OVER TO COUNTY~~
6. CLEAR AND GRUB (E) VEGETATION
7. ~~DEMOLISH (E) CONCRETE FLATWORK AND STAIRS~~
8. DEMOLISH (E) CONCRETE SIDEWALK AND CURB
9. ~~DEMOLISH (E) CONCRETE LANDSCAPING CURB~~
10. ~~SAWCUT AND REMOVE (E) ASPHALT PAVING~~
11. ~~REMOVE PORTION OF (E) MASONRY WALL~~
12. (E) FENCE TO REMAIN DURING CONSTRUCTION AND BE REPLACED WITH NEW FENCE AFTER CONSTRUCTION
13. (E) STORM DRAIN INLET TO REMAIN, BE UNDISTURBED, AND BE INTEGRATED INTO NEW CONCRETE SIDEWALK AND CURB
14. (E) STORM DRAIN MANHOLE TO REMAIN, MODIFY RIM ELEVATION TO FIT (N) CONCRETE GRADE, SEE SITE PLAN SHEET C100 AND NEW GRADING PLAN C121
15. ~~DEMOLISH (E) BOLLARD~~
16. (E) TREE TO REMAIN AND BE PROTECTED
17. ~~(E) UTILITY FIXTURES TO BE DISCONNECTED AND REMOVED, SEE UTILITY DEMOLITION CD141~~
18. (E) UTILITY FIXTURES TO BE REMOVED OR MODIFIED TO CORRELATE WITH NEW DESIGN NEEDS, SEE UTILITY PLAN C141
19. (E) CONCRETE TRENCH TO REMAIN
20. EXCAVATE FOR NEW INFILTRATION OR BIORETENTION TRENCH, SEE DETAIL C505
21. REMOVE TREE STUMP

LEGEND:

- (E) BUILDING TO REMAIN
- DEMOLISHED BUILDING FOOTPRINT
- EXCAVATE (E) ASPHALT AND SUB-GRADE TO ALLOW FOR REMOVAL OF (E) UTILITIES
- REMOVE (E) CONCRETE WALKWAY
- REMOVE (E) CONCRETE WALKWAY

DEMOLITION OF BUILDING AND PAVEMENT BY OTHERS

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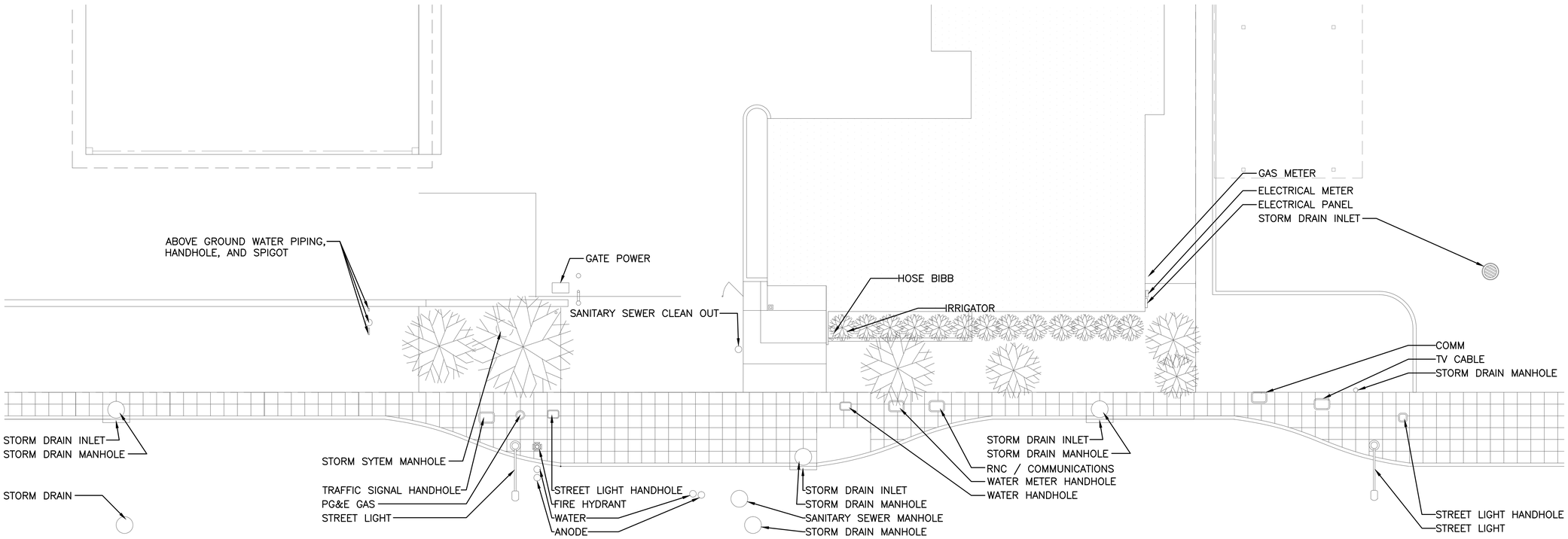
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
SITE DEMOLITION PLAN

Sheet Number:
CD101



PLAN NORTH

1 EXISTING UTILITY BOXES AND VALVES

1/8" = 1'-0"

0 4' 8' 16'

GENERAL NOTES:

1. ADJUST (RAISE/LOWER) AND RELOCATE, IF NECESSARY, EXISTING UTILITY BOXES, VALVES AND OTHER SIMILAR SITE FEATURES.
2. THE EXISTING SIDEWALK, CURBS AND PAVEMENTS WILL BE REMOVED, DEMOLISHED AND REBUILT. SEE CD 141 AND C100 FOR ADDITIONAL INFORMATION.
3. INVESTIGATE EXISTING SITE FOR ADDITIONAL SITE FEATURES, BOXES AND VALUES NOT SHOW ON THIS SHEET.

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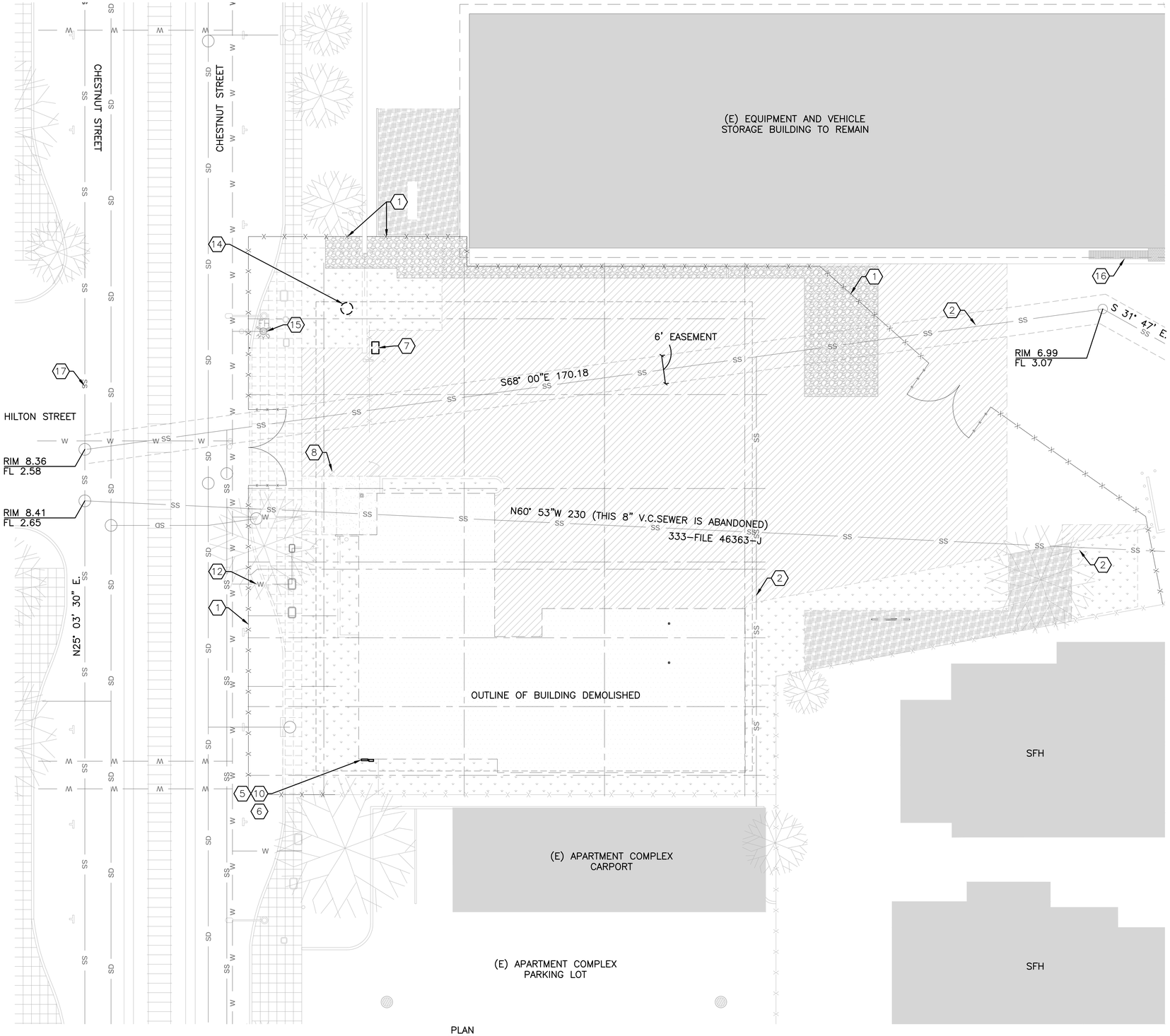
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
EXISTING UTILITY STRUCTURES

Sheet Number:
CD140



GENERAL UTILITY DEMOLITION NOTES:

1. VERIFY ALL SITE CONDITIONS TO BE DEMOLISHED. BRING ANY UNFORESEEN CIRCUMSTANCES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR RESOLUTION.
2. ANY REQUIRED UTILITY DISCONNECTION IS TO BE COMPLETED PRIOR TO DEMOLITION OF EXISTING BUILDING. CAP AND SEAL EXISTING UTILITIES AT PERIMETER OF ASPHALT REMOVAL LIMITS, U.O.N.
3. SEE SHEET CD140 FOR LOCATION OF VALVE BOXES, UTILITY BOXES AND OTHER VISIBLE UTILITY STRUCTURES.

LEGEND:

- SD — STORM DRAIN
- DW — WATER
- SS — SANITARY SEWER
- E — ELECTRICAL
- T — TELECOM
- GAS — GAS

KEYED NOTES:

1. TEMPORARY SECURITY FENCE AROUND PERIMETER OF SITE WORK
2. (E) SANITARY SEWER PIPING TO REMAIN, NEW BUILDING CONNECTION TO BE MADE TO (E) PIPING, SEE C141.
3. (E) STORM DRAIN PIPING TO REMAIN
4. NOT USED
5. ~~DISCONNECT (E) ELECTRICAL CONNECTION~~
6. ~~DISCONNECT AND REMOVE (E) PG&E METER, DEMOLISH AND CAP EXISTING GAS PIPING. (E) UTILITY METER TO BE REMOVED AND TURNED OVER TO UTILITY PROVIDER~~
7. ~~(E) FENCE GATE OPERATOR TO BE DISCONNECRED, REMOVED, AND TURNED OVER TO COUNTY~~
8. RELOCATE (E) UTILITY FIXTURE
9. NOT USED
10. ~~(E) ELECTRICAL SERVICE PANEL TO BE DISCONNECTED AND REMOVED~~
11. NOT USED
12. ~~(E) WATER LINE TO BE DISCONNECTED AND TEMPORARILY CAPPED DURING CONSTRUCTION, SEE UTILITY PLAN C141 FOR RECONNECTION~~
13. NOT USED
14. (E) STORM DRAIN INLET TO BE RELOCATED, MODIFY RIM ELEVATION TO INTEGRATE WITH (N) GRADE, SEE C141, C101 AND C121
15. (E) FIRE HYDRANT TO REMAIN
16. (E) CATCH BASIN TO REMAIN
17. (E) 15" SEWER LINE, V.C.

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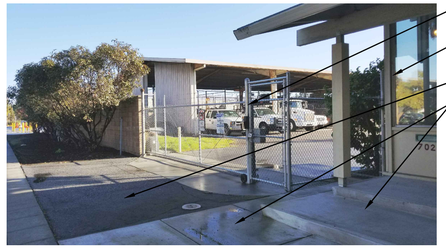
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
UTILITY DEMOLITION PLAN

Sheet Number:
CD141

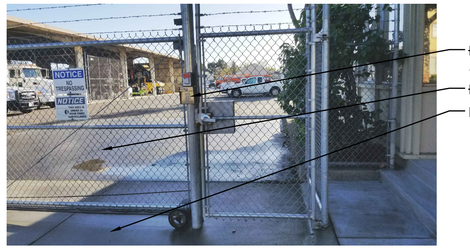


- ~~REMOVE (E) CHAINLINK GATE AND MAN DOOR~~
- ~~DEMOLISH (E) BUILDING IN ITS ENTIRETY~~
- DEMOLISH (E) ASPHALT DRIVE
- ~~DEMOLISH (E) CONCRETE STEPS AND WALK~~

5 PHOTO

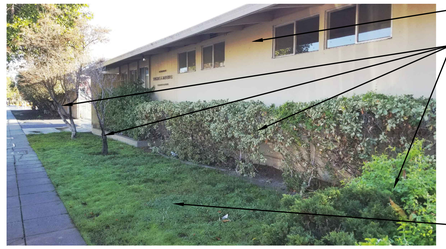
- ~~DEMOLISH (E) BUILDING IN ITS ENTIRETY~~
- ~~REMOVE (E) VEGETATION~~

1 PHOTO



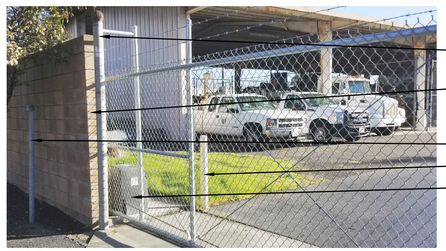
- ~~DISCONNECT AND~~ RELOCATE (E) ACCESS ELECTRONICS
- ~~DEMOLISH (E) ASPHALT DRIVE~~
- DEMOLISH (E) CONCRETE DRIVE

6 PHOTO



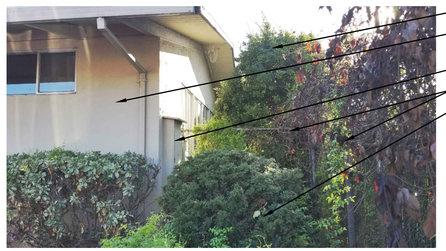
- ~~DEMOLISH (E) BUILDING IN ITS ENTIRETY~~
- ~~REMOVE (E) VEGETATION~~
- ~~CLEAR AND GRUB (E) LAWN~~

2 PHOTO



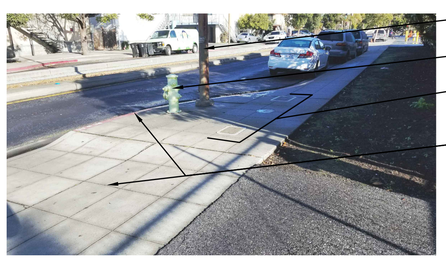
- ~~(E) OVERHEAD GATE STRUCTURE TO BE DEMOLISHED~~
- ~~DEMOLISH PORTION OF (E) MASONRY WALL,~~ REFINISH TO MATCH (E)
- ~~DEMOLISH (E) METAL POLE~~
- ~~DEMOLISH (E) BOLLARD~~
- ~~DISCONNECT AND~~ RELOCATE (E) GATE OPERATOR

7 PHOTO



- ~~REMOVE (E) VEGETATION~~
- ~~DEMOLISH (E) BUILDING IN ITS ENTIRETY~~
- ~~DISCONNECT (E) ELECTRICAL PANEL~~
- ~~DEMOLISH (E) FENCE~~
- ~~REMOVE (E) VEGETATION~~

3 PHOTO



- (E) STREET LIGHT AND POLE
- (E) FIRE HYDRANT
- (E) UTILITY STRUCTURES TO REMAIN AND HAVE HEIGHT ADJUSTED FOR NEW CONCRETE
- DEMOLISH (E) CONCRETE SIDEWALK, DRIVE, AND CURB

8 PHOTO

- ~~DEMOLISH (E) BUILDING IN ITS ENTIRETY~~
- (E) NEIGHBORING APARTMENT COMPLEX CARPORT TO REMAIN UNDISTURBED
- (E) TREE TO REMAIN AND BE PROTECTED
- ~~DEMOLISH (E) FENCE~~

4 PHOTO

DEMOLITION OF BUILDING AND PAVEMENT BY OTHERS

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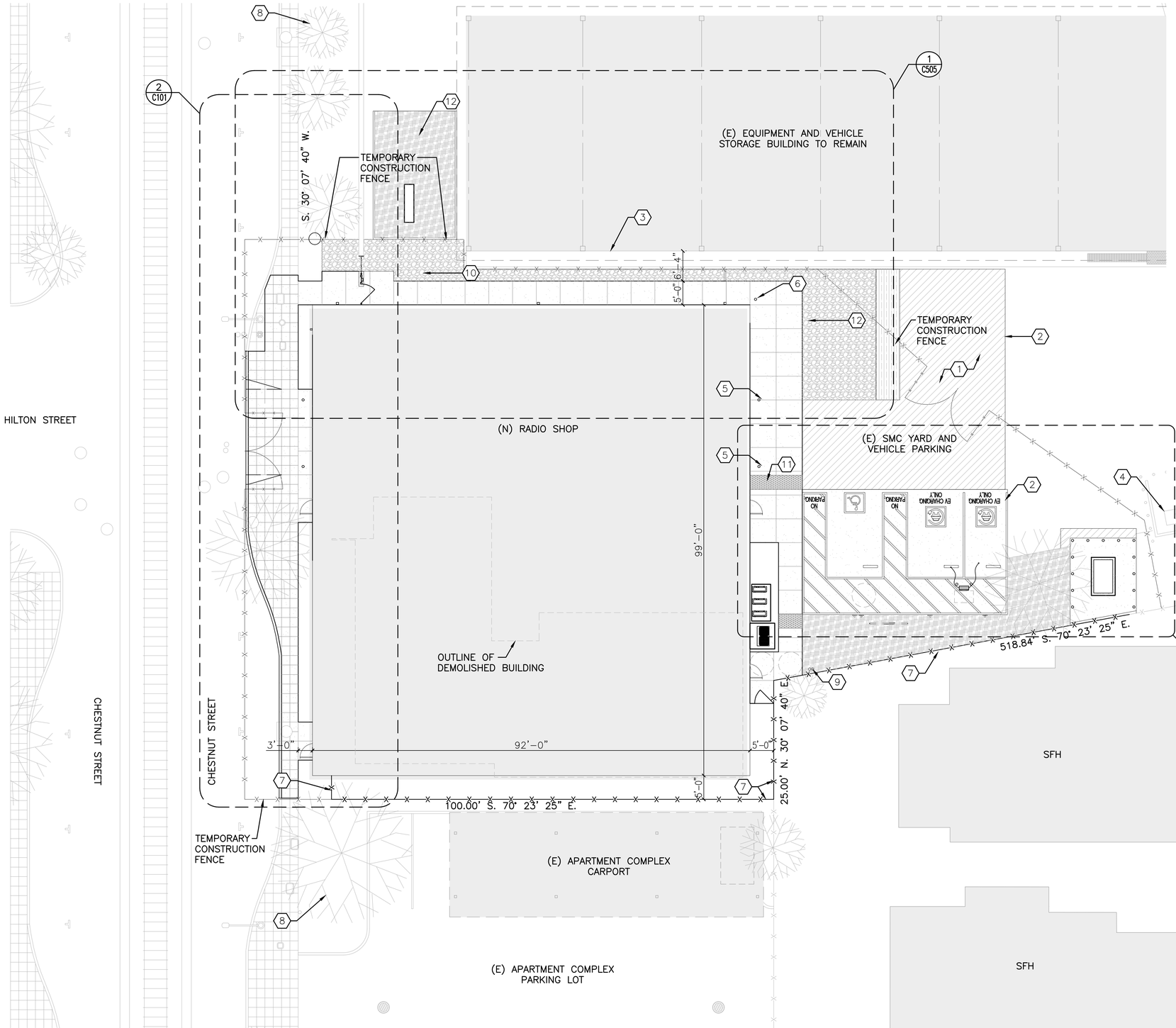
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
SITE DEMOLITION PHOTOS

Sheet Number:
CD501



GENERAL NOTES:

1. VERIFY ALL SITE CONDITIONS. BRING ANY UNFORESEEN CIRCUMSTANCES TO THE ATTENTION OF THE ARCHITECT/ ENGINEER FOR RESOLUTION.
2. COORDINATE NEW CONSTRUCTION WORK (PARTICULARLY FENCING) WITH ADJACENT SINGLE FAMILY HOME, 639 PINE STREET, DURING DEMOLITION AND INSTALLATION.

LEGEND:

- (N) ASPHALT REPLACEMENT
- (N) CONCRETE
- (N) SITE SIGN
- (N) INFILTRATION TRENCH
- ADA TURN RADIUS, 60 INCHES

KEYED NOTES:

1. (N) ASPHALT PAVEMENT, SEE DETAIL 1/C501
2. TIE–IN (N) TO (E) ASPHALT, SEE DETAIL 2/C501
3. NEW 1 HOUR RATED FIRE ASSEMBLY, SEE DETAIL 7/A503
4. (E) FLUID TANK, MASONRY WALL, AND BOLLARDS TO REMAIN, FUNCTIONALITY OF AND ACCESS TO AREA SHALL REMAIN UNINTERRUPTED THROUGH CONSTRUCTION PHASE
5. (N) STEEL PIPE BOLLARD, SEE DETAIL 12/C501
6. (N) STEEL PIPE BOLLARD. MAINTAIN 42" CLEAR PATH BETWEEN OUTSIDE EDGE OF OF BOLLARD AND OUTSIDE EDGE OF ACCESSIBLE PATH, SEE DETAIL 12/C501
7. (N) FENCE, SEE 11/C502
8. (E) TREE TO REMAIN AND BE PROTECTED DURING CONSTRUCTION PHASE
9. PROVIDE TWO, TEN FEET HIGH, 6 INCH DIAMETER GALVANIZED STEEL BOLLARDS WITH SEALED TOP WITH 3 FEET DIAMETER, 6 FEET DEEP CONCRETE FOOTING, AT LOCATION PER OWNER.
10. INFILTRATION BASIN, SEE C505
11. 36" X 132" TRUNCATED DOMES, SEE 8/C502
12. BIORETETION AREA, SEE C505

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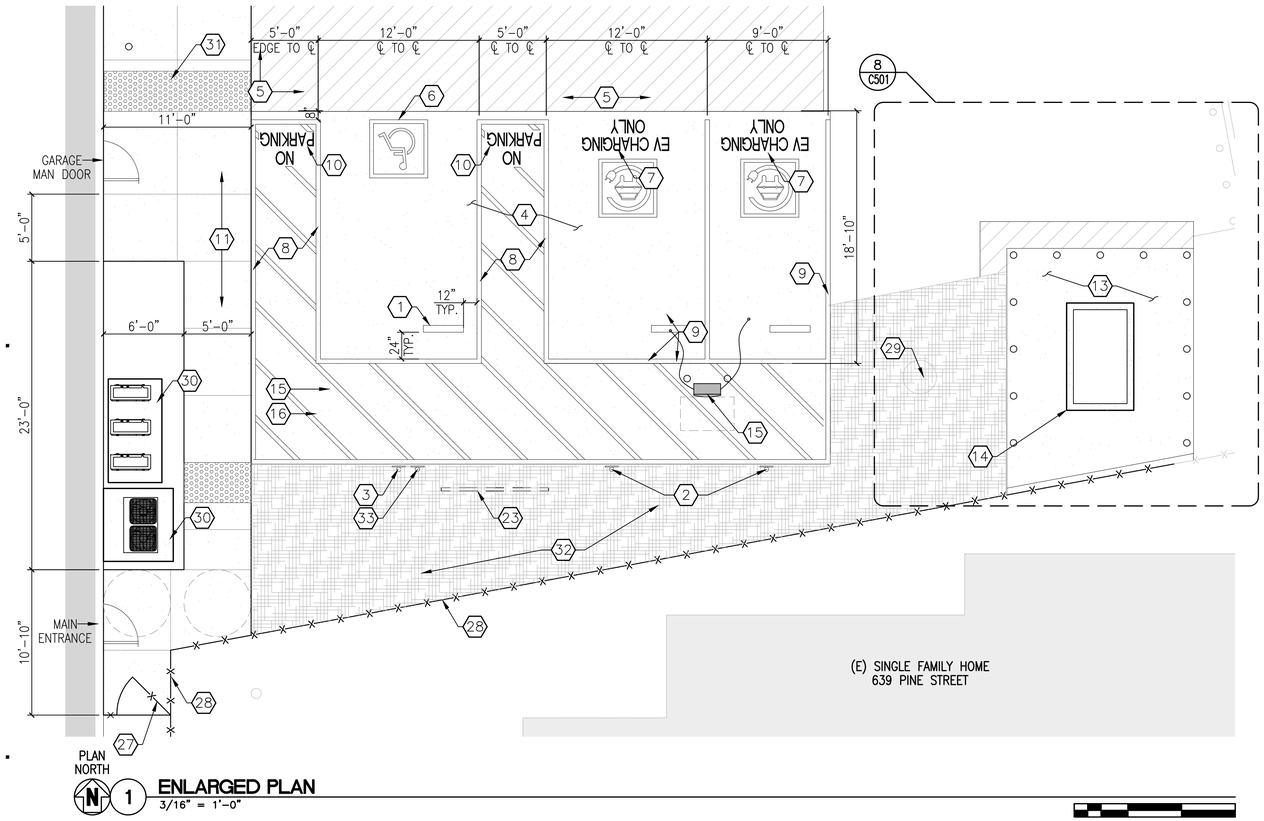
Revisions:
2 11-16-2020

BID SET

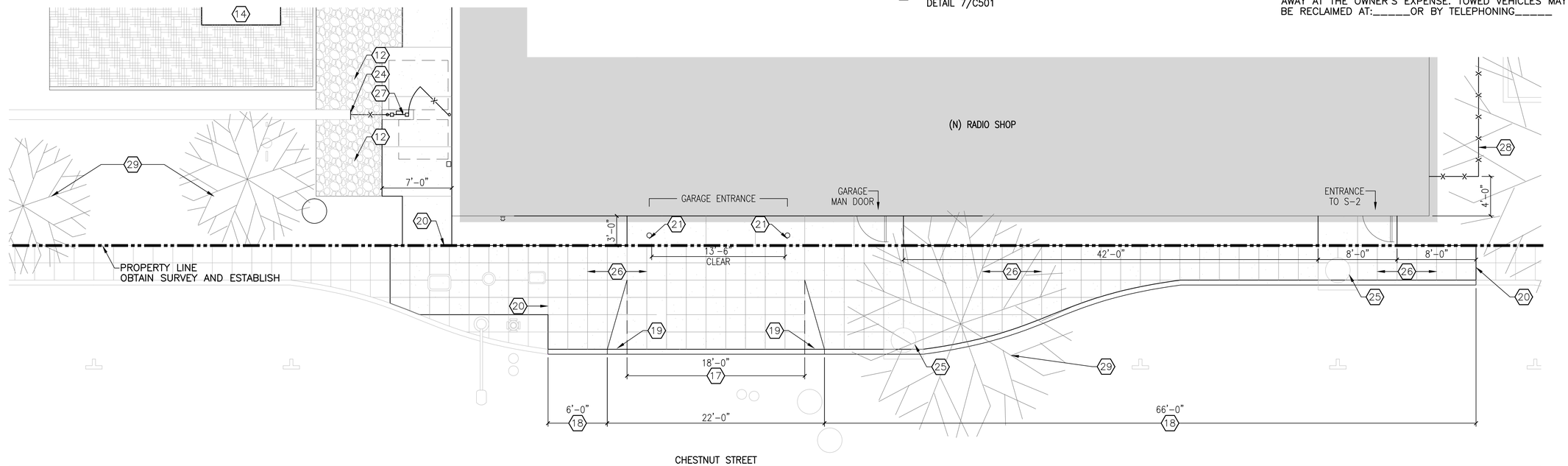
Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
SITE PLAN

Sheet Number:
C100



1 ENLARGED PLAN
3/16" = 1'-0"



2 ENLARGED PLAN
3/16" = 1'-0"

GENERAL NOTES:

1. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
2. SEE SHEET G001 FOR LEGENDS AND ABBREVIATIONS
3. ALL PAVEMENTS AND PAVEMENT MARKINGS ARE TO MEET ADA AND CBC ACCESSIBILITY REQUIREMENTS.
4. SEE SHEET C121 FOR TOPOGRAPHY PLAN

LEGEND:

- (N) ASPHALT REPLACEMENT
- (N) CONCRETE
- (N) SITE SIGN
- ADA TURN RADIUS, 60 INCHES

KEYED NOTES:

1. (N) CONCRETE WHEEL STOP, TYP. SEE DETIAL 1/C502
2. (N) ELECTRIC VEHICLE PARKING SIGN, SEE DETAIL 5/C502, SIGN "A"
3. (N) VAN ACCESSIBLE/ELECTRIC VEHICLE PARKING SIGN, SEE DETAIL 5/C502, SIGN "B"
4. (N) CONCRETE PARKING PAD (APPROX. 1,133 S.F.), ACCESSIBLE PARKING STALL AND ACCESS AISLES TO BE 1:48 MAX. SLOPE IN ALL DIRECTIONS. SEE DETAIL 4/C501
5. (N) ASPHALT PAVEMENT SURROUNDING NEW ADA PARKING SPACES. TRANSITION ASPHALT TO MATCH NEW CONCRETE EDGE, SEE DETAIL 1,2/C501
6. INTERNATIONAL SYMBOL OF ACCESSIBILITY, SEE DETAIL 3/C502
7. 12" MINIMUM HIGH WHITE PAINTED LETTERING PER CBC 11B-812
8. ACCESS AISLE SHALL BE MARKED WITH A BLUE (FS15090) PAINTED BORDERLINE AROUND PERIMETER OF ACCESS AISLE. STRIPING INSIDE ACCESS AISLE SHALL BE 4" WIDE AND 36" O.C., PAINTED WHITE,
9. ELECTRIC PARKING STALL MARKED WITH 4" WIDE GREEN (FS34230) PAINTED BORDERLINE
10. 12" HIGH WHITE PAINTED LETTERING, SEE DETAIL 2/C502
11. (N) CONCRETE WALK, SEE DETAIL 3/C501, SLOPE NOT TO EXCEED 1:20 ALONG PATH OF TRAVEL, CROSS SLOPE NOT TO EXCEED 1:48
12. INFILTRATION TRENCH, SEE 6/C502
13. (N) CONCRETE SLAB (APPROX. 230 S.F.)
14. (N) CONCRETE EQUIPMENT PAD SEE DETAIL 8,9,11/C501
15. (N) ELECTRIC VEHICLE CHARGING STATION, RACEWAY ONLY, NO EQUIPMENT OR CONNECTORS.
16. (N) ACCESSIBLE CLEAR SPACE
17. (N) DECORATIVE CONCRETE DRIVE AND FLUSH CURB, SEE DETAIL 7/C501
18. (N) DECORATIVE CONCRETE WALK AND CURB, MATCH CURVE OF PARKING AREA CURB TO SIMILAR EXISTING, MATCH JOINTS TO EXISTING, SEE DETAIL 3/C501
19. (N) CURB CUT AND TRANSITION, SEE CITY STANDARD DETAIL 7/C501
20. TIE IN (N) CONCRETE WALK TO (E) CONCRETE WALK WHERE TWO ABUT, SEE DETAIL 5/C501
21. (N) STEEL PIPE BOLLARD, TYP, SEE DETAIL 12/C501
22. (N) STEEL PIPE BOLLARD, MAINTAIN 42" CLEAR BETWEEN BOLLARD AND OUTSIDE EDGE OF PAINTED ACCESSIBLE PATH, SEE DETAIL 12/C501
23. BIKE RACK
24. REFINISH MASONRY WALL TO MATCH (E)
25. (E) UTILITY STRUCTURE TO REMAIN ADJUST RIM/INLET ELEVATION BASED ON ELEVATION OF NEW CONCRETE, SEE UTILITY PLAN C141 AND TOPOGRAPHY PLAN C121
26. PORTION OF (N) CONCRETE THAT IS CONSIDERED PUBLIC WALKWAY TO HAVE 1:20 MAX SLOPE ALONG PATH OF TRAVEL AND 1:48 MAX CROSS SLOPE
27. (N) CHAINLINK FENCE, GATE, AND KNOCK BOX, SEE DETAIL 9/C502
28. (N) CHAINLINK FENCE
29. (E) TREE TO REMAIN AND BE PROTECTED DURING CONSTRUCTION PHASE
30. (N) HVAC UNITS ON CONCRETE EQUIPMENT PADS, SEE TYPICAL DETAIL 6/C501
31. 36" X 132" TRUNCATED DOMES, SEE 8/C502
32. EXISTING LANDSCAPE TO REMAIN
33. 17" WIDE X 22" HIGH SIGN IN LETTERS WITH A MINIMUM HEIGHT OF 1" STATING "UNAUTHORIZED VEHICLES PARKED IN DESIGNATED ACCESSIBLE SPACES NOT DISPLAYING DISTINGUISHING PLACARDS OR SPECIAL LICENSE PLATES ISSUED FOR PERSONS WITH DISABILITIES WILL BE TOWED AWAY AT THE OWNER'S EXPENSE. TOWED VEHICLES MAY BE RECLAIMED AT:_____OR BY TELEPHONING_____

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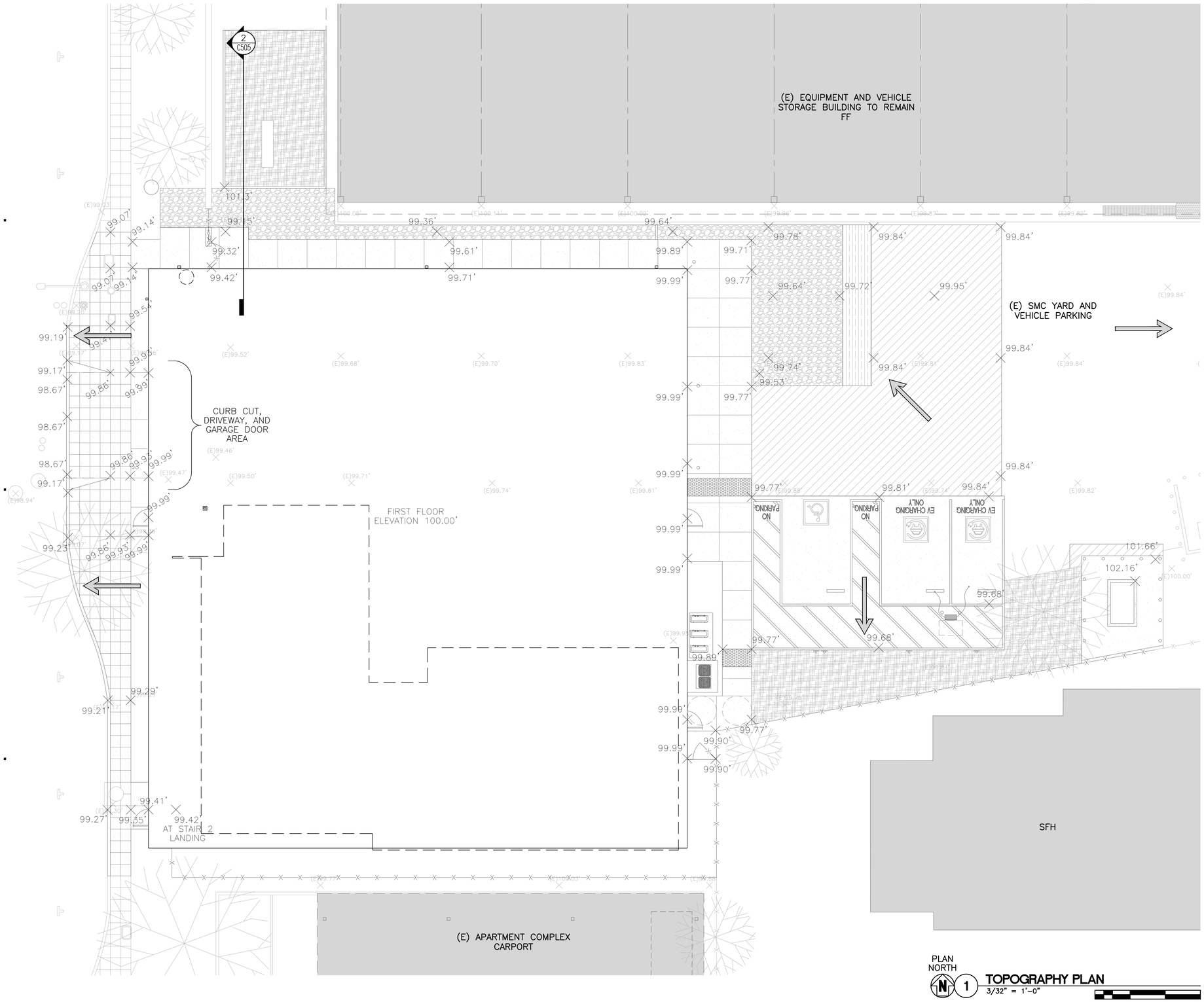
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
SITE ENLARGED PLANS

Sheet Number:
C101



GENERAL NOTES:

1. CONTRACTOR TO FIELD VERIFY AND ADJUST ELEVATION TO MEET FIELD CONDITIONS.
2. CHANGE IN LEVEL AT DOORWAYS BETWEEN 1/4 INCH AND 1/2 INCH SHALL BE BEVELED WITH A SLOPE NO GREATER THAN ONE UNIT VERTICAL TO TWO UNITS HORIZONTAL.
3. SAWCUT, REGRADE AND INSTALL ASPHALT PATCHING FOR SMOOTH GRADE TRANSITIONS.
4. MAXIMUM CONCRETE WALKWAY CROSS SLOPES SHALL NOT EXCEED 1:48.
5. NO PAVEMENT TRANSITION SHALL EXCEED 1/2".
6. SLOPE GRADE AWAY FROM BUILDING TOWARDS PERIMETER CONCRETE PADS AND SIDEWALKS.
7. SEE C502 FOR CURB RAMPS AND DETAILED CURB RAMP SPOT ELEVATIONS.
8. CONTRACTOR TO FIELD VERIFY AND ADJUST ELEVATIONS TO MEET FIELD CONDITIONS.
9. MAINTAIN A MAX. OF 4" DROP FROM NEW WALKWAY TO LANDSCAPED AREAS.
10. MAINTAIN MAXIMUM 2% SLOPE AWAY FROM EXTERIOR DOORS FOR MINIMUM OF 5'-0".
11. MAINTAIN MAXIMUM 5% SLOPE ALONG ACCESSIBLE PATH OF TRAVEL AND 2% CROSS SLOPE ON ACCESSIBLE PATH OF TRAVEL.

LEGEND:

- NEW ASPHALT PAVING
- NEW CONCRETE PAVING
- 1.23' NEW ELEVATION GRADE POINTS
- (E)1.23' EXISTING ELEVATION GRADE POINTS

PLAN NORTH

N 1 **TOPOGRAPHY PLAN**
3/32" = 1'-0"

0 8' 16' 24'

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C-29713
RENEWAL DATE 3/28/2021
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
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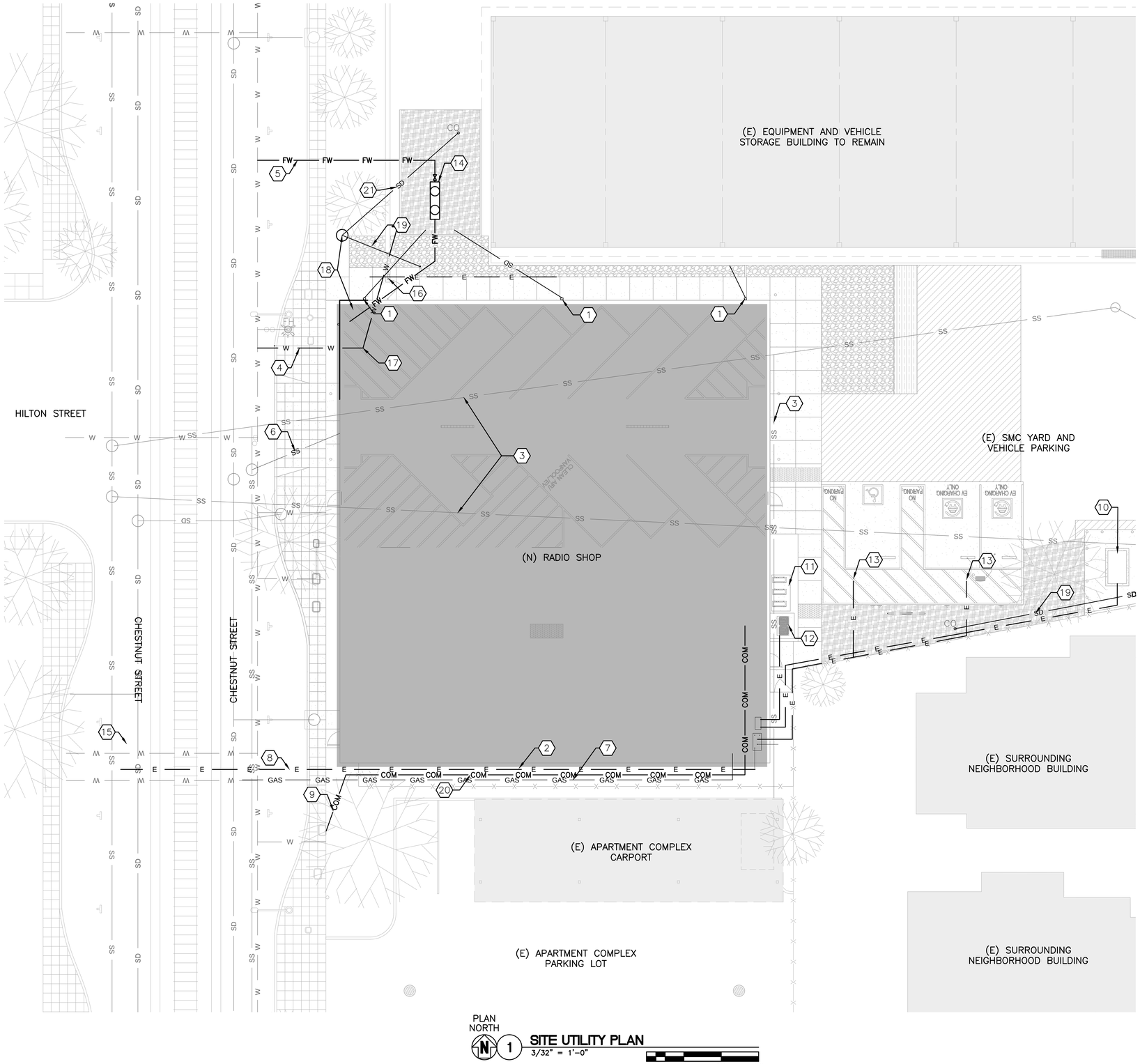
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
TOPOGRAPHY PLAN

Sheet Number:
C121



GENERAL UTILITY NOTES:

1. FIELD VERIFY PRESENCE OF EXISTING UTILITY STRUCTURES AND CONDITIONS, BRING ANY ISSUES OR DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.

LEGEND:

SD	STORM DRAIN
DW	DOMESTIC WATER
SS	SANITARY SEWER
E	ELECTRICAL
COM	TELECOM
	OVERHEAD LINE
FW	FIRE WATER
SEC	SPARE ELEC. CONDUIT
GAS	GAS
CO	CLEANOUT

KEYED NOTES:

1. BUILDING DRAIN LEADER/HUB DRAIN, CONNECT TO STORM MANHOLE
2. NEW 6"ø STORM DRAIN PIPE, CONNECT TO (E) STORM DRAIN MANHLOLE
3. PROTECT (E) SANITARY SEWER PIPING
4. NEW 2" DOMESTIC WATER LINE, SEE P1.1
5. NEW 4" FIRE WATER LINE
6. NEW SANITARY SEWER LINE CONNECT TO (E) MANHOLE. ADJUST MANHOLE PER UTILITY FOR NEW CONNECTION, SEE P1.1
7. NEW GAS LINE
8. NEW BORED ELECTRICAL LINE, SEE E3.1
9. NEW TELECOM LINE
10. NEW BACK-UP GENERATOR ON CONCRETE EQUIPMENT PAD
11. NEW MINI SPLIT UNITS ON CONCRETE EQUIPMENT PAD, SEE M1.1
12. NEW CONDENSING UNITS ON CONCRETE EQUIPMENT PAD, SEE M1.1
13. NEW ELECTRIC CAR CHARGING STATION, RACEWAY ONLY
14. NEW BACKFLOW PREVENTER, WITH 1" CONDUIT AND SENSOR CONDUCTOR.
15. EXISTING UNDERGROUND ELECTRICAL TRANSFORMER VAULT
16. NEW 1" CONDUIT AND CONDUCTOR TO GATE ACCESS CONTROL
17. RELOCATE WATER VALVE AND PIPING
18. REMOVE (E) STORM DRAIN STRUCTURE. PROVIDE NEW STORM DRAIN MANHOLE STRUCTURE AND PIPING. CONNECT TO EXISTING SYSTEMS
19. INFILTRATION TRENCH OUTLET CONNECT TO STORM MANHOLE
20. (2) 1" CONDUIT FOR COMMUNICATION LINES
21. PERFORATED UNDERDRAIN PIPE, SEE C505

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2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
SITE UTILITY PLAN

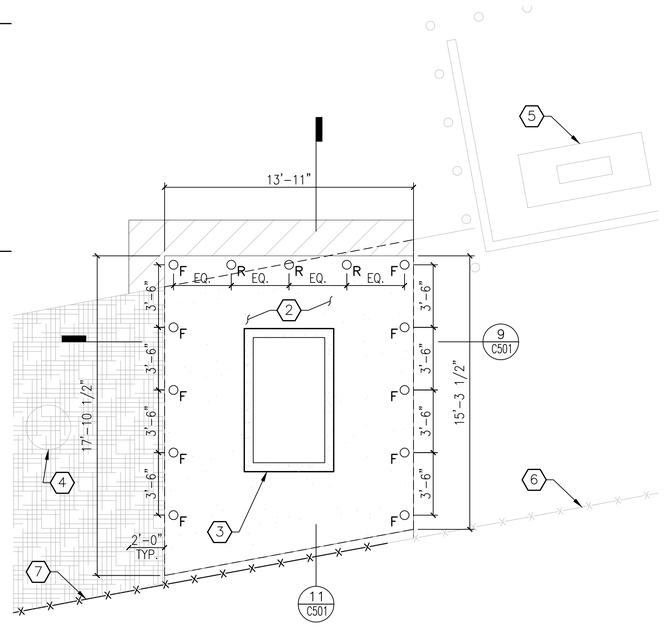
Sheet Number:
C141

LEGEND:

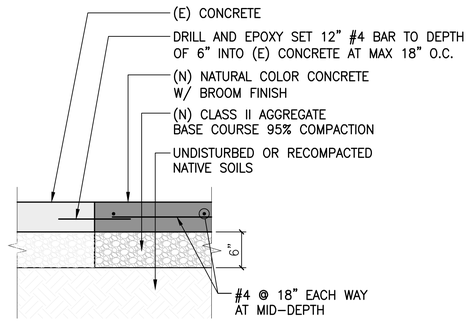
- ○F (N) FIXED BOLLARD, SEE DETAIL 12/C501
- ○R (N) REMOVABLE BOLLARD, SEE DETAIL 10/C501
- (N) ASPHALT REPLACEMENT
- (N) CONCRETE

KEYED NOTES:

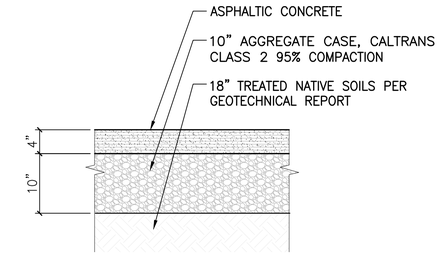
1. NOT USED.
2. (N) CONCRETE SLAB (APPROX. 230 S.F.)
3. (N) CONCRETE EQUIPMENT
4. (E) TREE TO REMAIN AND BE PROTECTED DURING CONSTRUCTION PHASE (BRANCHING NOT SHOWN FOR CLARITY)
5. (E) FLUID TANK, MASONRY WALL, AND BOLLARDS TO REMAIN, ENSURE AREA REMAINS ACCESSIBLE AND OPERATIONAL DURING CONSTRUCTION PHASE
6. (E) PERIMETER CHAIN LINK FENCE TO REMAIN
7. (N) PERIMETER CHAN LINK FENCE, MATCH (E) FENCE



8 EMERGENCY GENERATOR AREA - PARTIAL ENLARGED PLAN



5 TYPICAL (N) TO (E) CONCRETE WALK
NOT TO SCALE



1 TYPICAL ASPHALT PAVING
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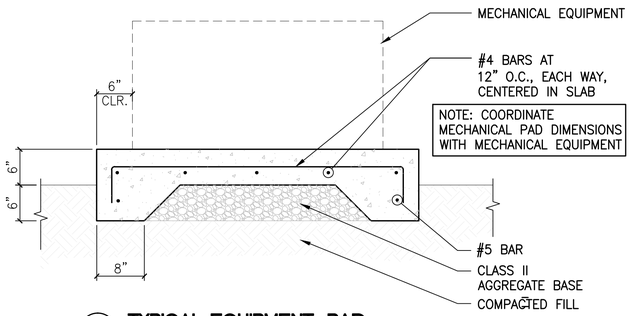
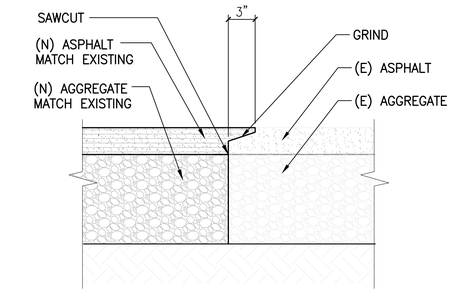
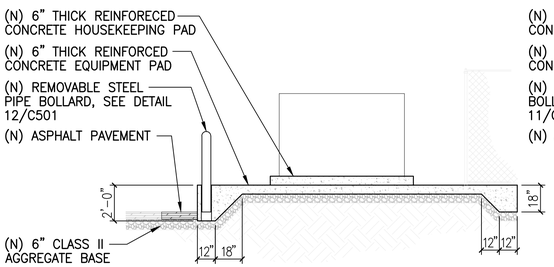


6 TYPICAL EQUIPMENT PAD
1" = 1'-0"



2 TYPICAL NEW TO EXISTING PAVING
NOT TO SCALE



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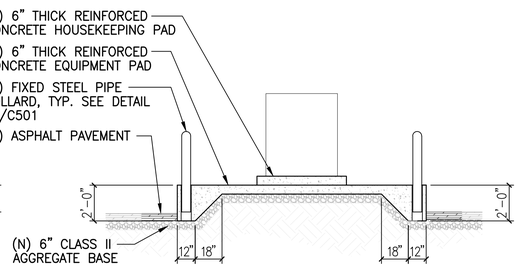

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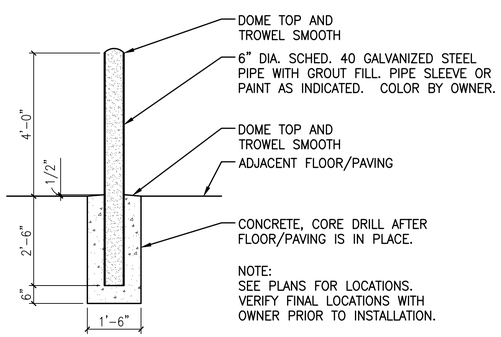
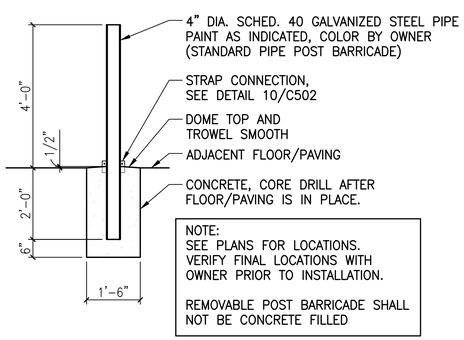
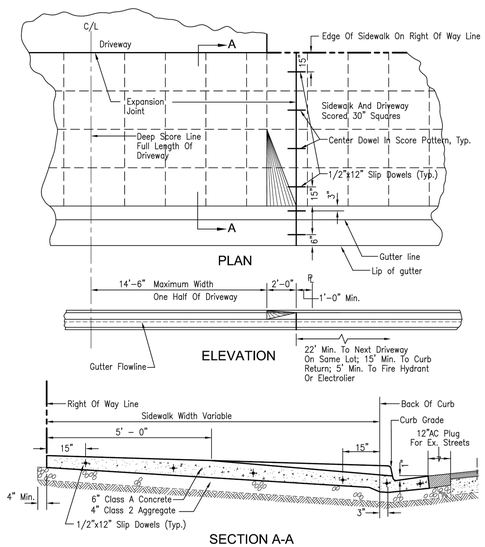


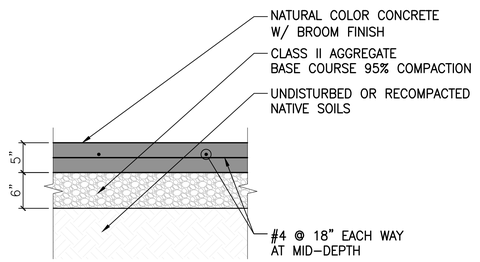
12 FIXED STEEL PIPE BOLLARD
1/2" = 1'-0"



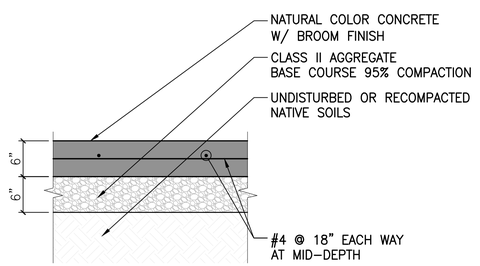
10 REMOVABLE STEEL PIPE BOLLARD
1/2" = 1'-0"



7 CITY STANDARD DETAIL C-2 DRIVEWAY APPROACH DETAIL
NOT TO SCALE



3 TYPICAL SITEWORK SLAB-ON-GRADE
NOT TO SCALE



4 TYPICAL DRIVEWAY SLAB-ON-GRADE
NOT TO SCALE

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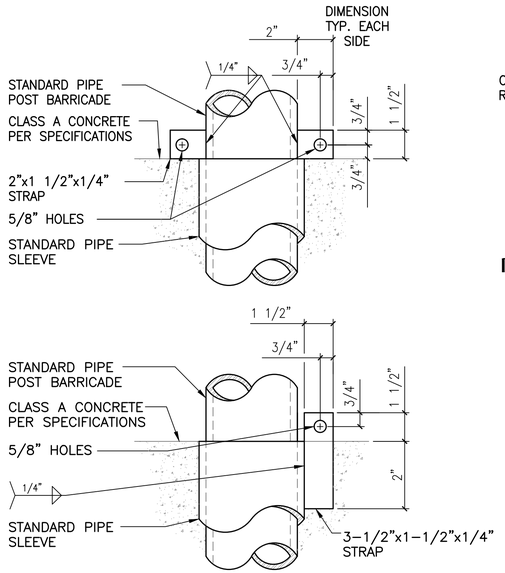
Revisions:
2 11-16-2020

BID SET

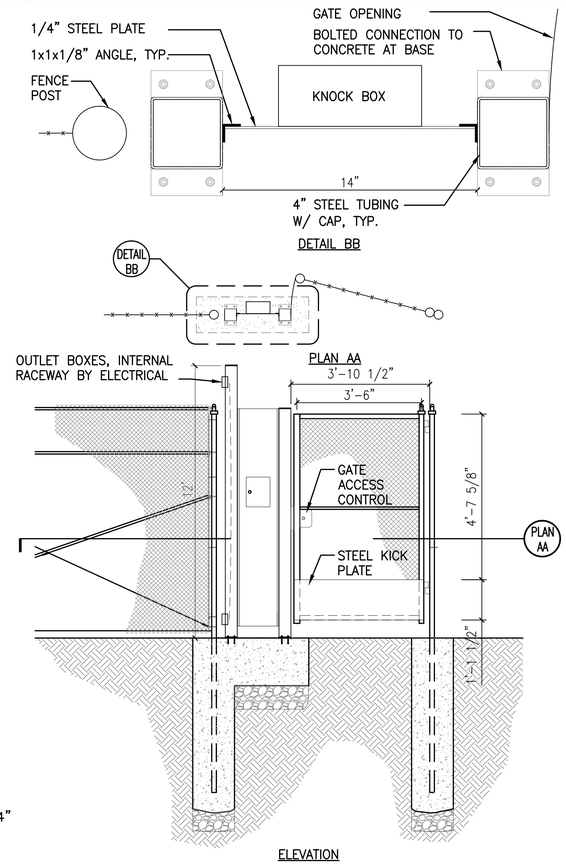
Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
SITE DETAILS

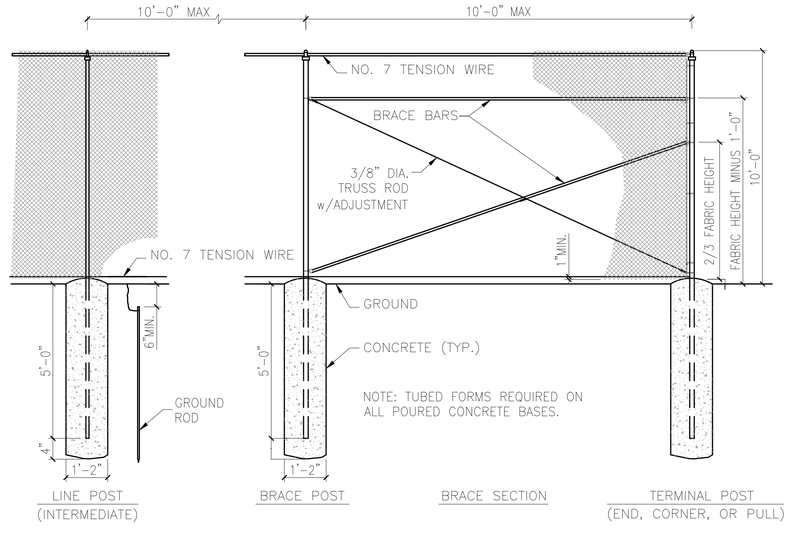
Sheet Number:
C501



10 BOLLARD STRAP DETAIL
1 1/2" = 1'-0"



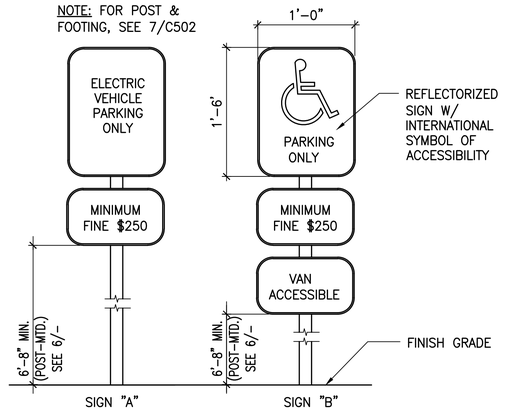
9 FENCE GATE
1/2" = 1'-0"



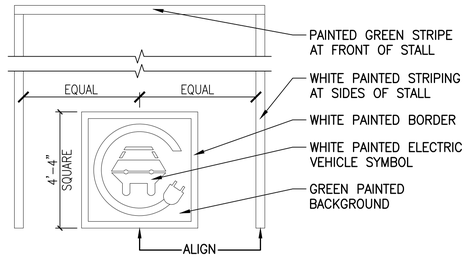
11 CHAIN LINK FENCE CLASS E
1/2" = 1'-0"

NOTES: CLASS E FENCE

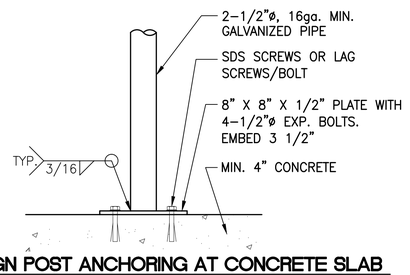
1. SELVAGE & TENSION WIRES: FENCES 60" AND UNDER IN TERMINAL AREAS SHALL HAVE KNUCKLE SELVAGE TOP AND BOTTOM. HAZARDOUS AND SECURITY AREAS TO BE FENCED SHALL HAVE BARBED SELVAGE TOP AND BOTTOM. WHEN RAILS ARE OMITTED, NO. 7 GAUGE TENSION WIRES OF THE SAME MATERIAL AS THE FABRIC SHALL BE PROVIDED.
2. FABRIC FASTENERS: MINIMUM 3/16"x3/4" STRETCHER BAR, BANDED TO TERMINAL POSTS, OR INTEGRAL FABRIC FITTINGS ON TERMINAL POSTS. USE NO. 6 WIRE CLIPS FOR LINE POSTS AND NO. 9 WIRE CLIPS FOR BRACES, RAILS, AND TENSION WIRES. ALL FASTENERS SPACED 14" MAX. VERTICALLY, 24" MAX. HORIZONTALLY.
3. FENCE HEIGHT: THE FABRIC HEIGHT IS TO MATCH EXISTING AND ADJACENT FENCE HEIGHT.
4. FENCE FABRIC: THE FABRIC SHALL BE COATED.



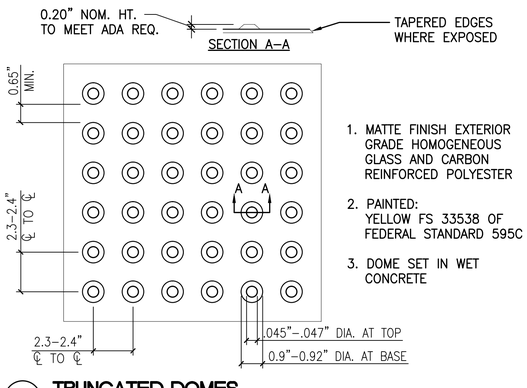
5 PARKING SPACE SIGNAGE
NOT TO SCALE



6 TYP. ELECTRIC VEHICLE PARKING STALL

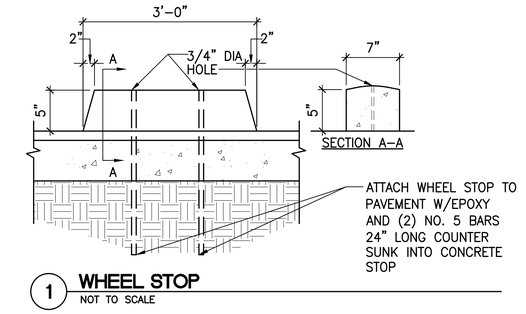


7 SIGN POST ANCHORING AT CONCRETE SLAB

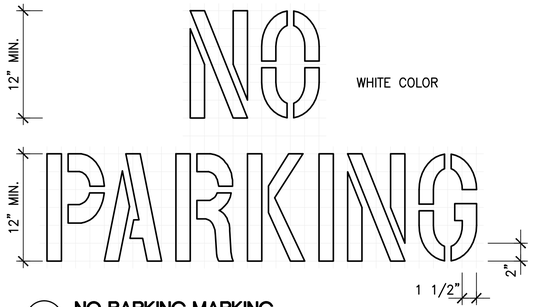


1. MATTE FINISH EXTERIOR GRADE HOMOGENEOUS GLASS AND CARBON REINFORCED POLYESTER
2. PAINTED: YELLOW FS 33538 OF FEDERAL STANDARD 595C
3. DOME SET IN WET CONCRETE

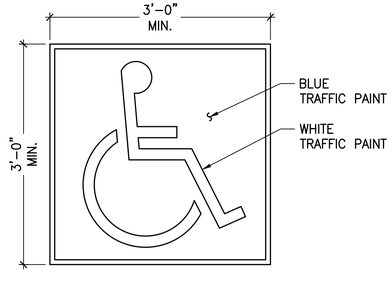
8 TRUNCATED DOMES
NOT TO SCALE



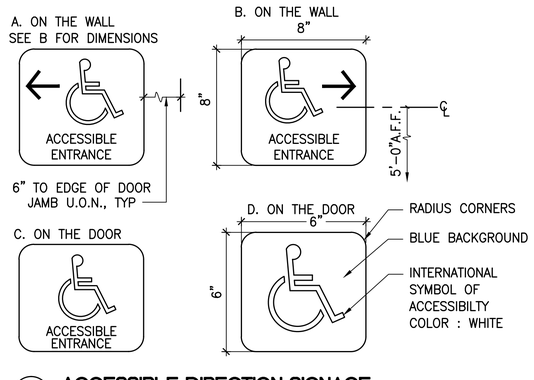
1 WHEEL STOP
NOT TO SCALE



2 NO PARKING MARKING
NO SCALE



3 ACCESSIBLE PARKING STALL EMBLEM
NOT TO SCALE



4 ACCESSIBLE DIRECTION SIGNAGE
NOT TO SCALE

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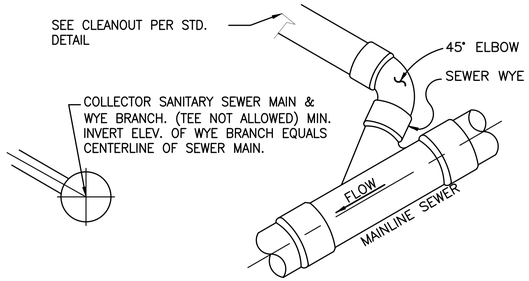
BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
SITE DETAILS

Sheet Number:
C502



NEW SEWER LATERAL CONNECTIONS

1. DUCTILE IRON PIPE
2. POLYVINYL CHLORIDE (PVC) PIPE, SDR-35 WHEN USED WITH A MANUFACTURED "Y" SPECIFICALLY DESIGNED FOR PVC LATERALS THE "Y" SHALL BE OF THE SAME MATERIAL AS THE SEWER MAIN.

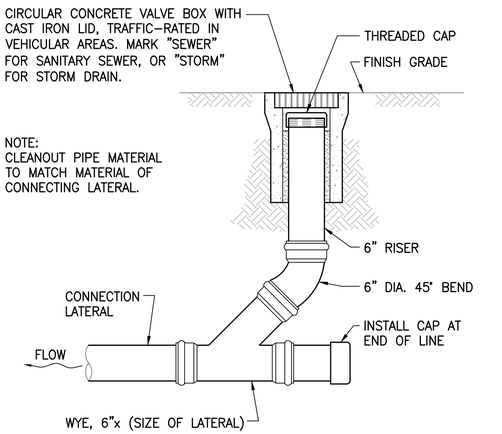
LATERAL CONNECTIONS TO EXISTING MAINS

1. PVC. (SDR-35) 4": CUT IN WYE WITH "CAULDER CPLG." OR TAP WITH ROMAC SEWER SADDLE.
2. LATERALS GREATER THAN 4" DIA. REQUIRE MANHOLE CONNECTION TO MAIN.

NOTES:

1. THE SEWER SERVICE LATERAL SHALL BE OF SUFFICIENT DEPTH TO ADEQUATELY SERVE THE BUILDING SITE, AND IN NO CASE SHALL BE LESS THAN 3 FT. DEEP AT THE BACK OF THE P.U.E. UNLESS OTHERWISE AUTHORIZED BY THE OWNER.
2. WHERE PROBLEMS ARE ANTICIPATED IN PROVIDING SEWER SERVICE TO A GIVEN BUILDING SITE, THE LATERAL INVERT AT THE BACK OF THE P.U.E. SHALL BE STAKED BY A LICENSED LAND SURVEYOR
3. WHERE DRIVEWAY LOCATION INFORMATION IS KNOWN, SERVICE LATERAL SHALL BE LOCATED OUTSIDE DRIVEWAY APPROACH DROP CURB.
4. MINIMUM 2% SLOPE EXCEPT WHERE A VARIATION IS SPECIFICALLY APPROVED BY THE DISTRICT.

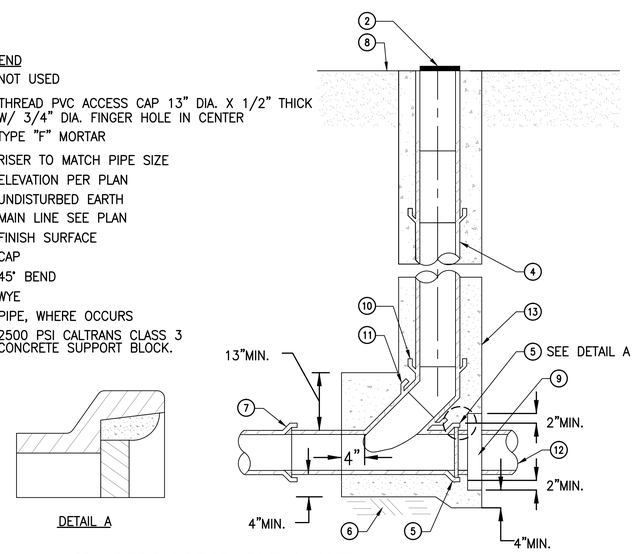
6 SEWER SERVICE LATERAL
NOT TO SCALE



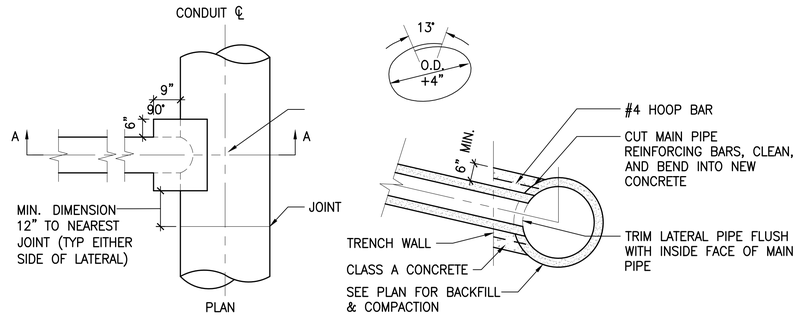
4 CLEAN OUT
NO SCALE

LEGEND

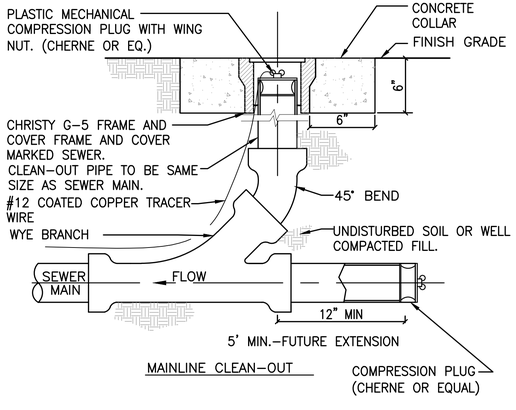
1. NOT USED
2. THREAD PVC ACCESS CAP 13" DIA. X 1/2" THICK W/ 3/4" DIA. FINGER HOLE IN CENTER
3. TYPE "F" MORTAR
4. RISER TO MATCH PIPE SIZE
5. ELEVATION PER PLAN
6. UNDISTURBED EARTH
7. MAIN LINE SEE PLAN
8. FINISH SURFACE
9. CAP
10. 45° BEND
11. WYE
12. PIPE, WHERE OCCURS
13. 2500 PSI CALTRANS CLASS 3 CONCRETE SUPPORT BLOCK.



1 STORM DRAIN CLEAN OUT
NO SCALE



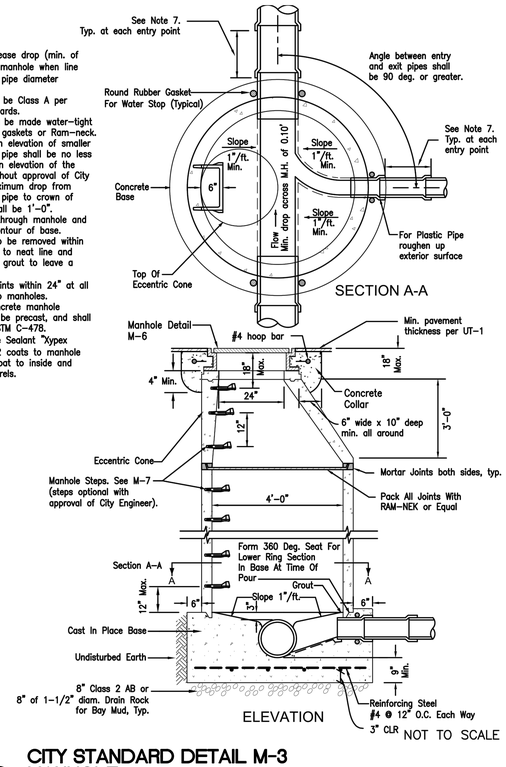
2 STORM DRAIN PIPE CONNECTION
NO SCALE



7 MAINLINE CLEANOUT
NOT TO SCALE

NOTES:

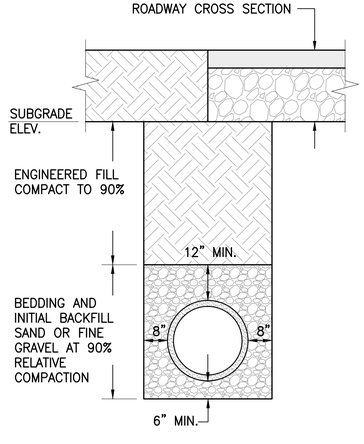
1. Modify or increase drop (min. of 0.10') across manhole when line bends and/or pipe diameter changes.
2. Concrete shall be Class A per Caltrans Standards.
3. All joints shall be made water-tight with neoprene gaskets or Ram-neck.
4. Minimum crown elevation of smaller diameter inlet pipe shall be no less than the crown elevation of the outlet pipe without approval of City Engineer. Maximum drop from invert of inlet pipe to crown of outlet pipe shall be 1'-0".
5. Lay cut pipe through manhole and conform to contour of base.
6. Top of pipe to be removed within manhole. Trim to neat line and finish off with grout to leave a smooth finish.
7. Provide two joints within 24" at all entry points to manholes.
8. Reinforced concrete manhole sections shall be precast, and shall conform to ASTM C-478.
9. Apply Concrete Sealant "Xypex Concentrate" 2 coats to manhole base and 1 coat to inside and outside of barrels.



5 CITY STANDARD DETAIL M-3 MANHOLE
NOT TO SCALE

NOTES:

1. TRENCH DETAIL FOR STORM DRAIN, SEWER, DOMESTIC WATER, & FIRE WATER ONLY.
2. IMPORTED OR ONSITE SELECT FILL MATERIAL SHALL HAVE THE FOLLOWING PROPERTIES:
   - -BE FREE ORGANIC OR HAZARDOUS MATERIAL
   - -CONTAIN NO ROCKS GREATER THAN 3 INCHES IN ITS LARGEST DIMENSION
   - -LIQUID LIMIT LESS THAN 40
   - -CONTAIN AT LEAST 20% FINES (PASSING THRU THE NO.200 SIEVE)
3. WHERE UTILITY TRENCHES ENTER THE BUILDING PAD, AN IMPERMEABLE PLUG CONSISTING OF LEAN CONCRETE, AT LEAST FIVE FEET IN LENGTH, SHOULD BE INSTALLED WHERE TRENCHES ENTER THE BUILDING FOOTPRINT. IF TRENCHES ARE BACKFILLED WITH SAND OR GRAVEL, THEN THE 5' LONG LEAN CONCRETE PLUGS SHALL ALSO BE INSTALLED WHERE UTILITIES CROSS THE EDGES OF VEHICULAR PAVEMENTS. SEE SOILS REPORT FOR MORE INFORMATION.
4. WHERE PIPE BEDDING AND COVER MATERIAL WILL BE BELOW GROUNDWATER, CRUSHED ROCK OR CALTRANS CLASS 2 PERMEABLE MATERIAL SHALL BE USED, AND WRAPPED IN FILTER FABRIC.



3 TRENCH BACKFILL
NO SCALE

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LICENSED ARCHITECT
PAUL W. POWERS
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RENEWAL DATE 3/28/2021
STATE OF CALIFORNIA

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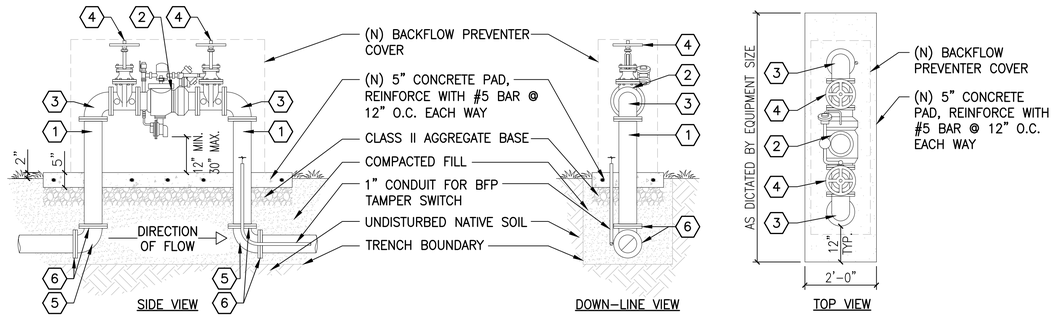
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
SITE UTILITY DETAILS

Sheet Number:
C503

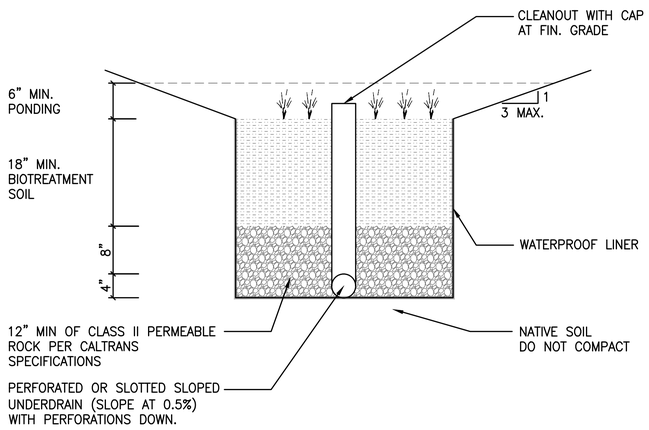


BACKFLOW PREVENTER STANDARDS COMPLIANCE
ASSE LISTED 1047 (2-1/2" THRU 8")
UL® CLASSIFIED
AWWA COMPLIANT C550
CSA CERTIFIED (4"& 6")
C-UL CLASSIFIED ®
FM® APPROVED
NYC MEA 218-01-M VOL 3
APPROVED BY THE FOUNDATION FOR CROSS CONNECTION CONTROL AND HYDRAULIC RESEARCH AT THE UNIVERSITY OF SOUTH CALIFORNIA

BACKFLOW PREVENTER MATERIALS		
ITEM	QTY	DESCRIPTION
1	2	RISERS - D.I.P. - C51 FLANGE TO PLAIN END
2	1	DOUBLE CHECK BACKFLOW ASSEMBLY
3	2	90 DEGREE ELBOW D.I.P. - FLANGE TO FLANGE
4	2	GATE VALVE C.I. (OS&Y)
5	2	90 DEGREE ELBOW D.I.P. - MJ
6	4	MEGALUG RETAINER GLANDS

NOTES:
1. FIELD ADJUST AND CUT RISERS TO PROPER LENGTH TO FIT CLEARANCE REQUIREMENTS.
2. ALL FITTINGS ABOVE GROUND SHALL BE FLANGED.
3. ALL PIPE SUPPORTS SHALL BE ADJUSTABLE.
4. INSTALL BOLLARDS AS REQUIRED IN HIGH TRAFFIC AREAS, PAINTED OSHA APPROVED SAFETY YELLOW.
5. ALL PIPING SHALL BE PAINTED SAFETY BLUE.

4 FIRE WATER BACKFLOW PREVENTER
NO SCALE

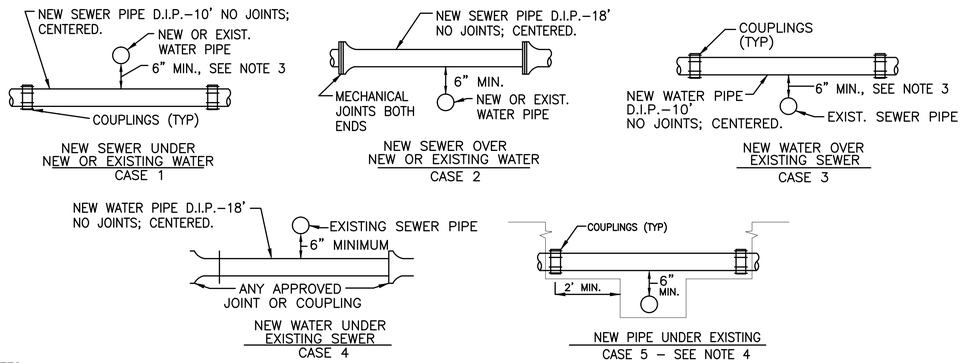


5 LINED BIORETENTION AREA
NO SCALE

I. MATERIAL SPECIFICATIONS:
1. BEDDING MATERIAL:
   A.) PEA GRAVEL - CONFORMING TO CALTRANS SECTION 68-1.025, PERMEABLE MATERIAL, CLASS 1 TYPE B.
   B.) CL 2 AB. - CONFORMING TO CALTRANS SECTION 26-1.02A, CLASS 2 AGGRIGATE BASE, 3/4" MAXIMUM.
2. AGGREGATE BASE:
   A.) CL 2 AB. - CONFORMING TO CALTRANS SECTION 26-1.02A, CLASS 2 AGGRIGATE BASE, 3/4" MAXIMUM.
3. DRAIN ROCK:
   A.) NO. 3 ROCK - SHALL BE A WASHED ROCK OF THE NOMINAL SIZE DESIGNATED AS 1" TO 2".
4. GABION ROCK:
   A.) GABION ROCK - SHALL BE A WASHED OR NON WASHED ROCK OF THE NOMINAL SIZE DESIGNATED AS 4" TO 12".
5. NATIVE MATERIAL:
   A.) NATIVE MATERIAL - NATIVE MATERIAL USED AS BACKFILL SHALL BE FREE OF ORGANIC MATTER, REFUSE, OR OTHER UNSATISFACTORY MATERIALS, STONES, OR LUMPS GREATER THAN 3" IN GREATEST DIMENSION.
6. SHALE MATERIAL:
   A.) SHALE MATERIAL - SHALE MATERIAL SHALL MEET THE QUALITY REQUIREMENTS FOR CL2 AB AND CONTAIN ENOUGH FINE MATERIALS TO BE ABLE TO BE COMPACTED TO 95" RC IN A TIGHT SUSTAINABLE MATRIX.

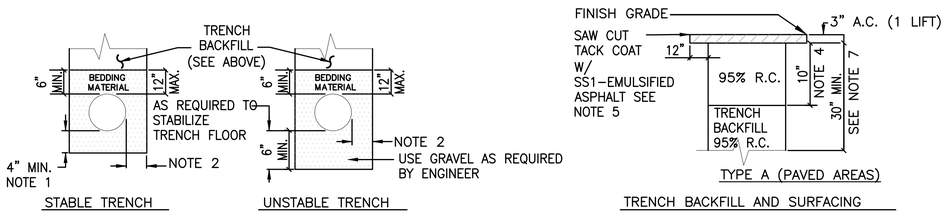
II. COMPACTION REQUIREMENTS:
1. BEDDING MATERIAL:
   A.) PEA GRAVEL SHALL EITHER BE HAND TAMPED UNDER AND AT THE SIDES OF THE PIPES IN LIFTS NOT GREATER THAN 6" OR SHAPED AND COMPACTED PRIOR TO PIPE INSTALLATION.
   B.) CL2 AB SHALL MEET THE ABOVE REQUIREMENTS AND SHALL ADDITIONALLY BE COMPACTED UNDER THE PIPE TO 90% RC AND UP TO THE SPRING LINE OF THE PIPE TO 90% RC IN TWO SEPARATE LIFTS RESULTING IN A FIRM UNYIELDING BEDDED TRENCH. JETTING SHALL NOT BE ALLOWED.
2. AGGREGATE BASE:
   A.) AGGREGATE BASE SHALL BE COMPACTED WITH MECHANICAL HAND OPERATED, EQUIPMENT MOUNTED, OR TOWED METHODS TO ACHIEVE THE REQUIRED COMPACTION. IN ANY EVENT, COMPACTION METHODS SHALL NOT DAMAGE THE PIPE, EXCEED THE LOADING CAPACITY OF THE PIPE, OR RESULT IN A CHANGE TO THE DESIGN PIPE SLOPE REQUIRED OR DEFLECTION UNITS. JETTING SHALL NOT BE ALLOWED.
3. DRAIN ROCK:
   A.) DRAIN ROCK SHALL BE CONSOLIDATED WITH A SURFACE VIBRATOR.
4. SHALE MATERIAL:
   A.) SHALE SHALL MEET THE COMPACTION REQUIREMENTS FOR CL 2 AB.
5 NATIVE MATERIAL:
   A.) NATIVE MATERIAL COMPACTED TO 90% RC SHALL MEET THE COMPACTION REQUIREMENTS OF CL 2 AB. NATIVE MATERIAL COMPACTED TO LESS THAN 90% RC MAY BE COMPACTED BY WHEEL ROLLING.

1 WATER AND SEWER STANDARDS
NOT TO SCALE



NOTES:
1. THIS STANDARD APPLIES TO PIPES UP TO AND INCLUDING 16" DIAMETER. ALL CROSSINGS OF LARGER DIAMETER SHALL BE AS APPROVED BY THE DISTRICT.
2. ALL NEW DUCTILE IRON SHALL BE WRAPPED IN POLYETHYLENE FILM IN TUBE FORM PER DISTRICT CONSTRUCTION SPECIFICATIONS.
3. WHERE SEWER CROSSES BELOW A WATER MAIN, WITH 1' OR MORE OF VERTICAL CLEARANCE, NO SPECIAL INSTALLATION IS REQUIRED.
4. NEW PIPE UNDER EXISTING-CASE 5 SHALL BE USED WHEN THE EXISTING PIPE HAS A JOINT OVER OR WITHIN 2' OF THE NEW TRENCH.
5. ANY PIPE-PIPE CROSSING WITH LESS THAN 6" VERTICAL CLEARANCE SHALL NOT BE INSTALLED WITHOUT APPROVAL OF THE DISTRICT.
6. WATER MAIN LOWERING PER STD. DETAIL.

2 PIPE - PIPE CROSSING DETAIL
NOT TO SCALE



1. 1/4 PIPE O.D. OR 4" MIN. WHEN EXCAVATION IS IN ROCKY GROUND.
2. PIPE DIAMETER 18" OR LESS: 6" MIN., 9" MAX/PIPE DIA. GREATER THAN 18": 9" MIN., 12" MAX.
3. RELATIVE COMPACTION DESIGNATED R.C.
4. THE MINIMUM STREET STRUCTURAL SECTION SHALL BE 3" ASPHALTIC CONCRETE ON 10" AGGREGATE BASE OR MATCH EXISTING PAVEMENT, WHICHEVER IS THICKER, SPECIFIED ON PLANS, OR REQUIRED BY ENCROACHMENT PERMIT.
5. SAW CUT PAVEMENT 12 INCHES FROM EDGE OF TRENCH AFTER TRENCH IS BACKFILLED
6. MINIMUM PIPE COVER SHALL BE 36" FROM TOP OF PIPE.
7. NEW STREETS AND SHOULDER AREAS UNDER CONSTRUCTION SHALL BE COMPACTED TO 95% RELATIVE COMPACTION FOR A MINIMUM DEPTH OF 30" PER CALTRANS SECTION 19-5.03.
8. INSTALL #12 COPPER COATED TRACER WIRE ON/OVER ALL NON-METALLIC MAINS AND SERVICE LINES.

3 WATER AND SEWER STANDARD TRENCH DETAILS
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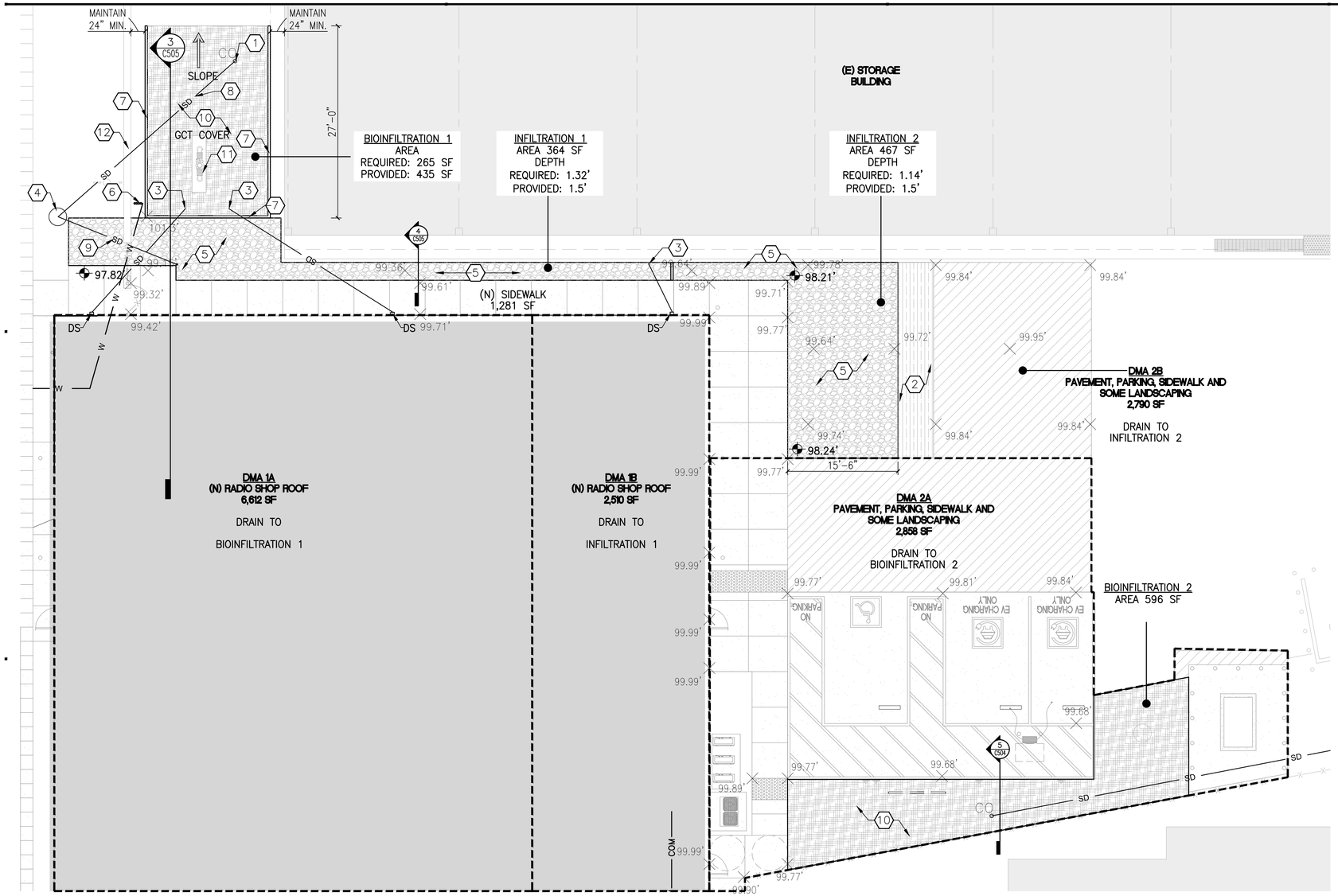
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
SITE UTILITY DETAILS

Sheet Number:
C504



PLAN NORTH

1 BIOFILTRATION BASIN WITH UNDERDRAIN
1/8" = 1'-0"

0 4' 8' 16'

GENERAL NOTES:

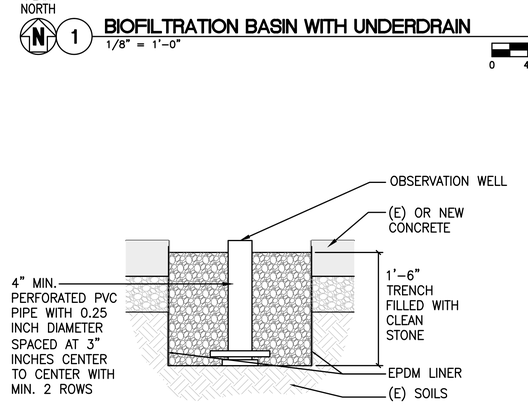
1. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
2. SEE SHEET G001 FOR LEGENDS AND ABBREVIATIONS
3. ALL PAVEMENTS AND PAVEMENT MARKINGS ARE TO MEET ADA AND CBC ACCESSIBILITY REQUIREMENTS.
4. SEE SHEET C121 FOR TOPOGRAPHY PLAN

LEGEND:

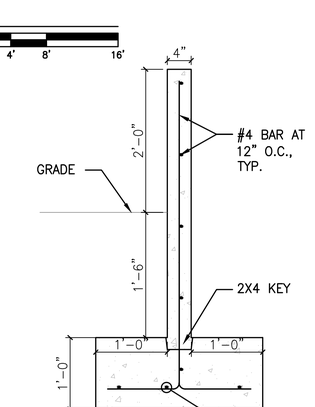
- (N) ASPHALT REPLACEMENT
- (N) CONCRETE
- (N) TRENCH
- (N) GROOVED PAVEMENT
- (N) LANDSCAPE AREA, SEE L101
- BOTTOM OF TRENCH ELEVATION

KEYED NOTES:

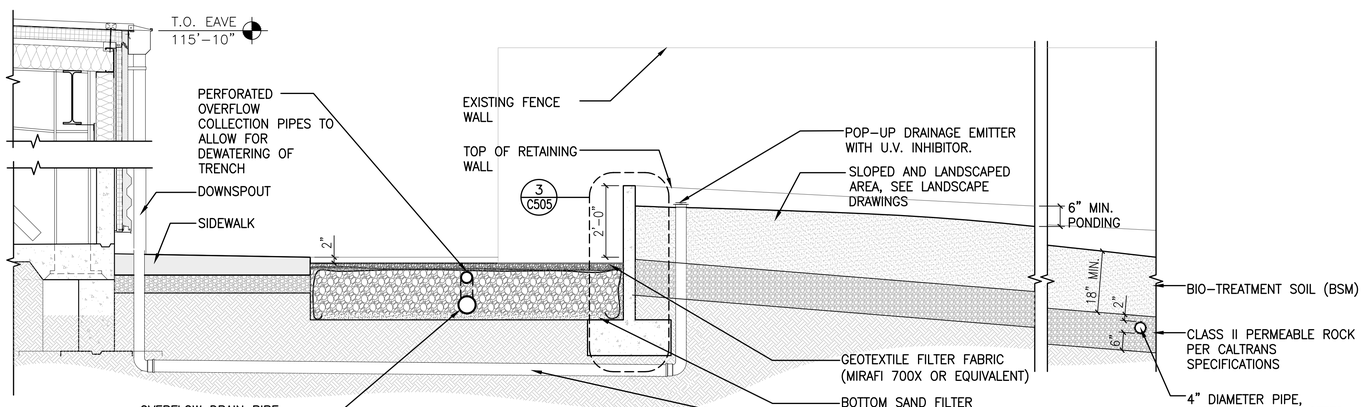
1. NEW CLEAN OUT
2. 5' WIDE GROOVED PAVEMENT
3. (N) POP-UP DRAINAGE EMITTER
4. NEW STORM DRAIN MANHOLE STRUCTURE AND PIPING. SEE C141
5. NEW TRENCH, SEE DETAIL 4
6. IRRIGATION SYSTEMS, SEE L111 FOR DETAILS
7. 2' RETAINING WALL
8. PERFORATED UNDERDRAIN PIPE
9. PVC OVERFLOW DRAIN WITH ELEVATED DRAIN
10. BIOINFILTRATION AREA
11. BACKFLOW PREVENTER
12. EXISTING PROPERTY FENCE WALL



4 INFILTRATION TRENCH WITH OBERVATION WELL
NOT TO SCALE



3 RETAINING WALL
NOT TO SCALE



2 SECTION
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PAUL W. POWERS
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RENEWAL DATE 3/28/2021
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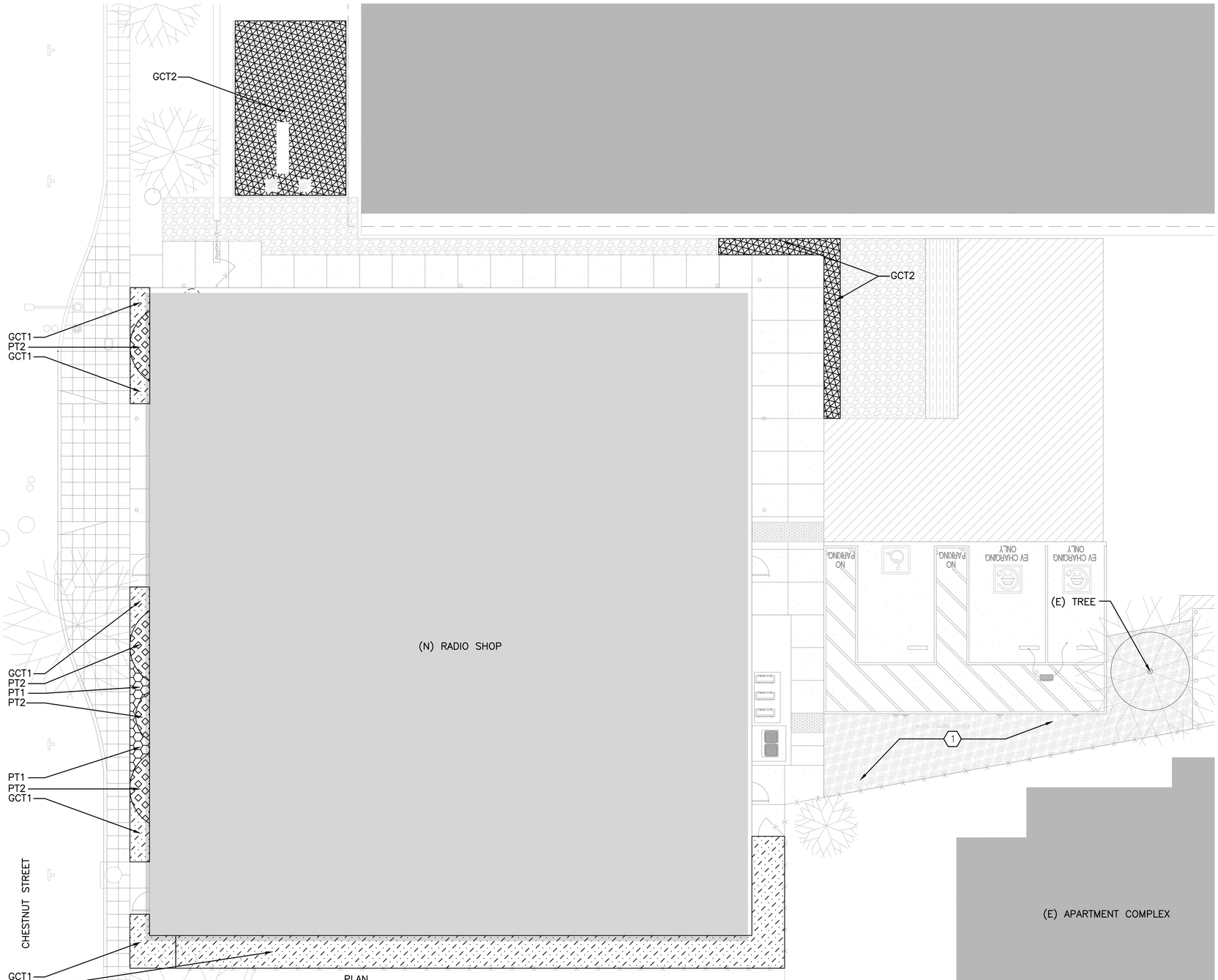
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
STORMWATER TREATMENT

Sheet Number:
C505



PLAN NORTH

1 LANDSCAPE PLAN
3/32" = 1'-0"

0 8' 16' 24'

PERENNIAL LEGEND AND LIST:

PATTERN/SYMBOL AND PLAN ABBREVIATION	SCIENTIFIC NAME	COMMON NAME	SPACING	SIZE	HYDROZONE	SF COVERAGE	MUCOLS PLANT FACTOR
PLANT TYPE 1 (PT1)	HELICTOTRICHON SEMPERVIRENS	BLUE OAT GRASS	1'-6" O.C.	1 GALLON	LOW	≈ 32	0.3
PLANT TYPE 2 (PT2)	MUHLENBERGIA CAPILLARIS, CVS.	HAIRY AWN MUHLY	2'-6" O.C.	1 GALLON	LOW	≈ 79	0.3
GROUND COVER TYPE 1 (GCT1)	ARCTOSTAPHYLOS UVA-URSI 'POINT REYES'	PT. REYES MANZANITA	1'-0" O.C.	1 GALLON	LOW	≈ 654	0.3
GROUND COVER TYPE 2 (GCT2)	OENOTHERA SPECIOSA	MEXICAN EVENING PRIMROSE	1'-0" O.C.	1 GALLON	LOW	≈ 536	0.3

GENERAL NOTES:

1. LANDSCAPE CONTRACTOR SHALL AGREE TO COMPLY WITH THE REQUIREMENTS OF THE WATER EFFICIENT LANDSCAPE ORDINANCE 23 CCR 492 AND SUBMIT A COMPLETE LANDSCAPE DOCUMENTATION PACKAGE.
2. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH DETAILS ON SHEET L501 AND PROJECT SPECIFICATIONS. IT IS THE RESPONSIBILITY OF THE PLANTING AND IRRIGATION CONTRACTOR(S) TO OBTAIN SPECIFICATIONS IF NOT PROVIDED INITIALLY WITH THESE DRAWINGS.
3. SANDY COURSE LOAM IMPORT SOIL ACCORDING TO SPECIFICATIONS IS REQUIRED IN ALL AREAS OF NEW LANDSCAPE PLANTING. IMPORT SOIL DEPTH SHALL BE 12" AFTER SETTLEMENT, PLACED OVER SCARIFIED SUBSOIL. SUBMIT IMPORT SOIL SAMPLE AND LAB ANALYSIS PER SPECS. IF IMPORT SOIL DOES NOT MEET MINIMUM SPEC REQUIREMENTS, AMENDMENTS AND FERTILIZERS MAY BE INCORPORATED ACCORDING TO LAB RECOMMENDATIONS, EITHER PRIOR TO DELIVERY OR AFTER PLACEMENT ON SITE. SUBMIT AMENDMENTS MATERIAL INFORMATION AND RECOMMENDATIONS.
4. ALL LANDSCAPED AREAS SHALL RECEIVE A 3" DEEP LAYER OF RECYCLED WOOD CHIPS PER SPECIFICATIONS. SHREDDED REDWOOD IS NOT ACCEPTABLE. ALL MULCHED AREAS SHALL RECEIVE AN APPLICATION OF PRE-EMERGENT HERBICIDE.
5. ALL ROCK AND DEBRIS 1-1/2" AND LARGER SHALL BE REMOVED FROM THE TOP 6" OF PLANTING AREAS SCARIFIED SOIL AND THEN FROM THE SITE.
6. SEE SHEET L111 FOR BOUNDARIES OF DRIP IRRIGATION SPRINKLER SYSTEMS DESIGNED AND INSTALLED BY LANDSCAPE CONTRACTOR.
7. POST INSTALLATION MAINTENANCE IS INCLUDED IN THIS CONTRACT FOR A MINIMUM PERIOD OF 90 DAYS. MAINTAIN ALL AREAS PER SPECIFICATIONS IN A WEED AND DEBRIS FREE CONDITION. REFER TO SPECIFICATIONS FOR END OF MAINTENANCE PERIOD.
8. REMOVE ALL EXISTING VEGETATION WITHIN CONSTRUCTION AREA SHOWN ON G006. PROTECT (E) TREES AND VEGETATION AT WEST PROPERTY LINE
9. A MINIMUM 3-INCH LAYER OF MULCH SHALL BE APPLIED ON ALL EXPOSED SOIL SURFACES OF PLANTING AREAS EXCEPT TURF AREAS, CREEPING OR ROOTING GROUNDCOVERS, OR DIRECT SEEDING APPLICATIONS WHERE MULCH IS CONTRAINDICATED.
10. DO NOT DISTURB EXISTING IRRIGATION SYSTEMS AT WEST PROPERTY LANDSCAPE AREA.
11. PRESSURE REGULATING DEVICES ARE REQUIRED IF WATER PRESSURE IS BELOW OR EXCEEDS THE RECOMMENDED PRESSURE OF THE SPECIFIED IRRIGATION DEVICES.
12. CHECK VALVES OR ANTI-DRAIN VALVES ARE REQUIRED ON ALL SPRINKLER HEADS WHERE LOW POINT DRAINAGE COULD OCCUR.
13. A CERTIFICATE OF COMPLETION SHALL BE FILLED OUT BY THE LICENSED LANDSCAPE CONTRACTOR FOR THE PROJECT.
14. SEE SHEET L113 FOR EXISTING LANDSCAPE SQUARE FOOTAGE.
15. ALL ZONES ARE LOW WATER USE HYDROZONES PER PERENNIAL LEGEND LIST. HYDROZONES SHALL BE MATCHED (ALL SAME).
16. TEST PIPE FOR FIRE PROTECTION PIPING SHALL DISCHARGE INTO LANDSCAPE BEDDING.
17. FOR SOIL LESS THAN 6% ORGANIC MATTER IN THE TOP 6 INCHES OF SOIL, COMPOST AT A RATE OF A MINIMUM OF FOUR CUBIC YARDS PER 1,000 SQUARE FEET OF PERMEABLE AREA SHALL BE INCORPORATED TO A DEPTH OF SIX INCHES INTO THE SOIL.

KEYED NOTES:

1 — REMOVE EXISTING TREE STUMP & VEGETATION AREA

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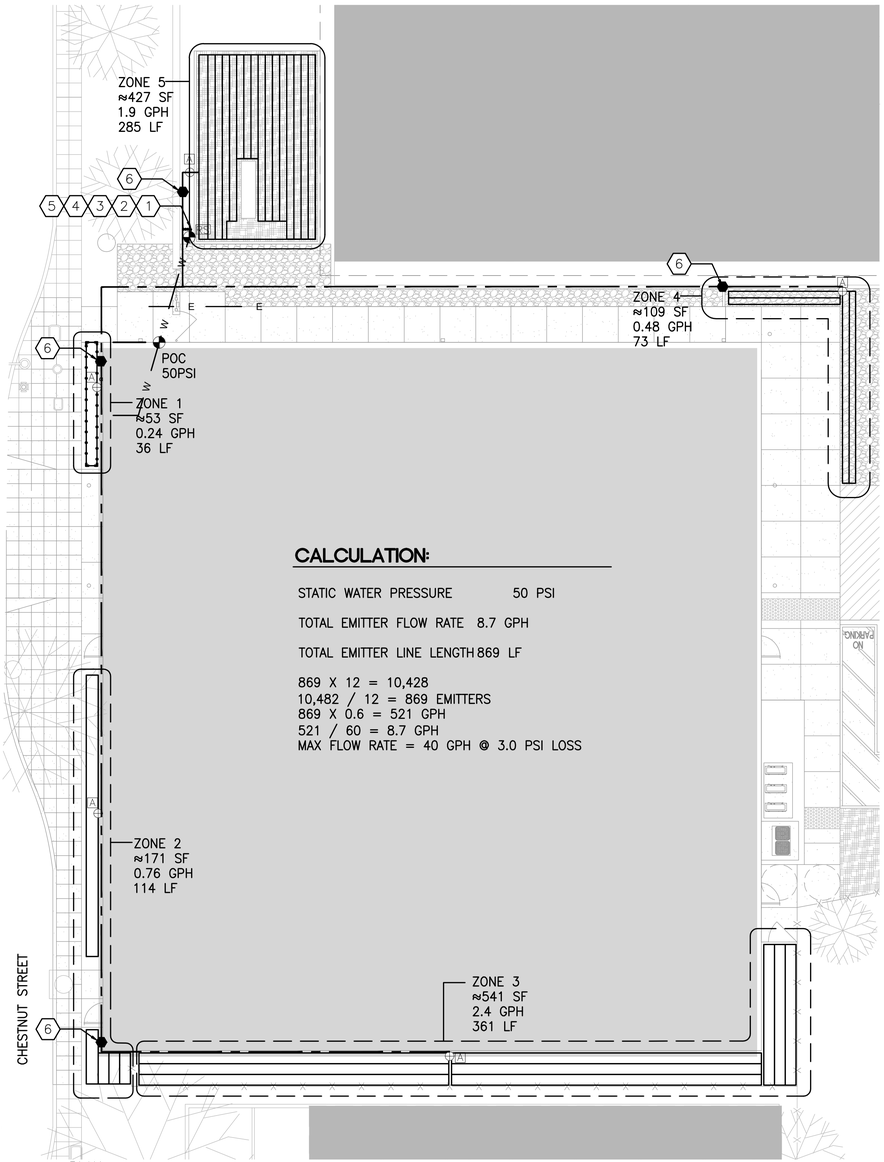
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
LANDSCAPE PLAN

Sheet Number:
L101



CALCULATION:

STATIC WATER PRESSURE	50 PSI
TOTAL EMITTER FLOW RATE	8.7 GPH
TOTAL EMITTER LINE LENGTH	869 LF

869 X 12 = 10,428
10,482 / 12 = 869 EMITTERS
869 X 0.6 = 521 GPH
521 / 60 = 8.7 GPH
MAX FLOW RATE = 40 GPH @ 3.0 PSI LOSS

1 IRRIGATION PLAN

3/32" = 1'-0"

0 8' 16' 24'

GENERAL NOTES:

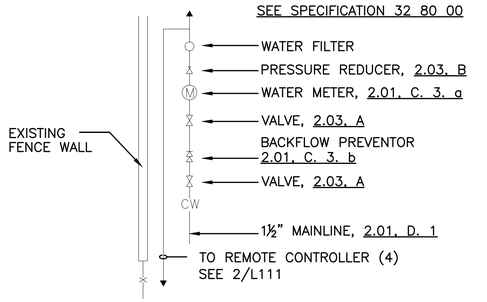
1. LATERAL LINE PIPE MINIMUM IS 3/4" IN DIAMETER.
2. INSTALL LOW VOLUME IRRIGATION SYSTEM WITH UNDERGROUND LINE EMITTER TUBING PROVIDING WATER DIRECTLY TO PLANT ROOTS.
3. DRIP EMITTER LOCATIONS AND QUANTITIES ARE APPROXIMATE. ACTUAL LOCATIONS AND QUANTITIES SHALL BE FIELD DETERMINED TO CONFORM WITH FINAL PLANTING AND MANUFACTURER'S PERFORMANCE CALCULATIONS.
4. NO WATER FEATURES SHALL BE INSTALLED.
5. A DIAGRAM OF THE IRRIGATION PLAN SHOWING HYDROZONES SHALL BE KEPT WITH THE IRRIGATION CONTROLLER FOR SUBSEQUENT MANAGEMENT PURPOSES.
6. A CERTIFICATE OF COMPLETION SHALL BE FILLED OUT BY THE LICENSED LANDSCAPE CONTRACTOR FOR THE PROJECT.
7. AN IRRIGATION AUDIT REPORT SHALL BE COMPLETED AT THE TIME OF FINAL INSPECTION. SUBMIT THIS REPORT TO SAN MATEO COUNTY PLANNING DEPARTMENT FOR REVIEW AND ACCEPTANCE, IN 8 1/2" X11" FORMAT.
8. DESIRED WATER DEPTH IS 9". INLINE EMITTER SPACING SHALL NOT EXCEED 12" WITH A FLOW RATE OF 0.9 GPH AND APPLICATION RATE CP 0.42/HR.
9. GROUND EQUIPMENT TO MEET MANUFACTURER'S STANDARDS.
10. INSTALL METER, BACKFLOW PREVENTER AND FILTER KIT.
11. INSTALL CONTROL ZONE KIT AT EACH ZONE.

KEYED NOTES:

1. CONNECT (N) UNDERGROUND IRRIGATION SYSTEM TO BUILDING WATER SUPPLY, ROOM 110, VEHICLE STORAGE, FENCED AREA
2. INSTALL (N) IRRIGATION CONTROL BOX
3. LANDSCAPE BACKFLOW PREVENTER
4. LANDSCAPE IRRIGATION METER
5. LANDSCAPE IRRIGATION FILTER KIT
6. QUICK COUPLING VALVE

IRRIGATION LEGEND:

- MAINLINE PIPE – 2" SCHEDULE 40 PVC
- INLINE EMITTER TUBING SEE 2/L111
- IRRIGATION ZONE (AREA OF ZONE)
- BACKFLOW PREVENTER
- METER
- PRESSURE REDUCER
- FILTER KIT
- POINT OF CONNECTION
- [A] IRRIGATION CONTROL BOX
- REDUCED PRESSURE BACKFLOW PREVENTOR
- [RS] RAIN SENSOR
- GATE VALVE
- QUICK COUPLING VALVE
- DRIPZONE VALVE ASSEMBLY

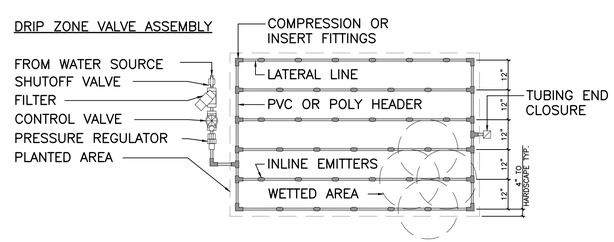


3 DRIPLINE SYSTEM DETAIL

NOT TO SCALE

HYDROZONE INFORMATION TABLE							
42.8	ANNUAL ETO FOR REDWOOD CITY						
HYDROZONE	WUCOLS PLANT FACTOR (PF)	IRRIGATION METHOD	IRRIGATION EFFICIENCY (IE)	$ETAF_Z$ (PF/IE)	LANDSCAPE AREA (SQ FT)	$ETAF_Z$ x AREA	ESTIMATED TOTAL WATER USE (ETWU)
1	.3	DRIP	.81	0.37	53	19.63	521
2	.3	DRIP	.81	0.37	171	63.33	1680.61
3	.3	DRIP	.81	0.37	541	200.37	5317
4	.3	DRIP	.81	0.37	109	40.37	1071
5	.3	DRIP	.81	0.37	427	158.15	4197
				TOTAL	1301	481.85	7519
SPECIAL LANDSCAPE AREAS							
N/A				1	0	0	0.00
				TOTAL	0	0	0.000000
	TOTAL LANDSCAPE AREA (LA + SLA)				1301		
AVERAGE ETAF	ETAF x AREA / TOTAL AREA = (OUR DESIGN RESULT)						0.370
SITEWIDE ETAF	TOTAL ETAF x AREA / TOTAL LANDSCAPE AREA						0.370
TOTAL ETWU	(ANNUAL ETO)(0.62 CONVERSION FACTOR) x (AVERAGE ETAF x TOTAL LANDSCAPE AREA)					TOTAL ETWU	12786.42
TOTAL MAWA	(ANNUAL ETO)(0.62 CONVERSION FACTOR)[(ETAF ADJUSTMENT FACTOR)(TOTAL LANDSCAPE AREA) + ((1–ETAF)*SLA))]					TOTAL MAWA	15535.50
		(ANNUAL ETO) x0.62	ETAF x TOTAL LA	ETAF	TOTAL SLA		
		26.54	585.45	0.45	0		

4 WATER EFFICIENT LANDSCAPE WORKSHEET



2 LANDSCAPE DRIPLINE SYSTEM TYPICAL DETAIL

NOT TO SCALE (ADJUST AASSEMBLY FOR MANUFACTURER'S DETAILS)

Certification 1 of 3

DOCUMENTATION AGREEMENT

I/we agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package.

Signature*

Name (print) Paul W. Powers

Date 05/22/2020

Certification 2 of 3

CERTIFICATION OF INSTALLATION ACCORDING TO THE LANDSCAPE DOCUMENTATION PACKAGE

"I/we certify that based upon periodic site observations, the work has been completed in accordance with the ordinance and that the landscape planting and irrigation installation conform with the criteria and specifications of the approved Landscape Documentation Package."

Signature*	Date	
Name (print)	Telephone No.	
	Fax No.	
Title	Email Address	
License No. or Certification No.		
Company	Street Address	
City	State	Zip Code

*Signer of the landscape design plan, signer of the irrigation plan, or a licensed landscape contractor.

Certification 3 of 3

CERTIFICATION OF EFFICIENT USE OF WATER

"I/we have complied with the criteria of the ordinance (CCR title 23, section 492) and applied them for the efficient use of water in the landscape design."

Signature*	Date	
Name (print)	Telephone No.	
	Fax No.	
Title	Email Address	
License No. or Certification No.		
Company	Street Address	
City	State	Zip Code

*Signer of the landscape design plan, signer of the irrigation plan, or a licensed landscape contractor.

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PHARIS ENGINEERING

LICENSED ARCHITECT
PAUL W. POWERS
C-29713
RENEWAL DATE 3/28/2021
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
IRRIGATION PLAN

Sheet Number:
L111

PT1

PT2

GCT1

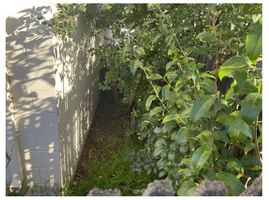
GCT2

4 PLANT TYPES (SEE L101)

DRIP IRRIGATION @ SHRUB / GROUNDCOVER														
MANUFACTURER: VARIES						LOCATION : REDWOOD ITY, CA								
PRECIPITATION RATE (INCHES / HOUR): 0.02						EMITTER SPACING: 1' (VERIFY BY INSTALLER)								
IRRIGATION SYSTEM EFFICIENCY: .81						EMITTER GPM: RANGE 2.6 TO 3.2								
PLANT FACTOR: .3														
YEAR 2 REDUCTION AMOUNT: –10% OF YEAR 1 (ESTABLISHMENT) RUN TIME MINUTES														
MONTH:		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ETO PER MONTH (INCHES):		1.5	1.8	2.9	3.8	5.2	5.3	6.2	5.6	4.8	3.1	1.7	1	42.8
ETO PER WEEK (INCHES):		0.346	0.416	0.670	0.878	1.201	1.224	1.432	1.293	1.109	0.716	0.393	0.231	
MINUTES OF WATER PER WEEK:	YEAR 1	0	34	34	34	34	34	68	68	34	34	34	0	
	YEAR 2	0	30	30	30	30	30	60	60	30	30	30	0	
WATERING DAYS PER WEEK:	YEAR 1	0	1	1	1	1	1	2	2	1	1	1	0	
	YEAR 2	0	1	1	1	1	1	2	2	1	1	1	0	
MINUTES OF WATER PER WATERING DAY:	YEAR 1	0	34	34	34	34	34	34	34	34	34	34	0	
	YEAR 2	0	30	30	30	30	30	30	30	30	30	30	0	
CYCLES PER WATERING DAY:	YEAR 1	0	2	2	2	2	2	2	2	2	2	2	0	
	YEAR 2	0	2	2	2	2	2	2	2	2	2	2	0	
MINUTES PER CYCLE:	YEAR 1	0	17	17	17	17	17	17	17	17	17	17	0	
	YEAR 2	0	15	15	15	15	15	15	15	15	15	15	0	

NOTES:
1. DAYS WITH MULTIPLE WATERING CYCLES ARE TO BE ADMINISTERED IN A FASHION THAT ALLOWS FOR NO MORE OR LESS THAN A 20 MINUTE REST/SOAK PERIOD PLACED BETWEEN THE TWO WATERING CYCLES.
2. WEEKS WITH MULTIPLE WATERING DAYS ARE TO HAVE WATERINGS EVENLY SPACED THROUGHOUT THE WEEK.

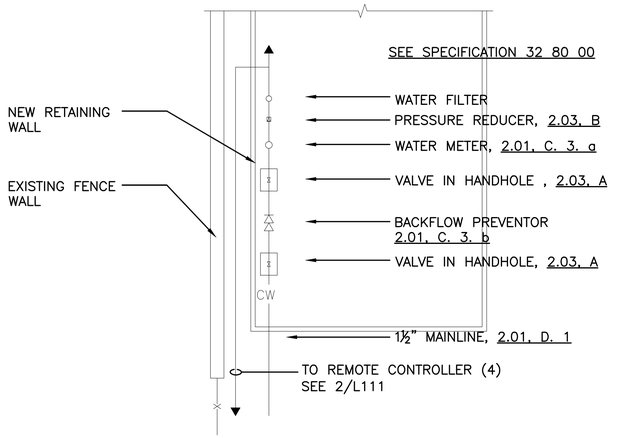
1 DRIP IRRIGATION WORKSHEET



3 EXISTING LANDSCAPE IMAGES (REMOVE)

GENERAL NOTES:

1. ZONES 1 – 5
2. IRRIGATION SYSTEM – UNDERGROUND DRIP LINE EMITTERS
3. GENERALLY PLANTS REQUIRE 1/4" OF WATER WEEKELY, EXCEPT RAINY SEASONS. APPROX. 11,000 GALLONS ANNUALLY.
4. KEEP PLANTING BEDS WELL IRRIGATED FOR FIRST SIX WEEKS.
5. FOLLOW NURSERY INSTRUCTIONS FOR INSTALLATION AND ONE (1) YEAR MAINTENANCE PLAN.
6. ANNUAL IRRIGATION QUANTITY SHALL BE MONITORED AND ADJUSTED, DO NOT EXCEED TABLE LISTED IN DETAIL 4/L111.



2 DRIPLINE SYSTEM DETAIL
NOT TO SCALE

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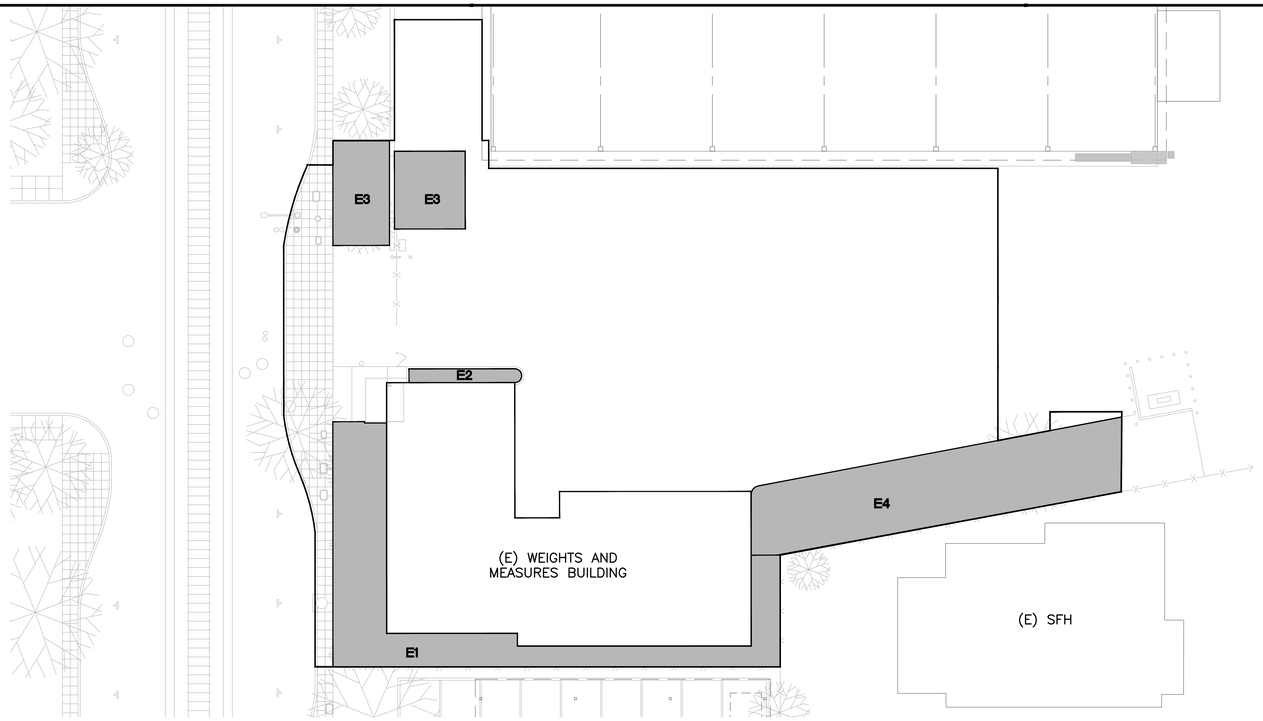
Revisions:
2 11–16–2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
IRRIGATION TABLES

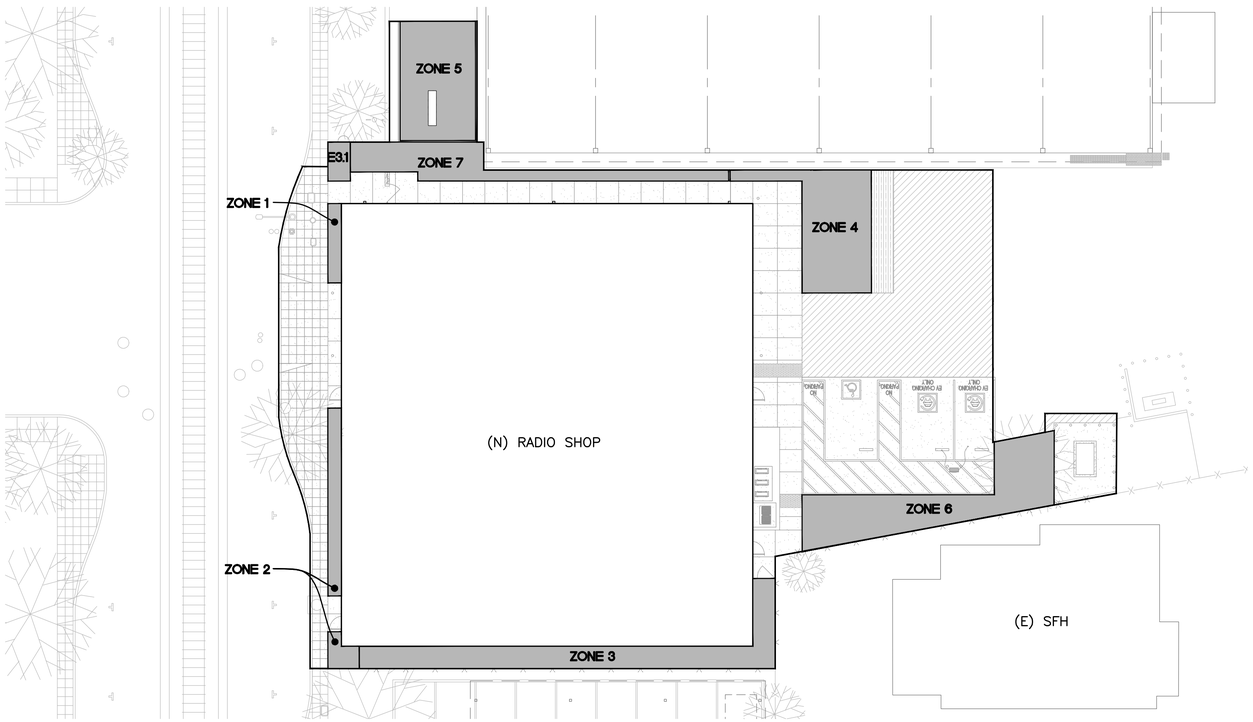
Sheet Number:
L112



PLAN NORTH

1 **EXISTING PLAN**
1/16" = 1'-0"

0 8' 16' 32'



PLAN NORTH

2 **NEW PLAN**
1/16" = 1'-0"

0 8' 16' 32'

AREA - EXISTING SITE

TOTAL SITE	17,370 sf
BUILDING ROOF AREA	3,374 sf
TOTAL LANDSCAPED AREA	3,295 sf
PERCENTAGE OF SITE LANDSCAPED	18.97 %

AREA BREAKDOWN:

E1	1,282 sf
E2	77 sf
E3	571 sf
E4	1,365 sf
TOTAL	3,295 sf

AREA - NEW SITE

TOTAL SITE	17,370 sf
BUILDING ROOF AREA	9,122 sf
TOTAL AREA OF IRRIGATION ZONE	809 sf
TOTAL AREA OF INFILTRATION ZONE	1,862 sf
PERCENTAGE OF SITE LANDSCAPED AND INFILTRATION AREA	15.38 %

LANDSCAPE AND PERVIOUS PAVEMENT BREAKDOWN:

ZONE1	53 sf
ZONE2	171 sf
ZONE3	541 sf
E3.1	44 sf
TOTAL	809 sf

INFILTRATION/BIOINFILTRATION ZONE

ZONE4	467 sf	INFILTRATION
ZONE5	435 sf	BIOINFILTRATION
ZONE6	596 sf	BIOINFILTRATION
ZONE7	364 sf	INFILTRATION
TOTAL	1,862 sf	

C VALUE – PRE-DEVELOPMENT

	TOTAL AREA (ACRES)	x	C VALUE*	
PAVED AREA (IMPERVIOUS)	0.33 ac	x	0.85	= 0.281
LANDSCAPE (PERVIOUS)	0.07 ac	x	0.10	= 0.007
TOTAL	0.40 ac			= 0.288
COMPOSITE C VALUE	= 0.288/0.40 = 0.720			

C VALUE – POST-DEVELOPMENT

	TOTAL AREA (ACRES)	x	C VALUE*	
PAVED AREA (IMPERVIOUS)	0.337 ac	x	0.85	= 0.286
LANDSCAPE (PERVIOUS)	0.02 ac	x	0.10	= 0.002
INFILTRATION	0.043 ac	x	0.00	= 0.000
TOTAL	0.40 ac			= 0.288
COMPOSITE C VALUE	= 0.288/0.40 = 0.720			

* SOURCE: C VALUE IS CITED ACCORDING TO RAINFALL RUNOFF DATA FROM SAN MATEO COUNTY GUIDELINES FOR DRAINAGE REVIEW AND RUNOFF COEFFICIENT (C) FACT SHEET FROM CALIFORNIA WATER BOARDS' STATE WATER RESOURCES CONTROL BOARD 5.1.3 FS-(RC) 2011

RAINFALL INTENSITY*

SAN MATEO COUNTY 0.728 IN/HR

* SOURCE: SAN MATEO COUNTY REQUIRES THAT THE PROJECT RUNOFF FROM A 10-YEAR 1-HR DURATION DESIGN STORM BE RETAINED ONSITE.

RUNOFF CALCULATION

PRE-DEVELOPMENT
Q = C x I x A
Q = 0.720 x 0.728 x 0.40
Q = 0.2097 cfs

POST-DEVELOPMENT
Q = C x I x A
Q = 0.720 x 0.728 x 0.40
Q = 0.2097 cfs

GENERAL NOTES:

1. DENUTED AREAS OF LANDSCAPE (E1 THROUGH E3) SHALL BE REPLACED BY NEW SOIL, MULCH AND VEGETATION (IRRIGATION ZONES 1 THROUGH 3).
2. EXISTING ERODED PARKING LOT PAVEMENT WILL BE REPLACED WITH NEW ASPHALT PAVEMENT. EXISTING DRAIN INLETS WILL BE RETAINED.
3. NEW ROOF DRAIN LEADERS WILL CONNECT TO BIORETENTION BASIN WITH OVERFLOW DRAIN CONNECTION TO CITY STORMSEWER IN CHESTNUT STREET.

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RENEWAL DATE 3/28/2021
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Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:

RUNOFF CALCULATION

Sheet Number:

L113

Anaheim Office
May 12, 2020
Report 20-122-0012

The KPA Group
6700 Koll Center Parkway
#125
Pleasanton, CA 94566

Attn: Paul Powers

RE: SMC Radio Shop, Redwood City Job #714.00

Background

One composite sample was processed on May 01, 2020 identified as site soil from a depth of 12 to 18 inches from areas where new landscaping is being installed. The sample was analyzed for horticultural suitability, fertility and physical characteristics. The results of the analyses are attached.

Analytical Results and Comments

The reaction of the soil is moderately acidic at 5.0 with qualitative lime absent. This is lower than preferred for some plants. Incorporating calcium carbonate lime will adjust the pH upward to the depth of incorporation. That change will happen slowly.

Salinity (ECe), sodium and boron are favorably low. The SAR shows sodium is adequately balanced by soluble calcium and magnesium; this balance is important for soil structure quality, which relates to the rate at which water infiltrates the soil.

According to the USDA Soil Classification, the less than 2mm fraction of this sample is classified as sandy clay loam. Organic content is sufficient at 4.02% dry weight. Based on this information, the estimated infiltration rate is 0.28 inch per hour. Infiltration rates may vary due to differences in compaction across the site.

In terms of fertility, calcium and magnesium are sufficient while the remaining major elements are low for proper plant nutrition.

Recommendations

A complete fertilizer containing nitrogen, phosphorus and potassium is recommended at the time of planting. Lime is also recommended for pH adjustment.

To Prepare for Mass Planting:
Drainage of the root zone should be improved by first loosening the top 10 inches of any undisturbed or compacted soil. The following materials should then be evenly spread and thoroughly blended with the top 6 inches of soil to form a homogenous layer:

Amount per 1000 Square Feet	
6 pounds	15-15-15
40 pounds	Calcium carbonate lime

4741 East Hunter Ave., Ste. A Anaheim CA 92807
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www.waypointanalytical.com

Anaheim Office
Report 20-122-0012

Maintenance

Maintenance fertilization for natives should be based entirely on color and growth performance. When needed, native plants can be maintained by broadcasting sulfur coated urea at the rate of 2.5 pounds per 1000 square feet. Follow fertilizer applications with a thorough irrigation.

Maintenance fertilization for other areas should rely primarily on a nitrogen only program supplemented with a complete fertilizer in the fall and spring. Beginning 45-60 days after planting, calcium nitrate (15.5-0-0) should be applied at a rate of 7 pounds per 1000 square feet with reapplication every 45-60 days. Alternatively, slow release Sulfur Coated Urea (43-0-0) may be applied at 6 pounds per 1000 square feet every 90 days. Keep in mind that long term use of sulfur coated urea can adjust the pH downward. Once plants are performing satisfactorily, the frequency of fertilization may be decreased depending on color and rate of growth desired. Early fall and spring, substitute a complete fertilizer such as 15-15-15 to help insure continuing adequate phosphorus and potassium.

Alternatively, Blood Meal (12-0-0) provides available nitrogen fairly rapidly while materials such as Feather Meal (12-0-0), Soybean or Cotton Seed Meal (7-1-1) are slower to provide available nitrogen, but they extend the length of time they make this contribution. In order to provide a good supply of nitrogen for a 3-4 month time frame a good combination would be 6 pounds Blood Meal and 14 pounds Feather Meal per 1000 square feet. In the fall and spring, substitute a complete organic fertilizer such as 5-5-5 applied at the manufacturer's label rate. Or in general planting areas, nutrient rich composted greenwaste may be spread in a 1 to 2 inch layer, which generally carries enough nutrition to boost complete nutrition though a source of nitrogen might also be added at a half rate to assure adequate nitrogen availability.

If we can be of any further assistance, please feel free to contact us.

Joe Kiefer, CCA

jkiefer@waypointanalytical.com

Emailed 3 Pages: paulp@thekpagroup.com

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www.waypointanalytical.com

Project : SMC Radio Shop, Redwood City
Job #714.00

COMPREHENSIVE SOIL ANALYSIS

Report No : **20-122-0012**
Purchase Order :
Date Recd : 05/01/2020
Date Printed : 05/12/2020
Page : 1 of 1

Sample Description - Sample ID	Half Sat %	pH	ECe dS/m	NO_3-N ppm	NH_4-N ppm	PO_4-P ppm	K ppm	Ca ppm	Mg ppm	Cu ppm	Zn ppm	Mn ppm	Fe ppm	Organic % dry wt.	Lab No.
	TEC	Qual Lime		Sufficiency Factors											
Site Soil	22	5.0	0.6	13	3	6	58	774	166					4.02	14766
	53	None		0.4		0.2	0.6	0.8	1.3						

Saturation Extract Values							Gravel %		Percent of Sample Passing 2 mm Screen						
									Sand						
Ca meq/L	Mg meq/L	Na meq/L	K meq/L	B ppm	SO_4 meq/L	SAR	Coarse 5 - 12	Fine 2 - 5	Very Coarse 1 - 2	Coarse 0.5 - 1	Med. to Very Fine 0.05 - 0.5	Silt .002-.05	Clay 0-.002	USDA Soil Classification	Lab No.
2.7	1.6	1.7	0.4	0.62	1.3	1.2	0.9	2.4	4.8	13.2	38	14.9	29.0	Sandy Clay Loam	14766

Sufficiency factor (1.0=sufficient for average crop) below each nutrient value. N factor based on 200 ppm constant feed. SAR = Sodium adsorption ratio. Half Saturation %=approx field moisture capacity. Nitrogen(N), Potassium(K), Calcium(Ca) and Magnesium(Mg) by sodium chloride extraction. Phosphorus(P) by sodium bicarbonate extraction. Copper(Cu), Zinc(Zn), Manganese(Mn) & Iron(Fe) by DTPA extraction. Sat. ext. method for salinity (ECe as dS/m),Boron (B), Sulfate(SO_4), Sodium(Na). Gravel fraction expressed as percent by weight of oven-dried sample passing a 12mm(1/2 inch) sieve. Particle sizes in millimeters. Organic percentage determined by Walkley-Black or Loss on Ignition.

* LOW , SUFFICIENT , HIGH

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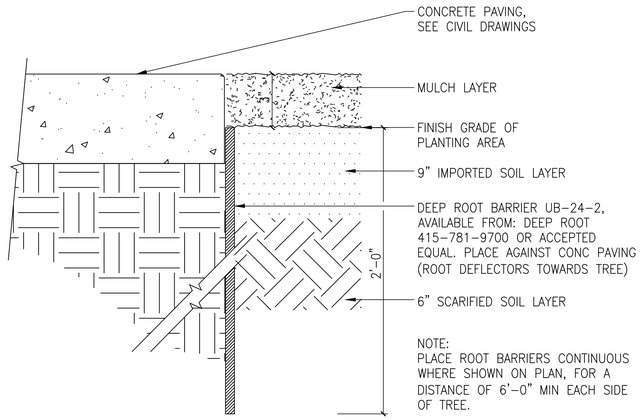
Revisions:
2 11-16-2020
BID SET

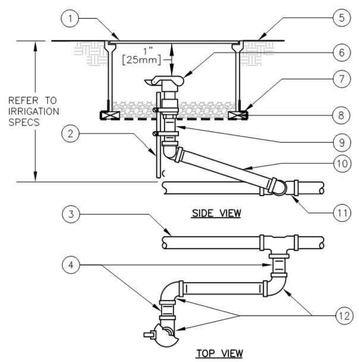
Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
SOIL REPORT

Sheet Number:
L200



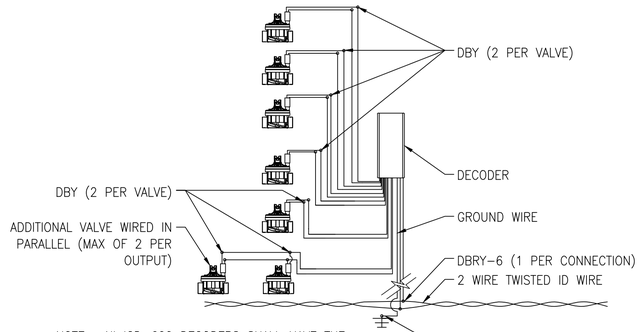
7 ROOT BARRIER
NOT TO SCALE



1. ROUND PLASTIC VALVE BOX WITH BOLT DOWN LID (REFER TO SPECS FOR BOX SIZE.)
2. 1 1/4" X 1 1/4" X 3/16" [30mm X 30mm X 5mm] ANGLE IRON 30" [760mm] LONG W/2 STAINLESS STEEL STRAPS (ONE AROUND QCV)
3. PVC MAIN LINE
4. 3" [75mm] LONG SCHEDULE 80 PVC THREADED NIPPLE
5. FINISH GRADE
6. QUICK COUPLING VALVE
7. 19 GAUGE 1/2" [13mm] SQUARE WIRE MESH
8. BRICK – 2 TOTAL
9. SCHEDULE 80 PVC THREADED NIPPLE
10. 10" [250mm] LONG SCHEDULE 80 PVC THREADED NIPPLE
11. UPC APPROVED SCHEDULE 40 PVC TEE OR ELBOW
12. SCHEDULE 80 PVC THREADED 90° ELL

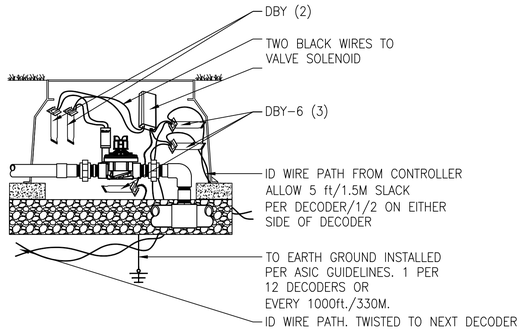
NOTE:
NIPPLES AND FITTINGS TO BE SAME SIZE AS VALVE IPT INLET THREAD SIZE.

8 QUICK COUPLING VOLVE (QCV)



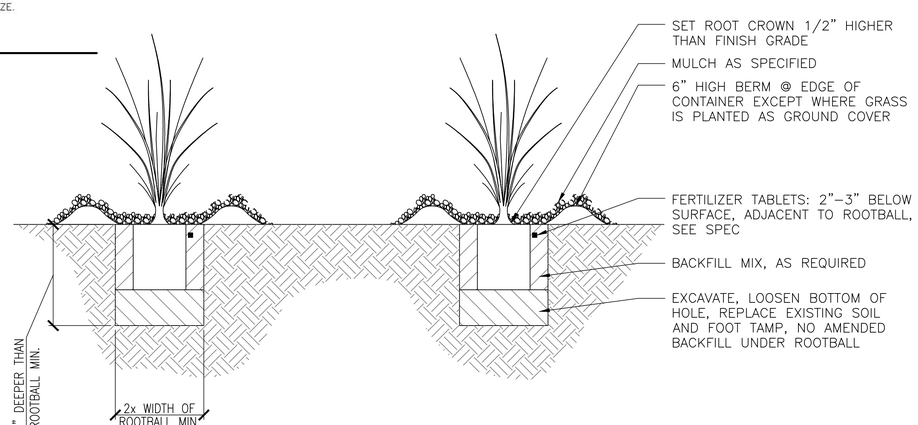
NOTE: All ICD-600 DECODERS SHALL HAVE THE FOLLOWING ADDRESS AND CORRESPONDING COLOR
ADDRESS 1 = Black ADDRESS 4 = White
ADDRESS 2 = Yellow ADDRESS 5 = Orange
ADDRESS 3 = Green ADDRESS 6 = Purple

4 DECODER

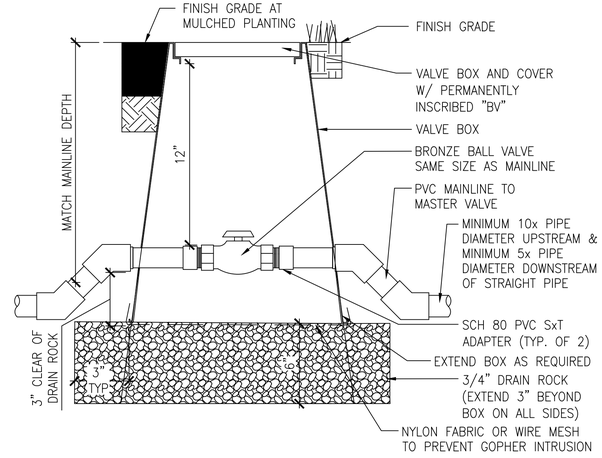


NOTE:
1. All ICD 100 DECODERS SHALL HAVE THE FOLLOWING ADDRESS AND CORRESPONDING COLOR ADDRESS 1 = Black

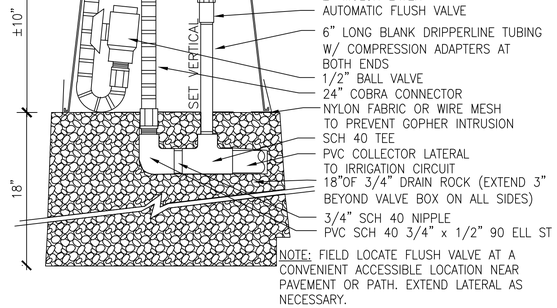
5 DECODER IN VALVE BOX



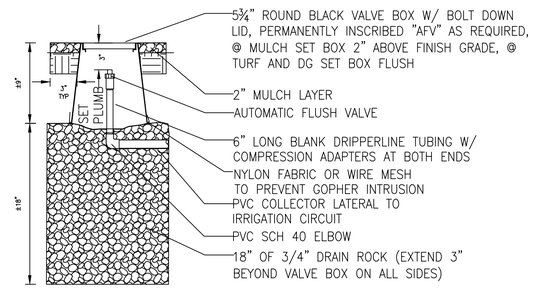
6 GRASS AND PERENNIAL PLANTING



1 ISOLATION VALVE 2" DIA AND SMALLER



2 AUTO/MANUAL FLUSH VALVE



NOTE:
FIELD LOCATE FLUSH VALVE AT A CONVENIENT ACCESSIBLE LOCATION NEAR PAVEMENT OR PATH. EXTEND LATERAL AS NECESSARY.

3 AUTOMATIC FLUSH VALVE

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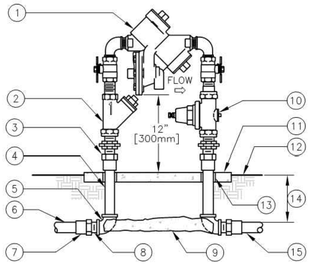
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
LANDSCAPE DETAILS

Sheet Number:
L501



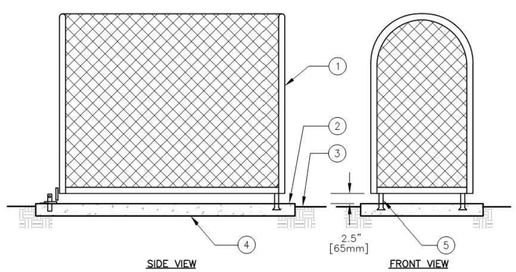
1. REDUCED PRESSURE BACKFLOW ASSEMBLY
2. YB "Y" STRAINER SYSTEM (AS REQ'D)
3. WROUGHT COPPER MALE ADAPTER – 2 TOTAL (SOLDER x THREAD CONNECTION)
4. COPPER TYPE "K" PIPE (LENGTH AS REQ'D)
5. WROUGHT COPPER 90° ELBOW – 2 TOTAL (SOLDER x THREAD CONNECTION)
6. PVC MAIN LINE TO POINT OF CONNECTION
7. BUSH AS NECESSARY FOR SIZE TRANSITION
8. SCHEDULE 40 PVC MALE ADAPTER – 2 TOTAL
9. CONCRETE SUPPORT BLOCK
10. PRESSURE REDUCING VALVE SET DISCHARGE PRESSURE AS INDICATED ON PLANS (AS REQ'D)
11. CONCRETE PAD – SEE ENCLOSURE DETAIL
12. FINISH GRADE
13. PVC SLEEVE BOTH SIDES
14. REFER TO IRRIGATION SPECS
15. PVC MAIN LINE TO IRRIGATION SYSTEM

NOTES:

1. INSTALL A FREEZE PREVENTATIVE BLANKET AROUND BACKFLOW ASSEMBLY. BLANKET SHALL BE GREEN.
2. DO NOT SOLDER CONNECT FITTINGS WHILE THREADED INTO BACKFLOW ASSEMBLY. THIS MAY CAUSE DAMAGE TO DEVICE.
3. NIPPLES AND FITTINGS TO BE SAME IPT SIZE AS BACKFLOW ASSEMBLY.
4. PROVIDE A STAINLESS STEEL ENCLOSURE TO COMPLETELY ENCLOSE DEVICE. INSTALL ENCLOSURE TO CONCRETE BASE AS DIRECTED BY MANUFACTURER.

7 REDUCED PRESSURE BACKFLOW ASSEMBLY
NTS

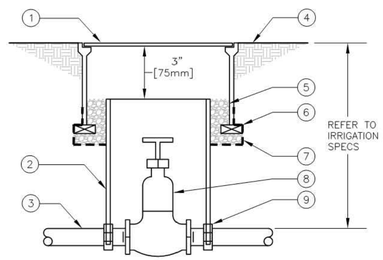
3" [75mm] AND SMALLER



1. STAINLESS STEEL ENCLOSURE TO COMPLETELY ENCLOSE DEVICE
2. SET PAD 1/2" [13MM] ABOVE FINISH GRADE
3. FINISH GRADE
4. 6" [150mm] THICK CONCRETE PAD FOR ENCLOSURE SUPPORT TO EXTEND 6" [150mm] BEYOND ENCLOSURE ON ALL SIDES. CONCRETE TO HAVE MEDIUM BROOM FINISH.
5. MOUNTING BRACKETS (STANDARD WITH ENCLOSURE) TO BE SET INTO CONCRETE PAD. PROVIDE LOCKING TAB TO ACCEPT PADLOCK PER MANUFACTURER'S INSTRUCTIONS.

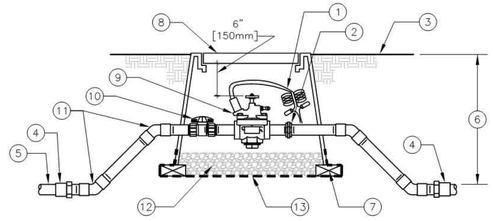
5 BACKFLOW ASSEMBLY ENCLOSURE
NTS

3" [75mm] AND SMALLER



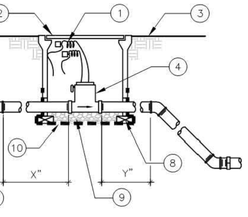
1. ROUND PLASTIC VALVE BOX WITH BOLT DOWN LID (REFER TO IRRIGATION SPECS FOR BOX SIZE)
2. 8" [200mm] CLASS 160 OR SCHEDULE 40 PVC PIPE (NOTCH TO FIT OVER MAIN LINE PIPE)
3. PVC MAIN LINE
4. FINISH GRADE
5. PEA GRAVEL OR 3/4" [20mm] DRAIN ROCK – 4" [100mm] DEEP (NO SOIL IN VALVE BOX)
6. BRICK – 2 TOTAL
7. 19 GAUGE 1/2" [13mm] SQUARE WIRE MESH
8. GATE VALVE
9. SCHEDULE 40 PVC MALE ADAPTER

3 GATE VALVE - 3" [75mm] AND SMALLER
NTS



1. VALVE CONTROL WIRE (1–BLUE, 1–WHITE) – PROVIDE SEAL PACKS AT ALL SPLICES AND 36" [1m] OF EXCESS IF WIRE IN A 1" [25mm] DIAMETER COIL
2. SCHEDULE 80 PVC THREADED UNION
3. FINISH GRADE
4. SCHEDULE 80 PVC MALE ADAPTER (2 TOTAL)
5. PVC MAIN LINE
6. REFER TO IRRIGATION SPECS
7. BRICK – 1 EACH CORNER OF VALVE BOX
8. RECTANGULAR PLASTIC VALVE BOX WITH BOLT DOWN LID. ONE VALVE PER BOX – NO EXCEPTIONS. REFER TO IRRIGATION SPECS FOR BOX SIZE.
9. MASTER VALVE WITH FLOW CONTROL AND MANUAL BLEED
10. SCHEDULE 80 PVC UNION BALL VALVE
11. SCHEDULE 80 PVC NIPPLES AND 45 THREADED ELBOWS (TYPICAL FOR BOTH SIDES OF VALVE)
12. PEA GRAVEL OR 3/4" [20mm] DRAIN ROCK – 4" [100mm] DEEP BELOW VALVE (NO SOIL IN VALVE BOX)
13. 19 GAUGE 1/2" [13mm] SQUARE WIRE MESH

1 MASTER VALVE
NTS

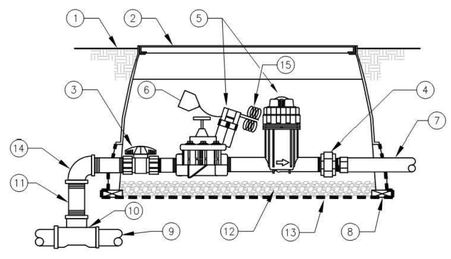


1. SENSOR CONTROL WIRE (1–BLACK, 1–ORANGE): PROVIDE SEALS PACKS AT ALL SPLICES AND 3' [1m] OF EXCESS U.F. WIRE IN A 1" [25mm] DIAMETER COIL. SENSOR WIRE FROM CONTROLLER TO VALVE BOX IS TO BE INSTALLED IN A 1" [25mm] SCHEDULE 40 PVC (GRAY) CONDUIT WITH PULL BOXES AT 200' [60m] OR LESS.
2. RECTANGULAR PLASTIC VALVE BOX WITH BOLT DOWN LID (REFER TO IRRIGATION SPECS FOR BOX SIZE)
3. FINISH GRADE
4. FLOW SENSOR – WIRE TO CONTROLLER PER IRRIGATION SPECS
5. PVC MAIN LINE
6. UPC APPROVED SCHEDULE 80 PVC MALE ADAPTER (2 TOTAL)
7. SCHEDULE 80 PVC THREADED NIPPLES AND 45° ELBOWS (AS REQUIRED ON BOTH SIDES OF SENSOR)
8. BRICK – 1 EACH CORNER OF VALVE BOX
9. PEA GRAVEL OR 3/4" [20mm] DRAIN ROCK – 4" [100mm] DEEP BELOW SENSOR (NO SOIL IN BOX)
10. 19 GAUGE 1/2" [13mm] SQUARE WIRE MESH

NOTE:

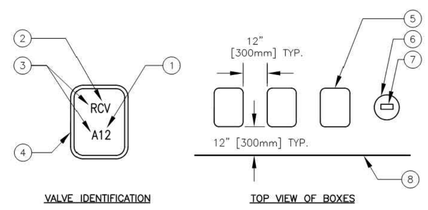
THE CONTRACTOR SHALL INSTALL FLOW SENSOR TO ALLOW STRAIGHT–FLOW OF A MINIMUM OF TEN TIMES THE DIAMETER OF MAINLINE PIPE ON THE INLET (X) SIDE AND FIVE TIMES THE DIAMETER OF MAINLINE PIPE ON THE OUTLET (Y) SIDE OF THE SENSOR. REFER TO INSTALLATION RECOMMENDATIONS.

8 FLOW SENSOR
NTS



1. FINISH GRADE
2. RECTANGULAR PLASTIC VALVE BOX WITH BOLT DOWN LID. ONE VALVE PER BOX – NO EXCEPTIONS. INSTALL BOX AS SHOWN IN BOX INSTALLATION DETAIL. REFER TO IRRIGATION SPECS FOR BOX SIZE.
3. SCHEDULE 80 PVC UNION BALL VALVE (ONE PER VALVE)
4. SCHEDULE 80 PVC THREADED UNION
5. REMOTE CONTROL VALVE DRIP ZONE KIT (SHALL INCLUDE VALVE, FILTER AND A 40 PSI PRESSURE REDUCING VALVE)
6. VALVE I.D. TAG (CONTROLLER AND STATION NUMBER)
7. PVC LATERAL LINE
8. BRICK – 1 EACH CORNER
9. PVC MAIN LINE
10. UPC APPROVED SCHEDULE 40 PVC TEE
11. SCHEDULE 80 PVC NIPPLE (4 TOTAL) LENGTH AS REQUIRED
12. PEA GRAVEL OR 3/4" [20mm] DRAIN ROCK – 4" [102mm] DEEP BELOW VALVE (NO SOIL IN VALVE BOX)
13. 19 GAUGE 1/2" [13mm] SQUARE WIRE MESH
14. SCHEDULE 80 PVC 90° ELBOW (TxT)
15. VALVE CONTROL WIRE– PROVIDE SEAL PACKS AT ALL SPLICES AND 3' [1m] OF EXCESS UF WIRE IN A 1" [25mm] DIAMETER COIL

6 REMOTE CONTROL VALVE - DRIP ZONE
NTS

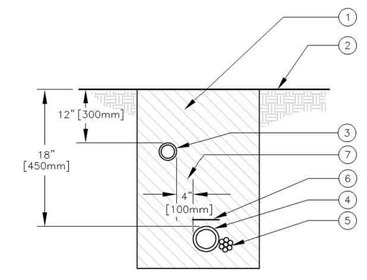


1. CONTROLLER AND STATION
2. VALVE TYPE
3. HEAT BRAND LETTERS AND NUMBERS INTO LID
4. VALVE BOX COVER
5. RECTANGULAR VALVE BOX
6. ROUND VALVE BOX FOR QCV AND GATE VALVE
7. HEAT BRAND LETTERS AND NUMBERS INTO LID (TYPICAL)
8. EDGE OF LAWN, WALK, FENCE, CURB, ETC.

INSTRUCTIONS:

1. CENTER VALVE BOX OVER REMOTE CONTROL VALVE TO FACILITATE SERVICING VALVE.
2. SET BOXES 1" [25mm] ABOVE FINISH GRADE OR MULCH COVER IN GROUNDCOVER/ SHRUB AREA AND FLUSH WITH FINISH GRADE IN TURF AREA.
3. SET REMOTE CONTROL VALVE AND VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN ONLY IF GROUND COVER DOES NOT EXIST ADJACENT TO LAWN.
4. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE OF LAWN, WALK, FENCE, CURB, ETC.
5. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOXES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
6. INSTALL EXTENSION BY VALVE BOX MANUFACTURER AS REQUIRED TO COMPLETELY ENCLOSE ASSEMBLY FOR EASY ACCESS.

4 VALVE BOX INSTALLATION
NTS



1. CLEAN BACKFILL MATERIAL
2. FINISH GRADE
3. LATERAL LINE
4. MAIN LINE
5. LOW VOLTAGE CONTROL WIRE
6. DETECTABLE WARNING TAPE OVER MAIN LINE – 3" [75mm] ABOVE PIPE
7. TYPICAL DISTANCE BETWEEN PIPES

2 TRENCHING
NTS

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Revisions:
2 11-16-2020

BID SET

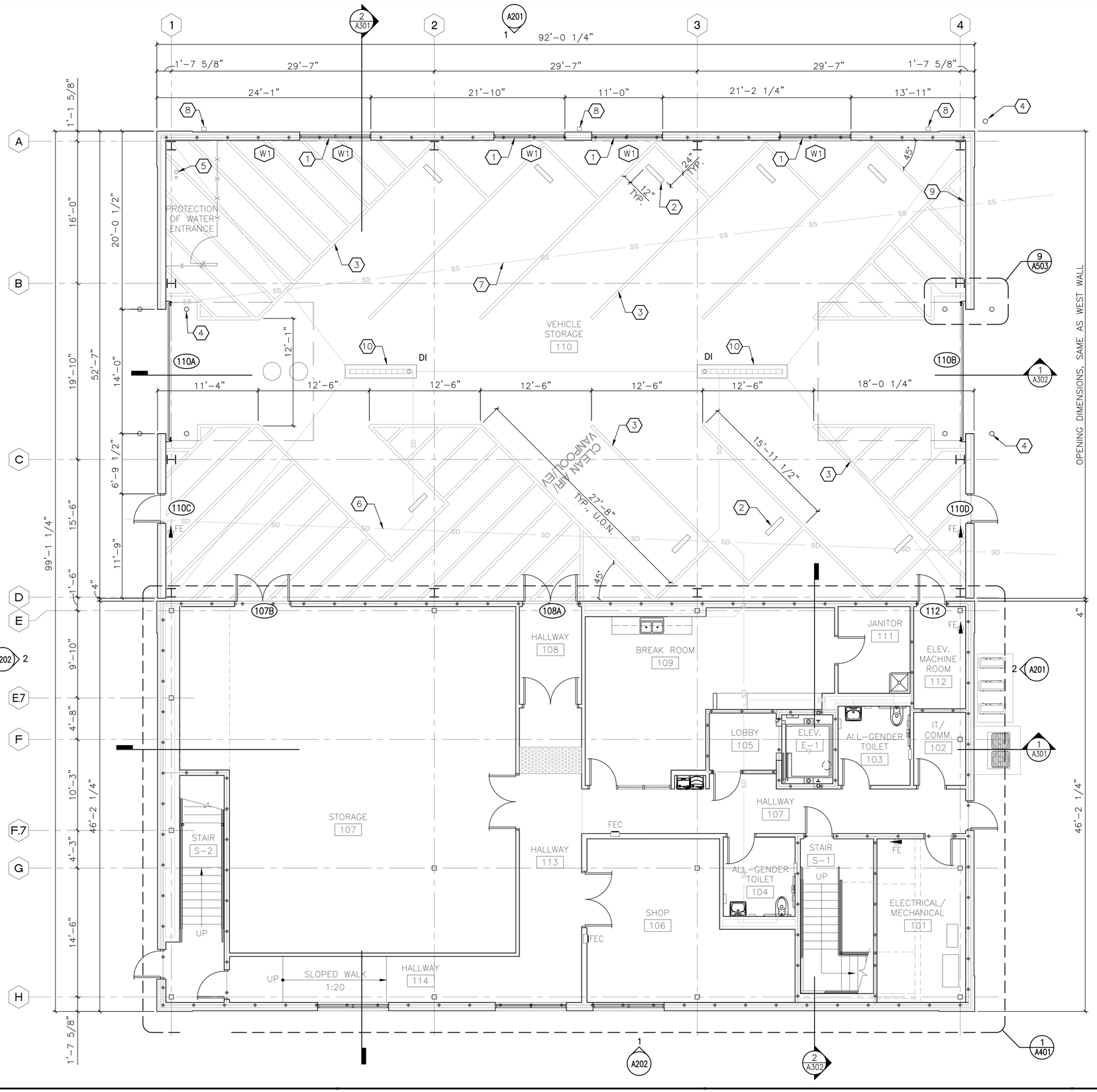
Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:

LANDSCAPE DETAILS

Sheet Number:

L502



GENERAL NOTES:

1. SEE SHEET G001 FOR LEGENDS, AND ABBREVIATIONS.
2. ALL DIMENSIONS SHALL BE COORDINATED w/ METAL BUILDING DESIGN. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER.
3. SEE ENLARGED FLOOR PLAN AT OFFICE AREA FOR ALL DOOR NUMBERS, DIMENSIONS, WALL TAGS AND KEYED NOTES.
4. ALL DIMENSIONS AT PAINTED FLOOR STRIPING ARE FROM CENTER TO CENTER OF 4" STRIPING.

LEGEND:

ROOM NAME — ROOM NAME AND NUMBER, SEE FINISH SCHEDULE A701

— ROOM NAME AND NUMBER, SEE FINISH SCHEDULE A701

A000 / 0 — EXTERIOR ELEVATION CALLOUT

0 / A000 — BUILDING SECTION

0 / A000 — DETAIL CALLOUT

100 — DOOR NUMBER

FEC — RECESSED FIRE EXTINGUISHER AND CABINET

FE — WALL MOUNTED FIRE EXTINGUISHER

W# — WINDOW TYPE, SEE SHEET A601

L — CORNER GUARD

1 HOUR RATED WALL

KEYED NOTES:

1. TRANSLUCENT WINDOW SYSTEM, SEE WALL SECTIONS
2. CONCRETE CURB STOP, TYPICAL, SEE DETAIL 1/C502
3. 4" WHITE PAINTED STRIPING WITH 4" STRIPING AT 36" O.C. AT ALL NON-PARKING AREAS
4. 6"ø PAINTED STEEL PIPE BOLLARD, TYPICAL
5. FIRE RISER
6. EXISTING UNDERGROUND STORM SEWER PIPE
7. EXISTING UNDERGROUND SANITARY DRAIN PIPE
8. DOWNSPOUTS TO DRAINAGE SYSTEM, SEE CIVIL
9. PROVIDE BACKING FOR TV MOUNT, SEE ELECTRICAL DRAWINGS.
10. TRENCH DRAIN, SEE PLUMBING AND STRUCTURAL PLANS

OPENINGS CALCULATION:

CBC TABLE 705.8 – EXTERIOR WALL OPENING
EXTERIOR WALL FIRE SEPARATION DISTANCE

WALL	WALL AREA (SF)	OPENING AREA (SF)	FIRE SEPARATION DISTANCE	ALLOWABLE AREA	ACTUAL OPENING
NORTH	2,866	220	≥ 5'	25%	7.7%
SOUTH	2,783	210	≥ 5'	25%	7.5%

PLAN NORTH

1 **FIRST FLOOR PLAN**
3/16" = 1'-0"

0 4' 8' 12'

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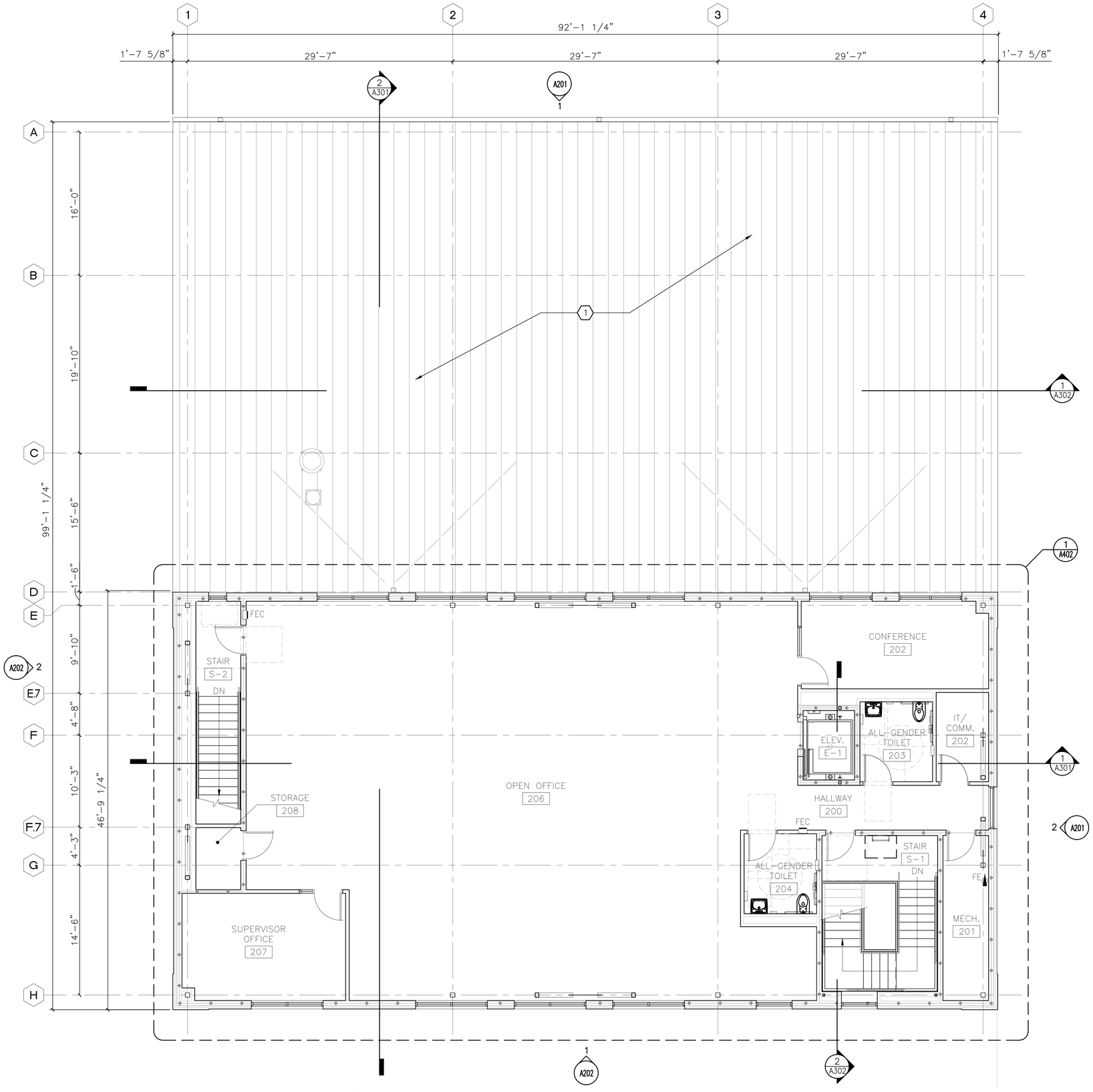
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
FIRST FLOOR PLAN

Sheet Number:
A101



GENERAL NOTES:

1. SEE SHEET G001 FOR LEGENDS, AND ABBREVIATIONS.
2. ALL DIMENSIONS SHALL BE COORDINATED w/ METAL BUILDING DESIGN. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER.
3. SEE ENLARGED FLOOR PLAN AT OFFICE AREA FOR ALL DOOR NUMBERS, DIMENSIONS, WALL TAGS AND KEYED NOTES.

LEGEND:

100	DOOR NUMBER
ROOM TAG ##	ROOM NAME AND NUMBER, SEE FINISH SCHEDULE A701
FEC	RECESSED FIRE EXTINGUISHER AND CABINET
0 A000	EXTERIOR ELEVATION CALLOUT
0 A000	BUILDING SECTION
0 A000	DETAIL CALLOUT
	1 HOUR RATED WALL

KEYED NOTES:

1 STRUCTURAL STANDING SEAM METAL ROOF, SEE SHEET A103

PLAN NORTH

SECOND FLOOR PLAN
3/16" = 1'-0"

0 4' 8' 12'

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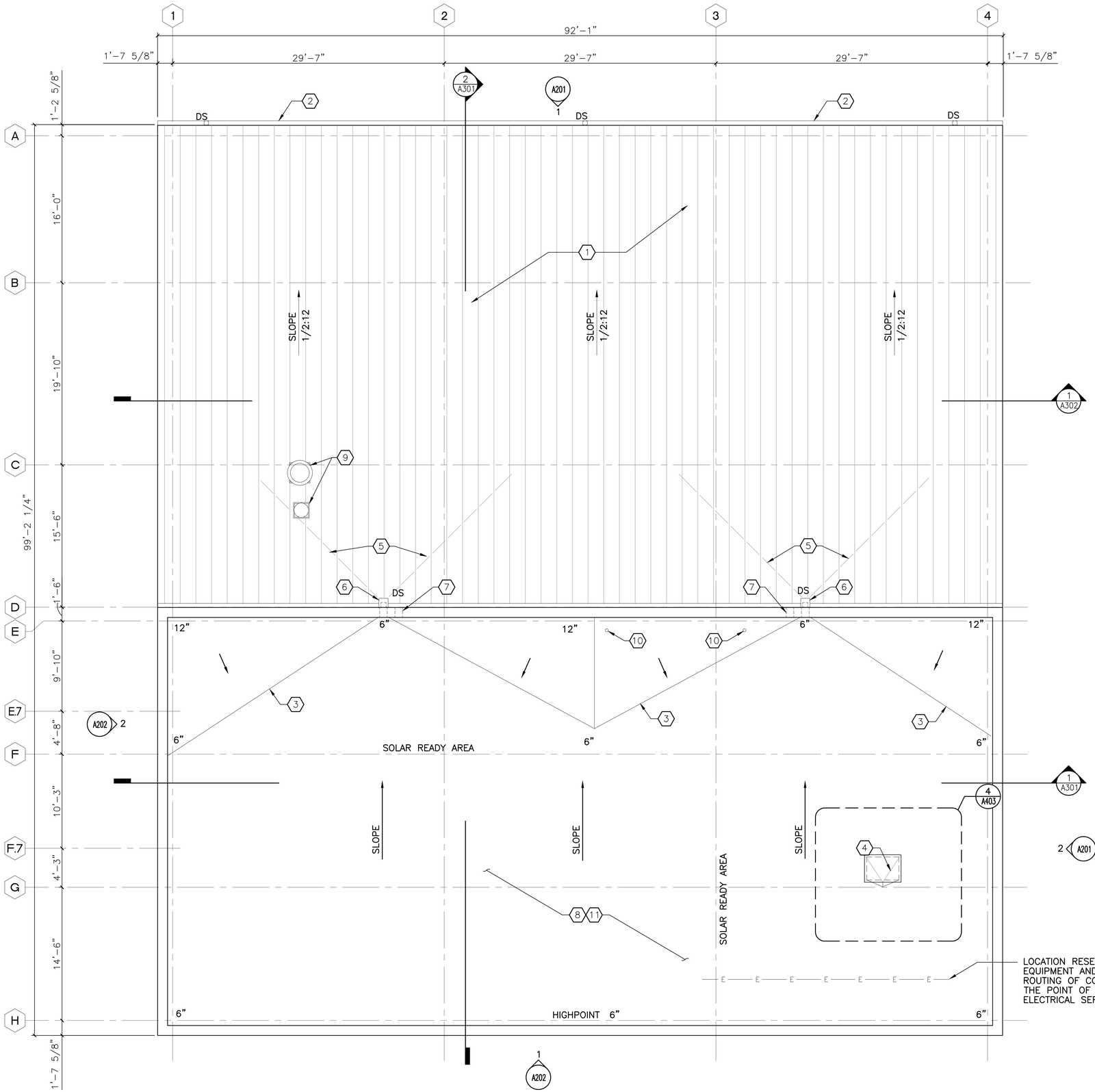
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
SECOND FLOOR PLAN

Sheet Number:
A102



LOCATION RESERVED FOR INVERTERS AND METERING EQUIPMENT AND A PATHWAY RESERVED FOR ROUTING OF CONDUIT FROM THE SOLAR ZONE TO THE POINT OF INTERCONNECTION WITH THE ELECTRICAL SERVICE

PLAN NORTH

ROOF PLAN
3/16" = 1'-0"

0 4' 8' 12'

GENERAL NOTES:

1. SEE SHEET G001 FOR LEGENDS, AND ABBREVIATIONS.
2. ALL DIMENSIONS SHALL BE COORDINATED w/ METAL BUILDING DESIGN. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER.
3. 4" MINIMUM CONTINUOUS ROOF INSULATION OVER ENTIRE BUILDING
4. SEE SECTIONS ON SHEETS A301, A302, A403, A404 A405, AND WALL SECTIONS SHEETS A310, A311 FOR DETAIL CALLOUTS AT RAKE, EAVE AND RIDGE CONDITIONS.

LEGEND:

DS	DOWNSPOUT
0 A000	EXTERIOR ELEVATION CALLOUT
0 A000	BUILDING SECTION
0 A000	DETAIL CALLOUT

KEYED NOTES:

1. STRUCTURAL STANDING SEAM METAL ROOF OVER CONTINUOUS WEATHER RESISTIVE BARRIER ON 1/2" COVER BOARD OVER 4" RIGID INSULATION OVER METAL BUILDING FRAMING ROOF SLOPE
2. PRE-FINISHED ALUMINUM GUTTER
3. TAPERED RIGID INSULATION
4. 3'-0" x 3'-0" ROOF HATCH
5. RAIN DIVERTER AT DOWNSPOUTS
6. THROUGH WALL SCUPPER AND COLLECTOR BOX, SEE DETAILS 1 & 2/A507
7. OVERFLOW THRU-WALL SCUPPER OPENING, SEE DETAILS 1 & 3/A507
8. ROOF MEMBRANE OVER CONTINUOUS WEATHER RESISTIVE BARRIER ON 1/2" COVER BOARD OVER 6" RIGID INSULATION OVER METAL DECK ON SLOPED STEEL FRAMING
9. MECHANICAL ROOF TOP EQUIPMENT
10. 2" GOOSENECK AND CAPPED ELECTRICAL RACEWAY DOWN TO 6" ABOVE ACOUSTICAL CEILING . SPACE AT A MINIMUM OF 15'-0" APART
11. ROOF SLOPE PER STRUCTURAL HEIGHT, SEE S301.

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Revisions:
2 11-16-2020

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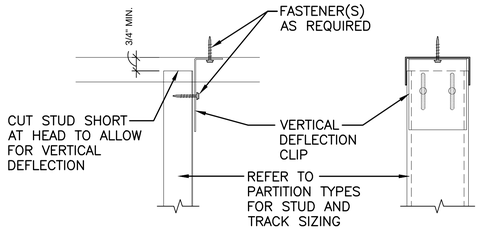
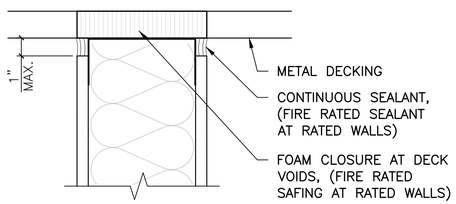
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
ROOF PLAN

Sheet Number:
A103



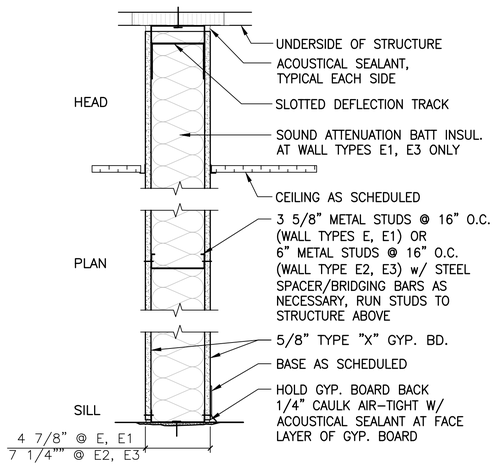
2 TYPICAL DETAIL AT DEFLECTION CLIP/SLIP TRACK
NO SCALE



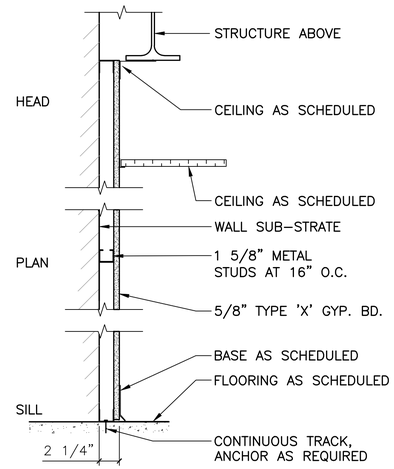
1 TOP OF WALL DETAIL
NO SCALE

WALL PARTITION GENERAL NOTES:

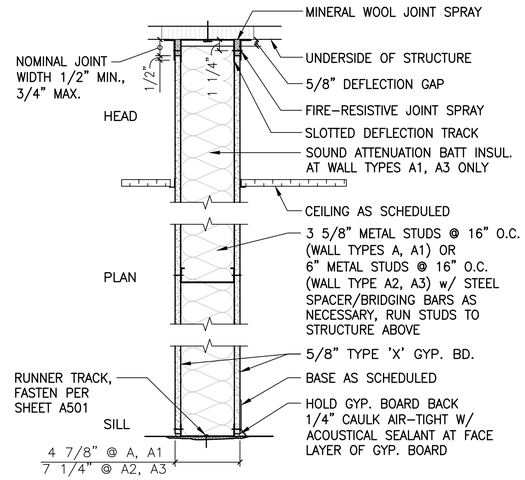
1. PARTITION TYPES INDICATE FRAMING REQUIREMENTS AND MATERIALS AT THE TOP AND BOTTOM OF STANDARD WALL TYPES. SEE WALL TYPES FOR STUD SIZES AND MATERIAL ASSEMBLIES.
2. ALL INTERIOR PARTITIONS SHALL BE FULL HEIGHT TYPE, UNLESS OTHERWISE NOTED.
3. METAL STUDS: SEE SHEET A501 FOR METAL STUD CONSTRUCTION AND FASTENING INFORMATION.
4. LEVELING: PROVIDE LEVELING NON-SHRINK GROUT UNDER ALL NEW METAL STUD WALLS AS REQUIRED TO MAINTAIN ± 1/8" PER 10' UNDER WALL. TYPICAL AT ALL LOCATIONS.
5. GYPSUM BOARD: ALL GYPSUM BOARD SHALL BE 5/8" TYPE "X" UNLESS OTHERWISE NOTED. SUBSTITUTE TYPE "X" MOISTURE RESISTANT GYPSUM BOARD IN TOILET ROOMS, TOILET ROOM VESTIBULES, JANITOR CLOSETS, PLUMBING SHAFTS AND ALL OTHER LOCATIONS SUBJECT TO MOISTURE. SUBSTITUTE 5/8" TYPE "X" VENEER PLASTER BASE IN ALL LOCATIONS WHERE VENEER PLASTER FINISH WILL BE APPLIED. SUBSTITUTE 5/8" TYPE "X" GYPSUM SHEATHING IN EXTERIOR LOCATIONS.
6. BACKING PLATES: PROVIDE STEEL PLATE AND/OR STUD BACKING AS INDICATED OR AS REQUIRED FOR ALL SIGNAGE, RAILINGS, CABINET, TV, SHELVING, GRAB BARS, TOILET PARTITIONS, TOILET ACCESSORIES, AND OTHER ITEMS FASTENED TO PARTITIONS. COORDINATE INSTALLATION OF BACKING WITH OTHER TRADES. SEE SHEET A501.
7. NON FIRE-RATED CONSTRUCTION: ALL NON FIRE-RATED CONSTRUCTION SHALL BE BUILT AS REQUIRED FOR ONE-HOUR FIRE RESISTANCE. EXCEPT THAT RECESSED ITEMS AND PENETRATIONS MAY PASS THROUGH THIS PARTITION UNPROTECTED, PROVIDE SEALANT OR CAULK AROUND PENETRATIONS.
8. TAPE AND FLOAT JOINTS (GYPSUM BOARD) ABOVE CEILINGS, TYPICAL.
9. SEE WALL SECTION SHEETS A310 TO A311 FOR ANY ADDITIONAL REQUIREMENTS.
10. ALL INTERIOR PARTITION STUDS SHALL BE 20GA. WITH A 2" FLANGE, UNLESS OTHERWISE NOTED.
11. ALL EXTERIOR VERTICAL STUDS SHALL BE 16GA WITH A 2" FLANGE, UNLESS OTHERWISE NOTED.



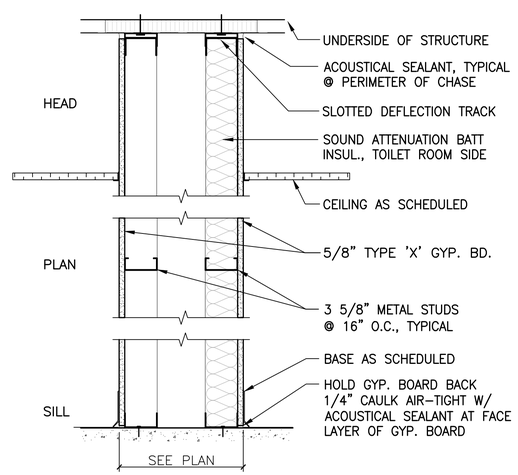
E E1 E2 E3 PARTITION TYPE (S)



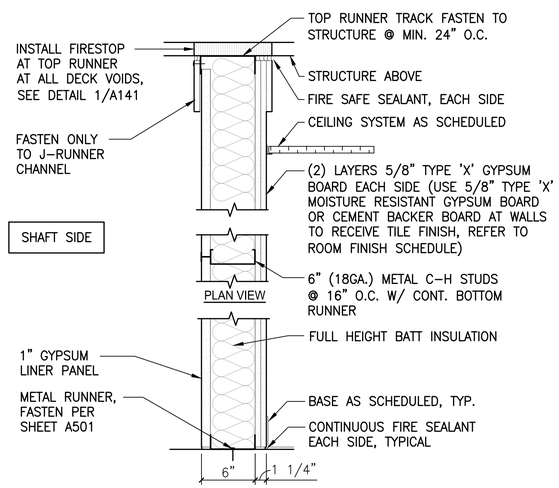
C PARTITION TYPE



A A1 A2 A3 PARTITION TYPE (S)
1HR. RATED UL #U465



F1 PARTITION TYPE - CHASE WALL



D PARTITION TYPE (S)
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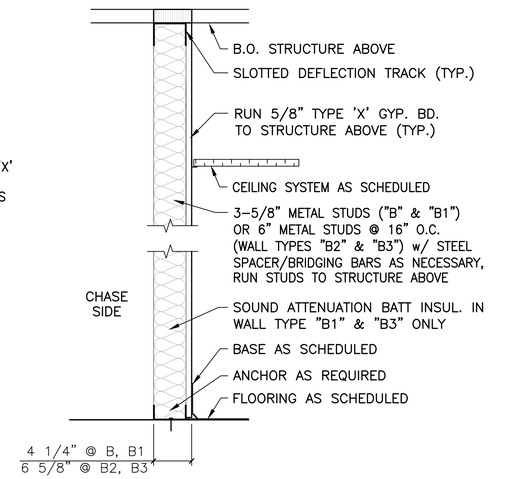

B B1 B2 B3 PARTITION TYPE (S)

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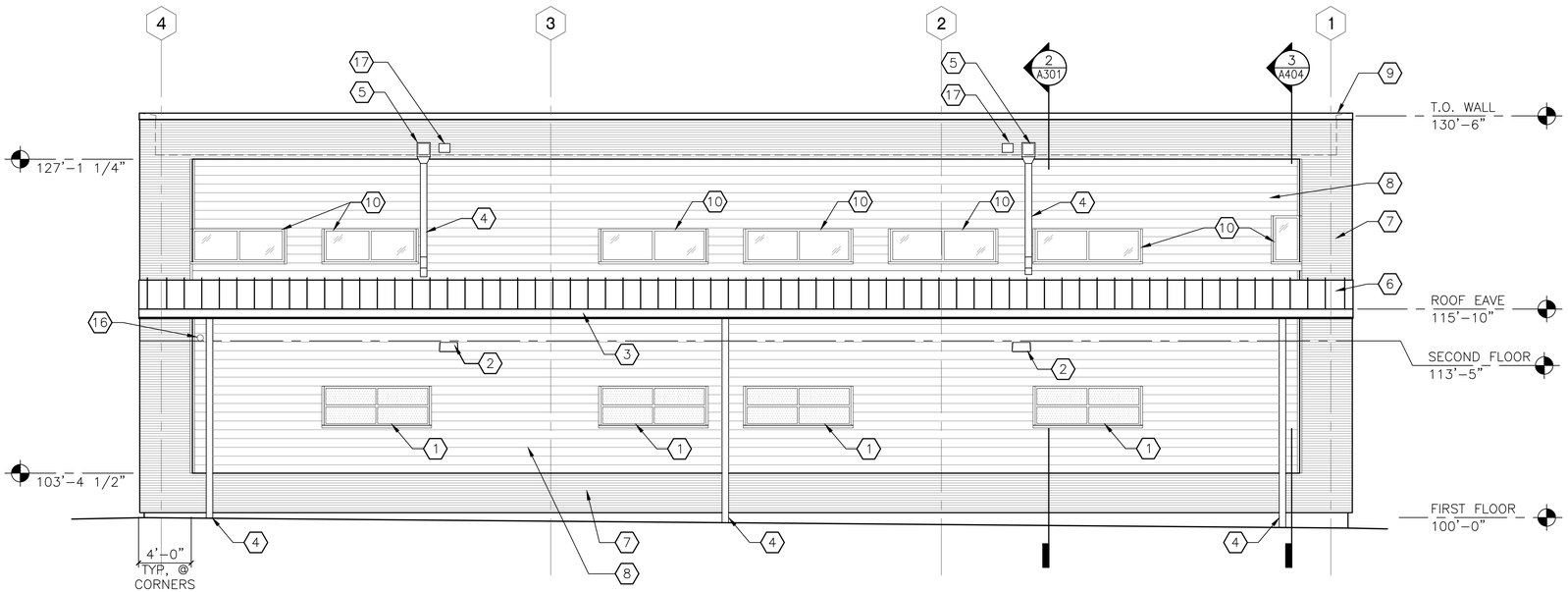
Revisions:
2 11-16-2020

BID SET

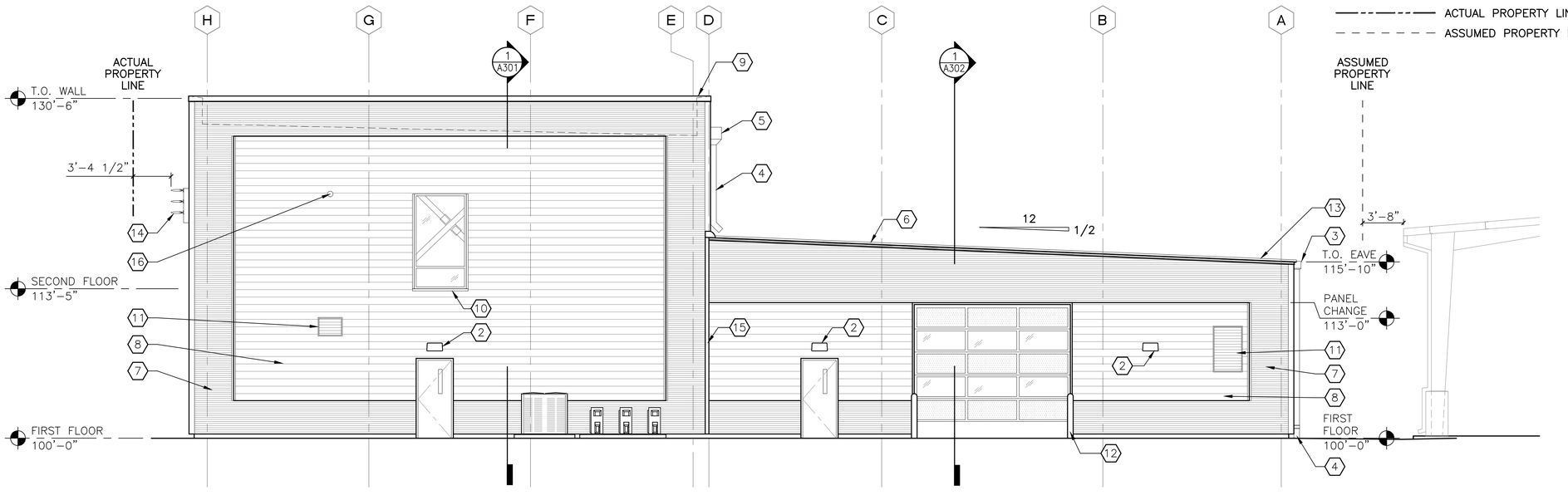
Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
PARTITION TYPES

Sheet Number:
A141



1 **NORTH ELEVATION**
3/16" = 1'-0"



2 **EAST ELEVATION**
3/16" = 1'-0"

GENERAL NOTES:

1. ALL EXTERIOR GLAZING SHALL BE GL2 UNLESS OTHERWISE NOTED, SEE SHEET A601.
2. COORDINATE LOCATION OF ELECTRICAL METERS AND DISCONNECTS WITH APPROVED SHOP DRAWING SUBMITTAL, PROVIDE BACKING PLATES BETWEEN STUDS AND SHEATHING WHERE REQUIRED FOR ANCHORAGE OF ELECTRICAL EQUIPMENT

KEYED NOTES:

1. TRANSLUCENT WINDOW PANEL SYSTEM
2. LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS
3. PRE-FINISHED ALUMINUM GUTTER
4. PRE-FINISHED ALUMINUM DOWNSPOUT (DOWNSPOUTS SHALL DRAIN TO PIPING BELOW, SEE DETAIL 2/C505
5. PRE-FINISHED METAL COLLECTOR BOX, SEE DET. 1 & 2/A507
6. METAL ROOF SYSTEM
7. METAL PANEL SIDING SYSTEM (MTL-1)
8. METAL PANEL SIDING SYSTEM (MTL-2)
9. PRE-FINISHED TOP OF WALL METAL COPING
10. ALUMINUM WINDOW SYSTEM w/ INSULATED GLAZING
11. PRE-FINISHED MECHANICAL LOUVER IN METAL PANEL WALL, SEE MECHANICAL DRAWINGS
12. 6"ø PAINTED STEEL PIPE BOLLARD, TYPICAL EACH SIDE OF OVERHEAD DOOR
13. PRE-FINISHED RAKE EDGE
14. SUNSHADING DEVICE
15. WALL TO WALL EXPANSION JOINT
16. MECHANICAL OPENING
17. OVERFLOW SCUPPER, SEE DETAIL 1,3/A507

LEGEND:

ACTUAL PROPERTY LINE, PER PLAT MAPS

ASSUMED PROPERTY LINE, FOR SETBACKS

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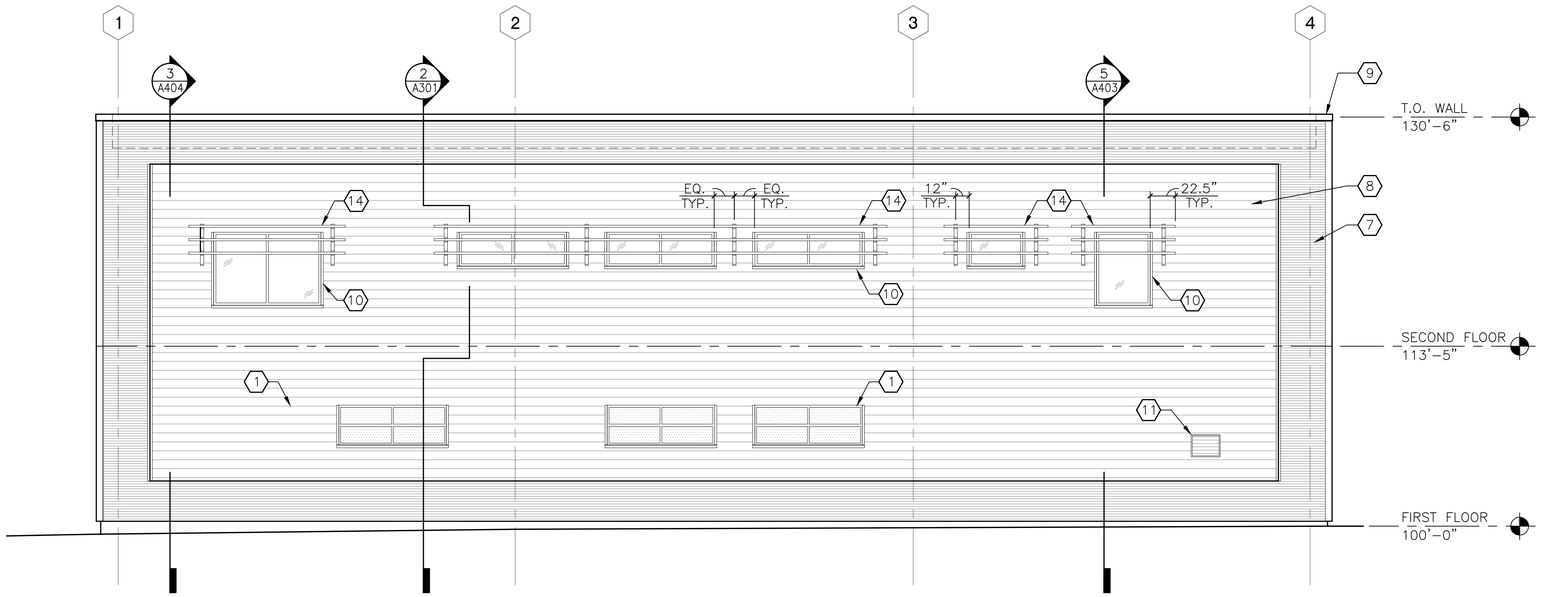
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
EXTERIOR ELEVATIONS

Sheet Number:
A201



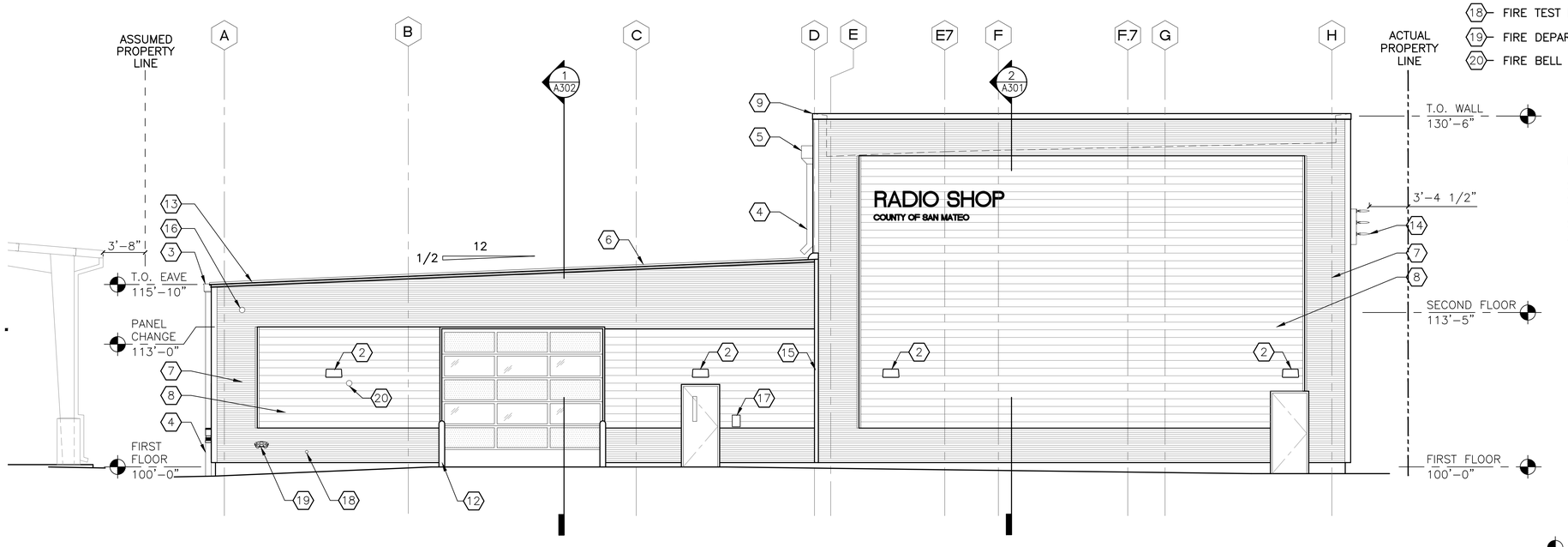
1 **SOUTH ELEVATION**
3/16" = 1'-0"

GENERAL NOTES:

1. ALL EXTERIOR GLAZING SHALL BE GL2 UNLESS OTHERWISE NOTED, SEE SHEET A601.
2. COORDINATE LOCATION OF ELECTRICAL METERS AND DISCONNECTS WITH APPROVED SHOP DRAWING SUBMITTAL, PROVIDE BACKING PLATES BETWEEN STUDS AND SHEATHING WHERE REQUIRED FOR ANCHORAGE OF ELECTRICAL EQUIPMENT

KEYED NOTES:

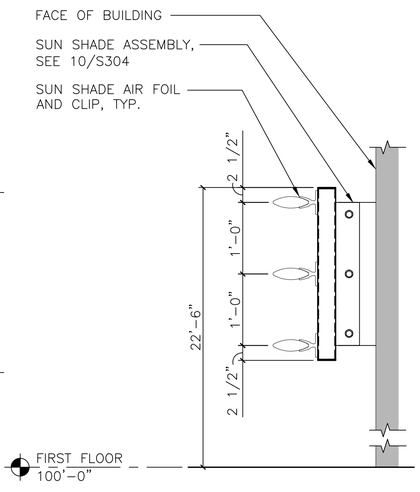
1. TRANSLUCENT WINDOW PANEL SYSTEM
2. LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS
3. PRE-FINISHED ALUMINUM GUTTER
4. PRE-FINISHED ALUMINUM DOWNSPOUT (DOWNSPOUTS AT FIRST FLOOR SHALL TIE INTO PIPING BELOW, SEE DETAIL 2/C505
5. PRE-FINISHED METAL COLLECTOR BOX
6. METAL ROOF SYSTEM
7. METAL PANEL SIDING SYSTEM (MTL-1)
8. METAL PANEL SIDING SYSTEM (MTL-2)
9. PRE-FINISHED TOP OF WALL METAL COPING
10. ALUMINUM WINDOW SYSTEM w/ INSULATED GLAZING
11. PRE-FINISHED MECHANICAL LOUVER IN METAL PANEL WALL, SEE MECHANICAL DRAWINGS
12. 6"ø PAINTED STEEL PIPE BOLLARD, TYPICAL EACH SIDE OF OVERHEAD DOOR
13. PRE-FINISHED RAKE EDGE
14. SUNSHADING DEVICE, SEE 3/A202 FOR ADDITIONAL DIMENSIONS, COORDINATE WITH LIGHT GAUGE FRAMING ELEVATIONS SHEET S303
15. WALL TO WALL EXPANSION JOINT
16. MECHANICAL OPENING
17. RECESSED LOCK BOX, SPEC SECTION 06 10 00
18. FIRE TEST DRAIN OUTLET
19. FIRE DEPARTMENT CONNECTION
20. FIRE BELL



LEGEND:

——·——·—— ACTUAL PROPERTY LINE, PER PLAT MAPS
– – – – – – ASSUMED PROPERTY LINE, FOR SETBACKS

2 **WEST ELEVATION**
3/16" = 1'-0"



3 **SUN SHADE MOUNTING HEIGHT**
1" = 1'-0"

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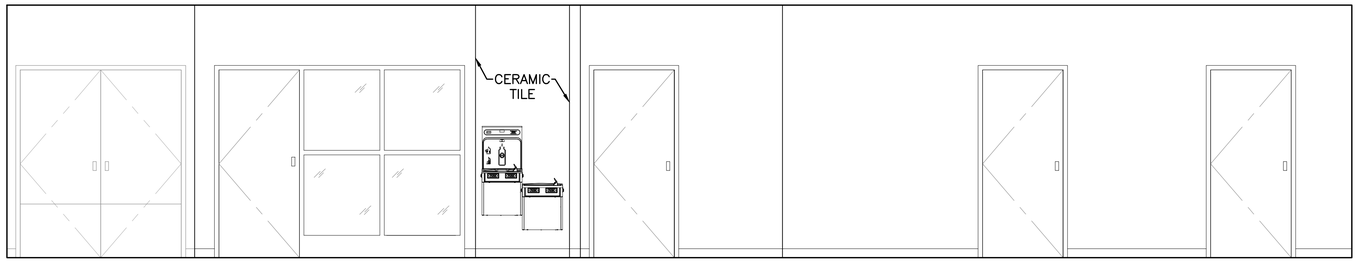
Revisions:
2 11-16-2020

BID SET

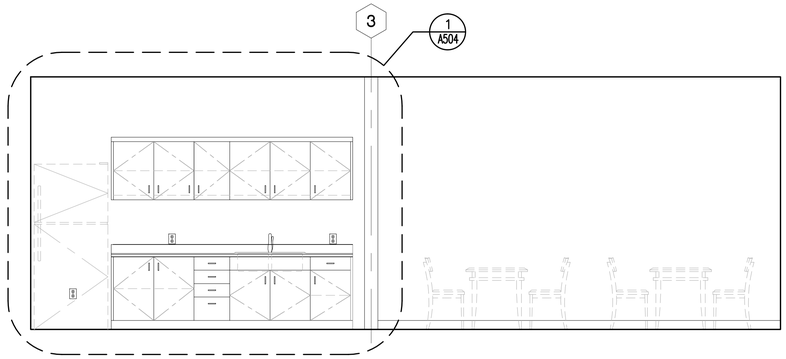
Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
EXTERIOR ELEVATIONS

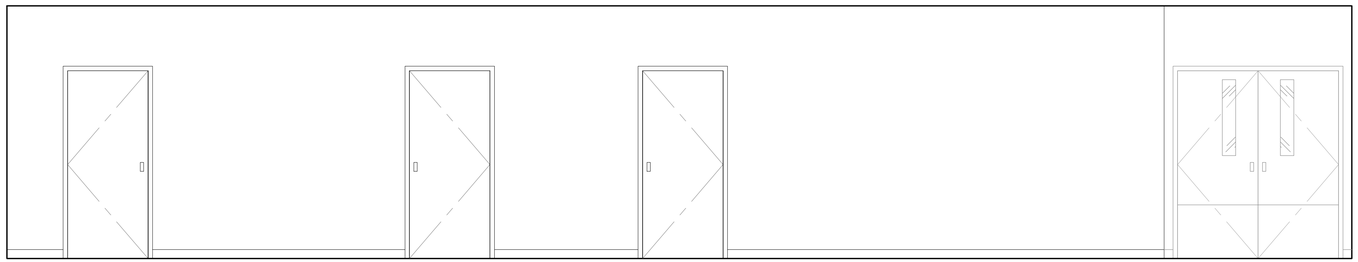
Sheet Number:
A202



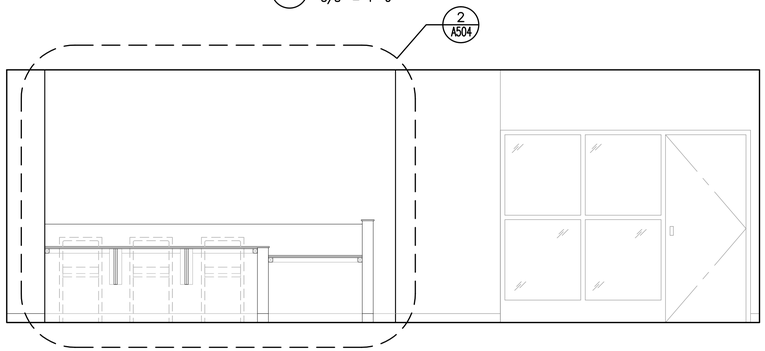
3 HALLWAY ELEVATION - NORTH
3/8" = 1'-0"



1 BREAK ROOM ELEVATION - NORTH
3/8" = 1'-0"



4 HALLWAY ELEVATION - SOUTH
3/8" = 1'-0"



2 BREAK ROOM ELEVATION - SOUTH
3/8" = 1'-0"

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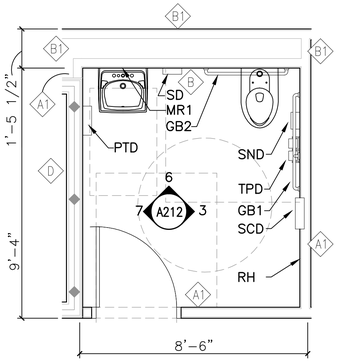
Revisions:
2 11-16-2020

BID SET

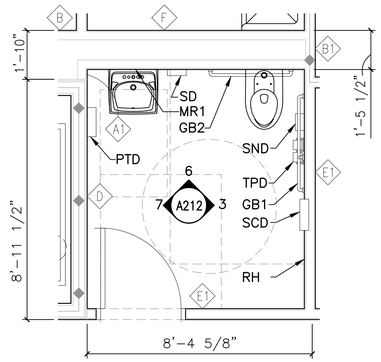
Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
INTERIOR ELEVATIONS AND CASEWORK DETAILS

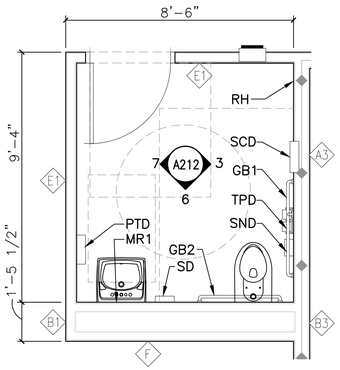
Sheet Number:
A211



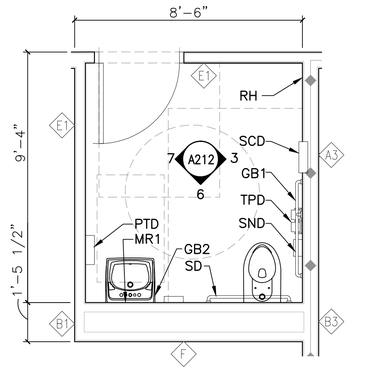
4 ENLARGED PLAN - TOILET 203



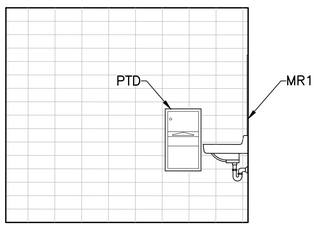
1 ENLARGED PLAN - TOILET 103
3/8"=1'-0"



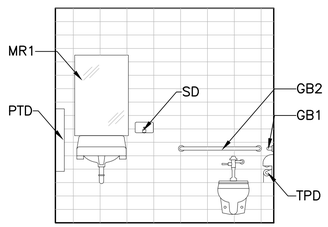
5 ENLARGED PLAN - TOILET 204



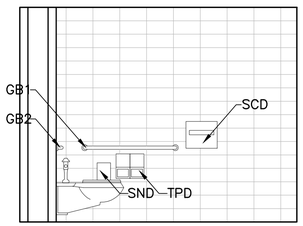
2 ENLARGED PLAN - TOILET 104



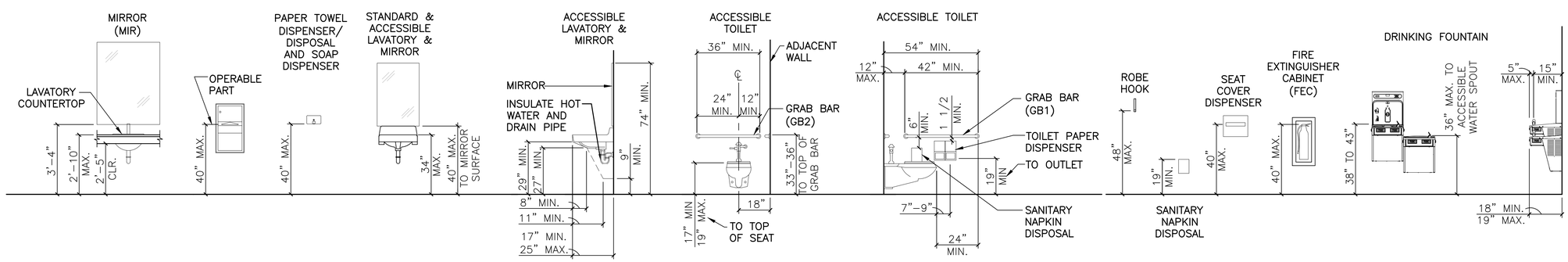
7 ELEVATION



6 ELEVATION



3 ELEVATION



8 TYPICAL ACCESSIBLE MOUNTING HEIGHTS FOR TOILET ROOM PLUMBING FIXTURES AND ACCESSORIES
3/8"=1'-0"

GENERAL NOTES:

1. THE HIGHEST OPERABLE PART ON ALL DISPENSERS SHALL BE NO MORE THAN 40" ABOVE FINISHED FLOOR.
2. LEVER/PUSH TYPE LAVATORY CONTROLS WITH SELF CLOSING VALVES (MIN. 10 SECOND OPEN FLOW), 5 LB. MAX. OPERATING FORCE PER CBC 11B-309.
3. INSULATE HOT WATER DRAIN PIPE UNDER SINKS. SEE SPECIFICATIONS FOR PLUMBING FIXTURES.
4. THE FORCE FOR PUSHING OR PULLING OPEN A DOOR OR GATE TO MEET CBC 11B-404.2.9
5. CLEARANCES AT DOORS, DOORWAYS AND GATES TO MEET CBC 11B-404
6. BACKING PLATES: PROVIDE STEEL PLATE AND/OR STUD BACKING AS INDICATED OR AS REQUIRED FOR ALL SIGNAGE, RAILINGS, CABINET, TV, SHELVING, GRAB BARS, TOILET PARTITIONS, TOILET ACCESSORIES, AND OTHER ITEMS FASTENED TO PARTITIONS. COORDINATE INSTALLATION OF BACKING WITH OTHER TRADES.
7. FULL HEIGHT TILE IN TOILET ROOM WALLS.

LEGEND:

GB1	GRAB BAR 42" LONG
GB2	GRAB BAR 36" LONG
MR1	MIRROR (24" x 36")
PTD	PAPER TOWEL DISPENSER/DISPOSAL
RH	ROBE HOOK
TPD	TOILET PAPER DISPENSER
SD	SOAP DISPENSER (SURFACE MOUNTED)
SCD	RECESSED SEAT COVER DISPENSER
SND	SANITARY NAPKIN DISPOSAL
A	PARTITION TYPE, SEE SHEET A141

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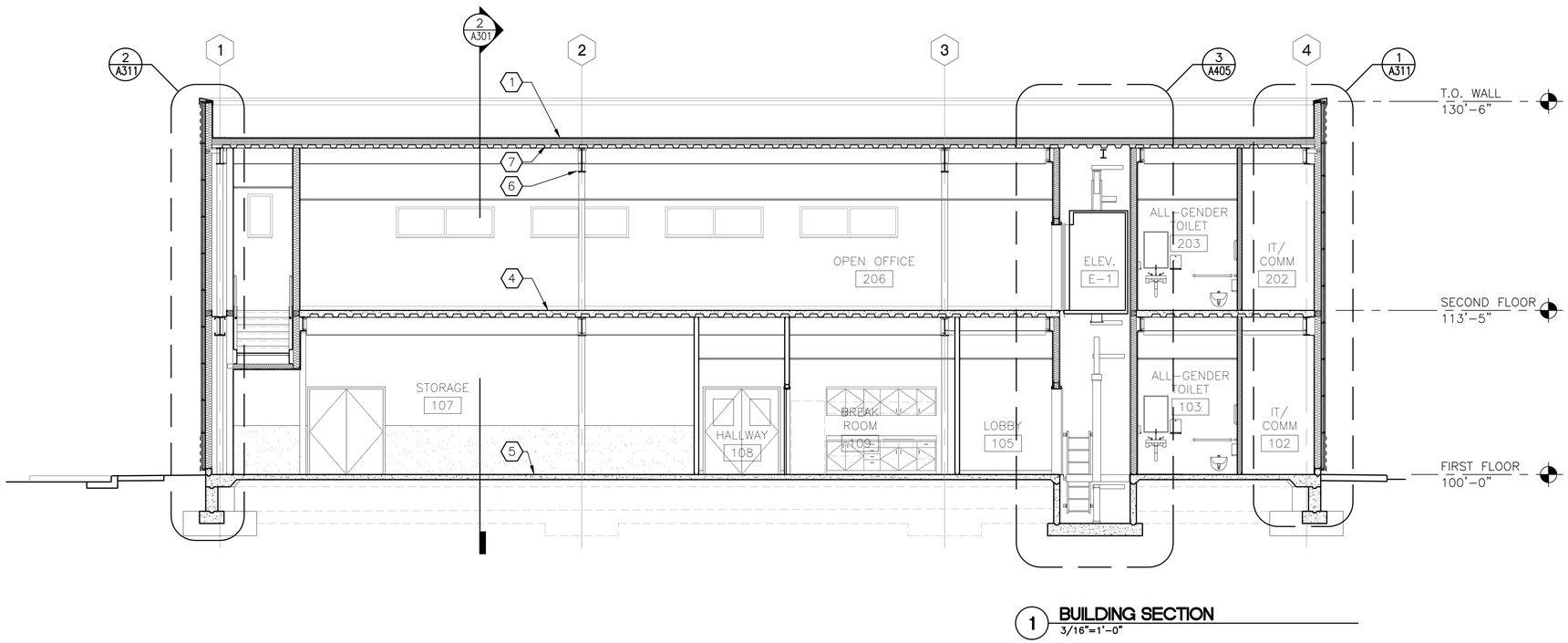
Revisions:
2 11-16-2020

BID SET

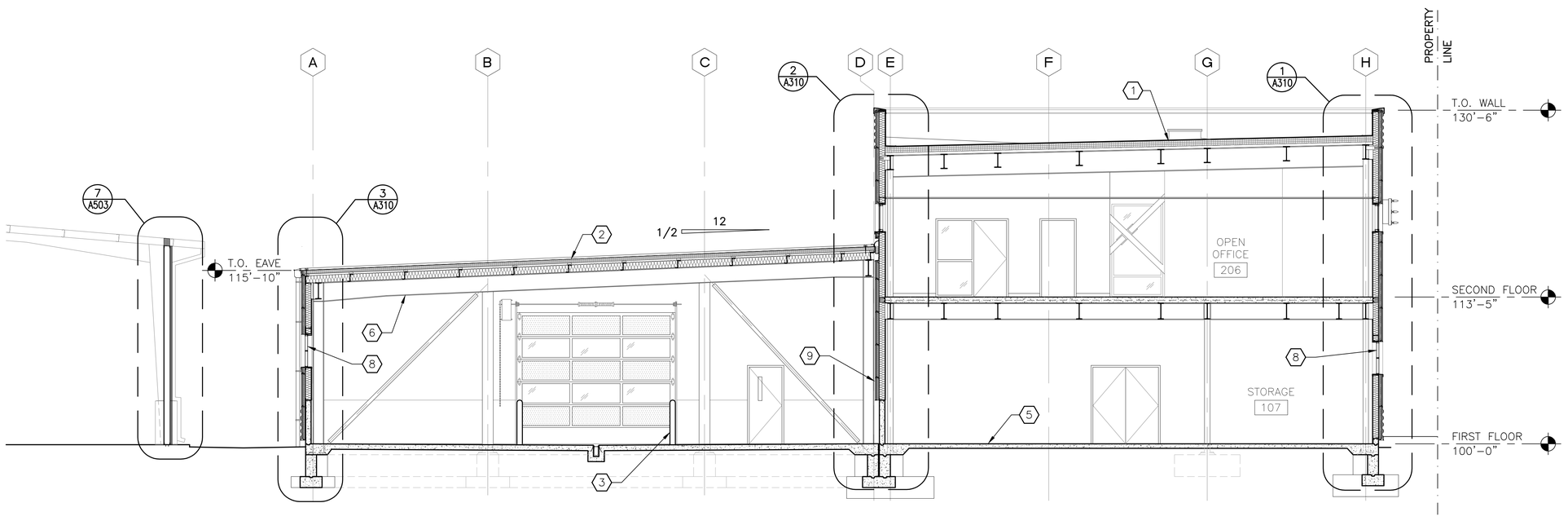
Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
ENLARGED TOILET ROOM PLANS AND ELEVATIONS

Sheet Number:
A212



1 **BUILDING SECTION**
3/16"=1'-0"



2 **BUILDING SECTION**
3/16"=1'-0"

GENERAL NOTES:

1. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
2. SEE SHEET G001 FOR LEGEND & ABBREVIATIONS

KEYED NOTES:

1. ROOF MEMBRANE OVER WEATHER RESISTIVE BARRIER OVER 1/2" COVER BOARD OVER 6" RIGID INSULATION OVER METAL DECK ON STEEL FRAMING
2. METAL ROOF SYSTEM OVER WEATHER RESISTIVE BARRIER ON 4" RIGID INSULATION OVER THERMAL BLOCKING ON STEEL ROOF PURLINS
3. 6"ø PAINTED STEEL PIPE BOLLARD, TYPICAL EACH SIDE OF OVERHEAD DOOR
4. CONCRETE/METAL DECK FLOOR SYSTEM OVER STRUCTURAL STEEL FRAMING, SEE STRUCTURAL DRAWINGS
5. REINFORCED CONCRETE FLOOR SLAB, SEE STRUCTURAL DRAWINGS
6. STEEL RIGID FRAME PER METAL BUILDING SUPPLIER
7. STEEL PURLINS AND INSULATION SYSTEM PER METAL BUILDING SUPPLIER
8. TRANSLUCENT WINDOW SYSTEM, SEE WALL SECTIONS
9. WALL TO CORNER VERTICAL EXPANSION JOINT COVER

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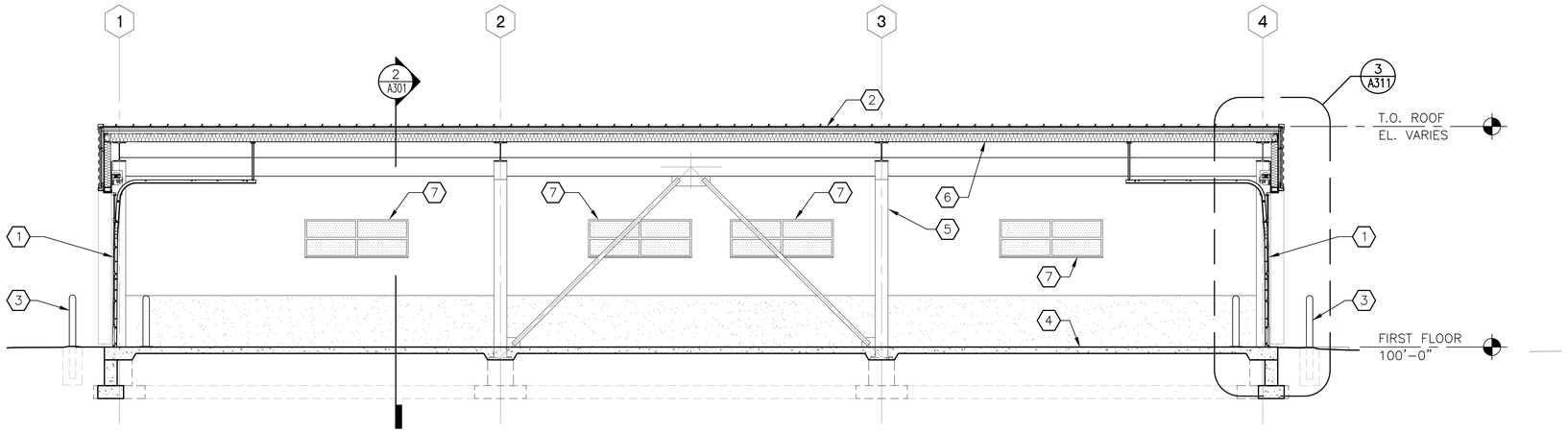
Revisions:
2 11-16-2020

BID SET

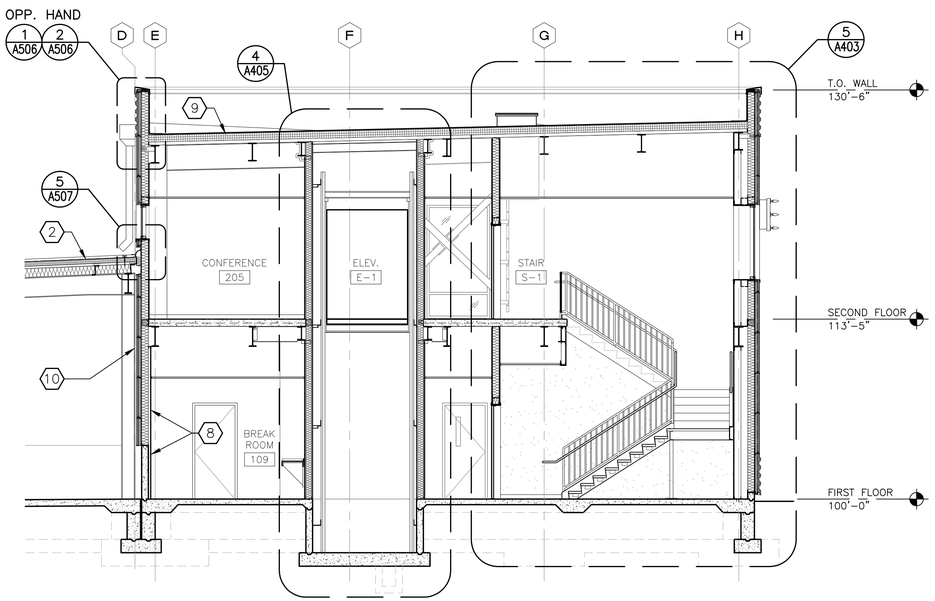
Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
BUILDING SECTIONS

Sheet Number:
A301



1 **BUILDING SECTION**
3/16"=1'-0"



2 **BUILDING SECTION**
3/16"=1'-0"

GENERAL NOTES:

1. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
2. SEE SHEET G001 FOR LEGEND & ABBREVIATIONS

KEYED NOTES:

1. SECTIONAL OVERHEAD DOOR
2. METAL ROOF SYSTEM OVER WEATHER RESISTIVE BARRIER ON 4" RIGID INSULATION OVER THERMAL BLOCKING ON STEEL ROOF PURLINS
3. 6"ø PAINTED STEEL PIPE BOLLARD, (4 PER DOOR) TYPICAL EACH SIDE OF OVERHEAD DOOR
4. REINFORCED CONCRETE FLOOR SLAB, SEE STRUCTURAL DRAWINGS
5. STEEL RIGID FRAME PER METAL BUILDING SUPPLIER
6. STEEL PURLINS AND INSULATION SYSTEM PER METAL BUILDING SUPPLIER
7. TRANSLUCENT WINDOW SYSTEM, SEE WALL SECTIONS
8. 5/8" TYPE "X" GYP. BD. OVER 1 5/8" METAL STUDS AT 16" O.C. OVER FACE OF 6" CONCRETE WALL AND 6" METAL STUDS
9. ROOF MEMBRANE OVER WEATHER RESISTIVE BARRIER OVER 1/2" COVER BOARD OVER 6" RIGID INSULATION OVER METAL DECK ON STEEL FRAMING
10. 2" INSUL. METAL WALL PANEL SYSTEM OVER WEATHER RESISTIVE BARRIER OVER 3" RIGID INSULATION ON 5/8" EXTERIOR SHEATHING

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REDWOOD CITY, CA 94063

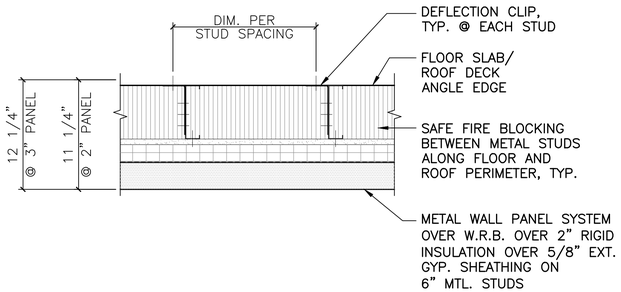
Revisions:
2 11-16-2020

BID SET

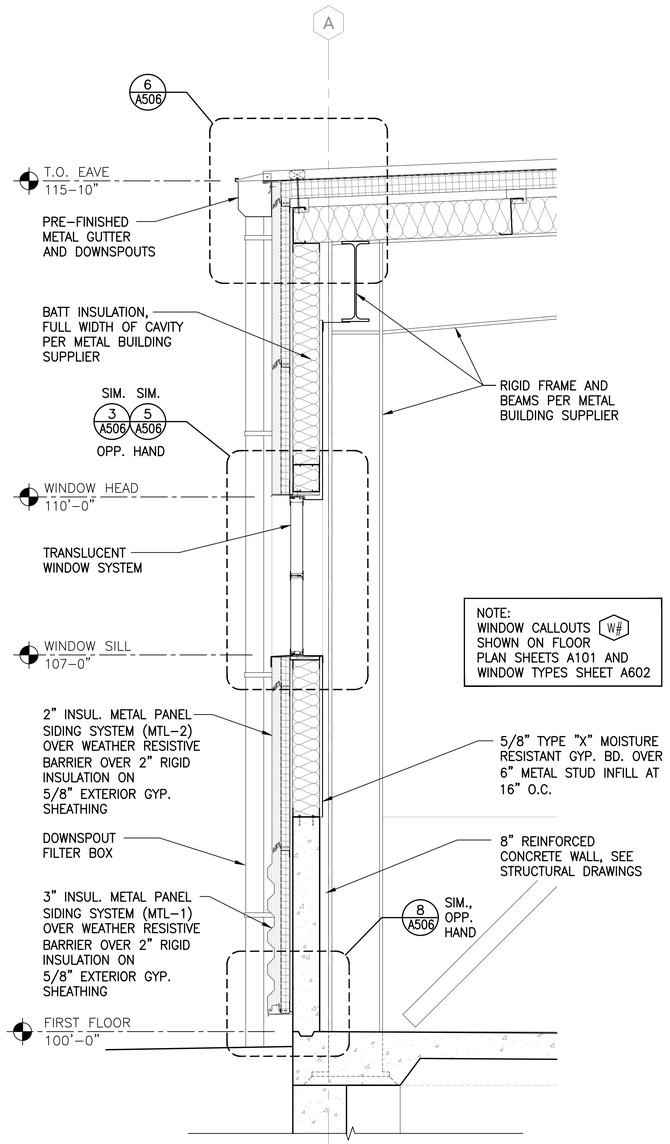
Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
BUILDING SECTIONS

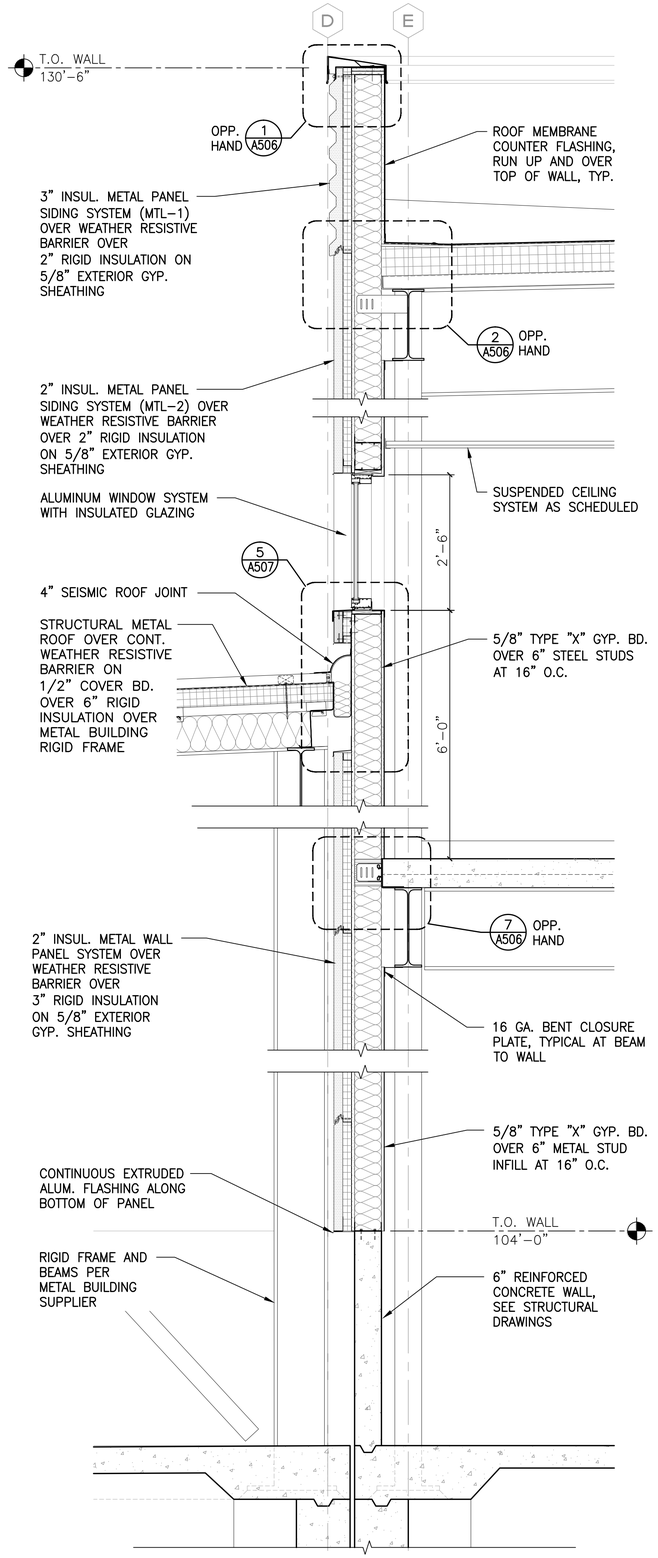
Sheet Number:
A302



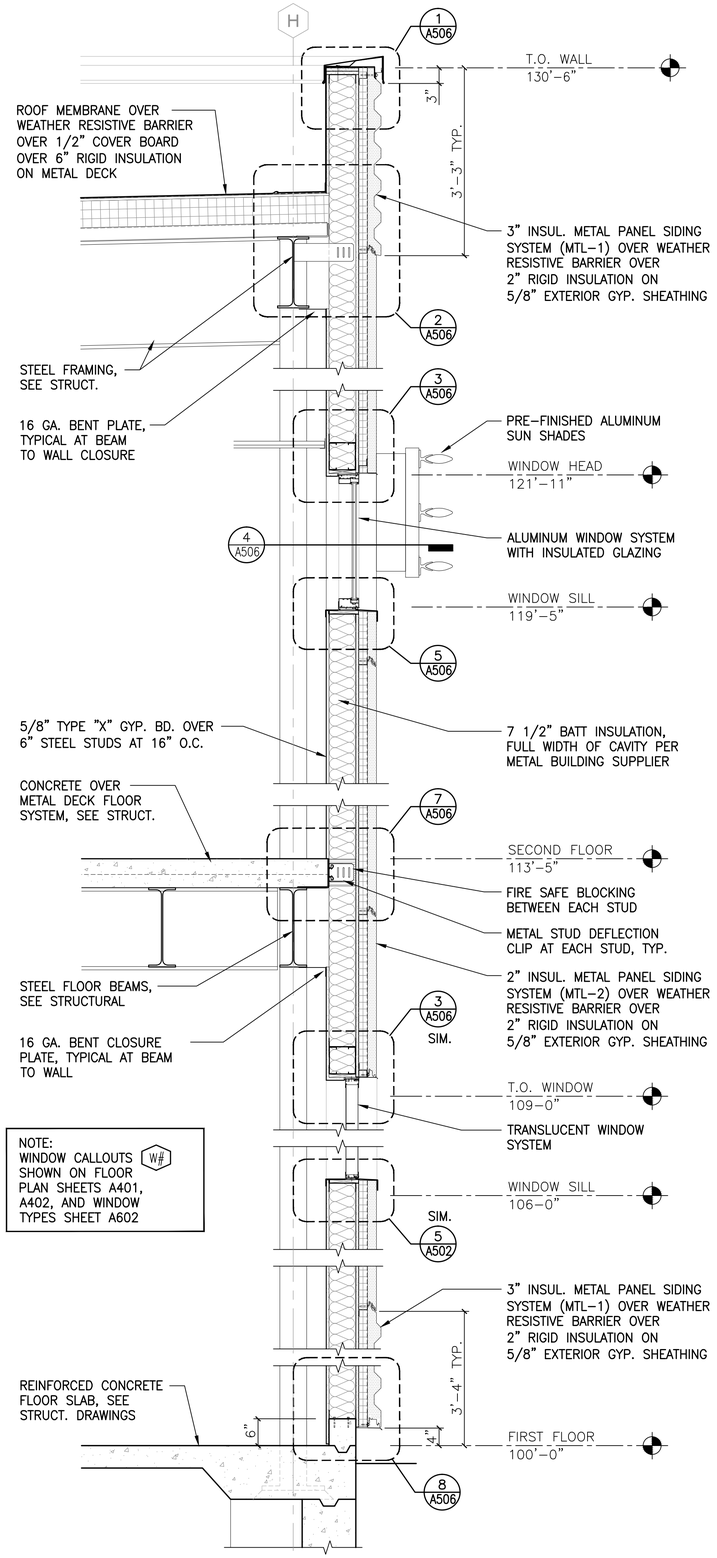
4 TYPICAL DETAIL BETWEEN STUDS ALONG FLOOR/ROOF PERIMETER
1 1/2" = 1'-0"



3 WALL SECTION
3/4" = 1'-0"



2 WALL SECTION
3/4" = 1'-0"



1 WALL SECTION
3/4" = 1'-0"

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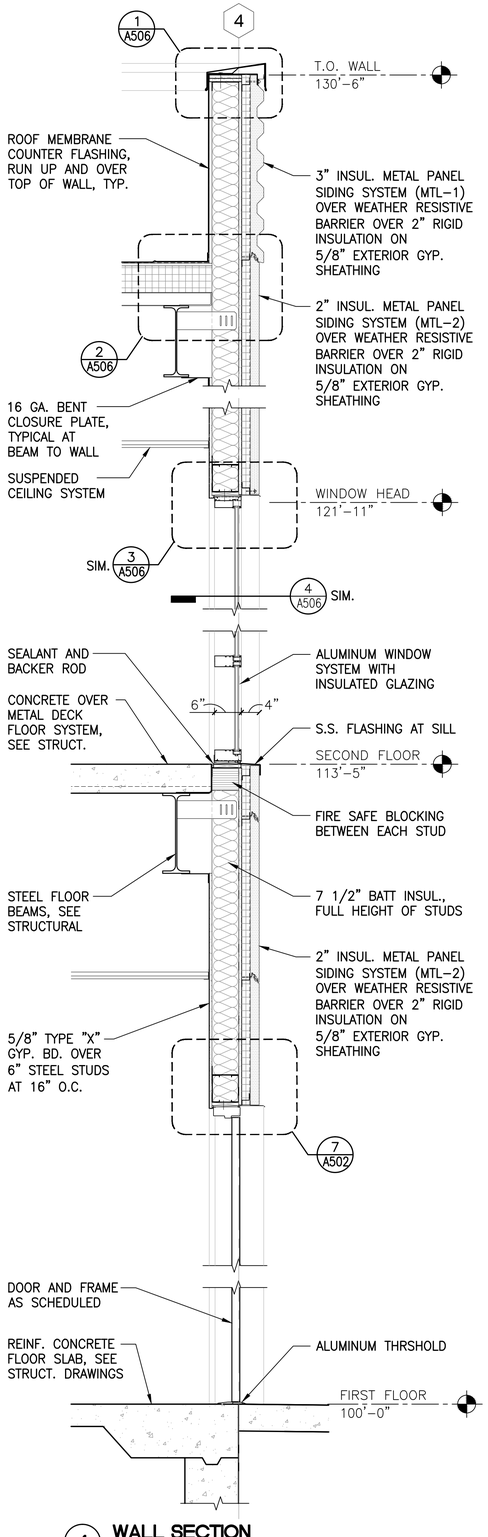
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

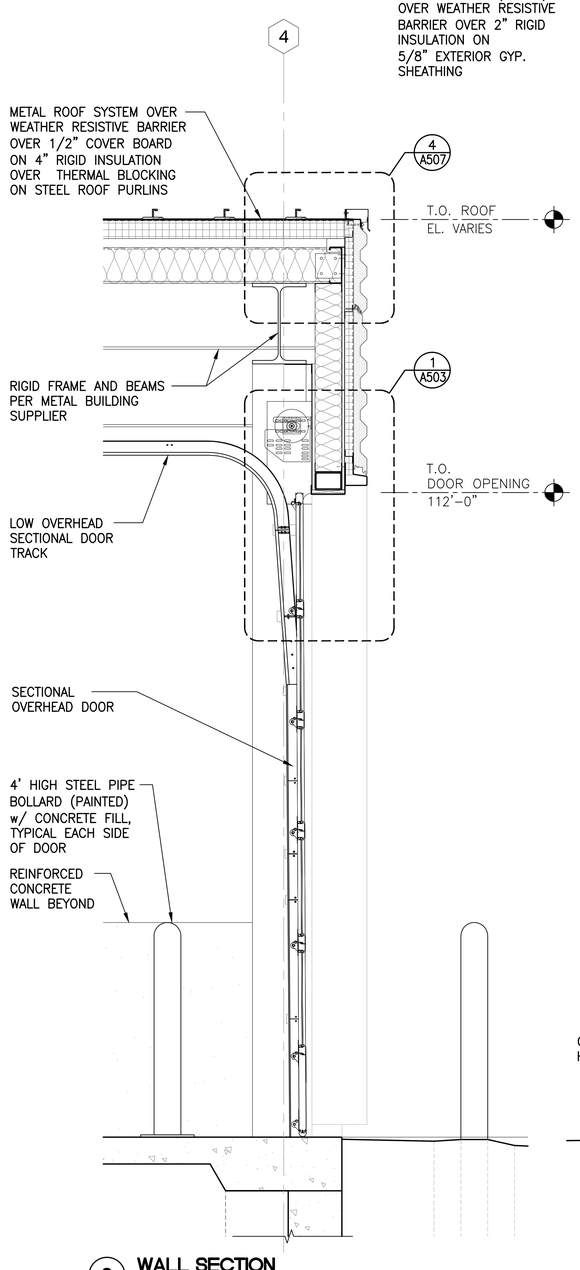
Sheet Title:
WALL SECTIONS

Sheet Number:
A310

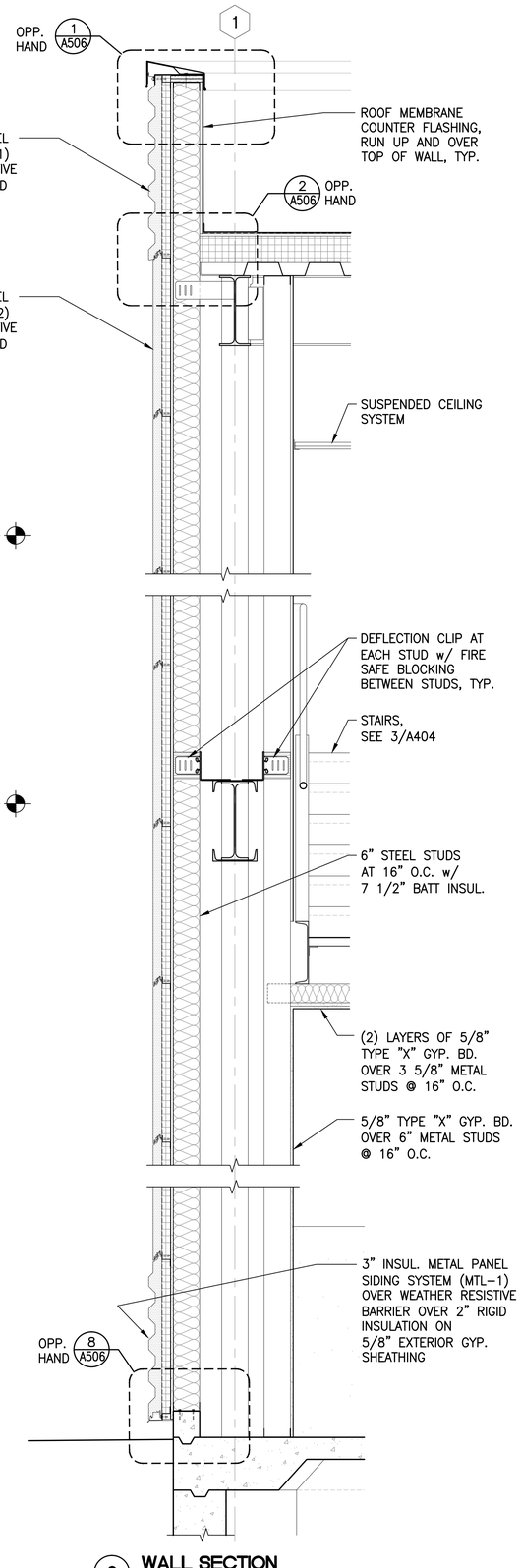


4 **WALL SECTION**
3/4" = 1'-0"

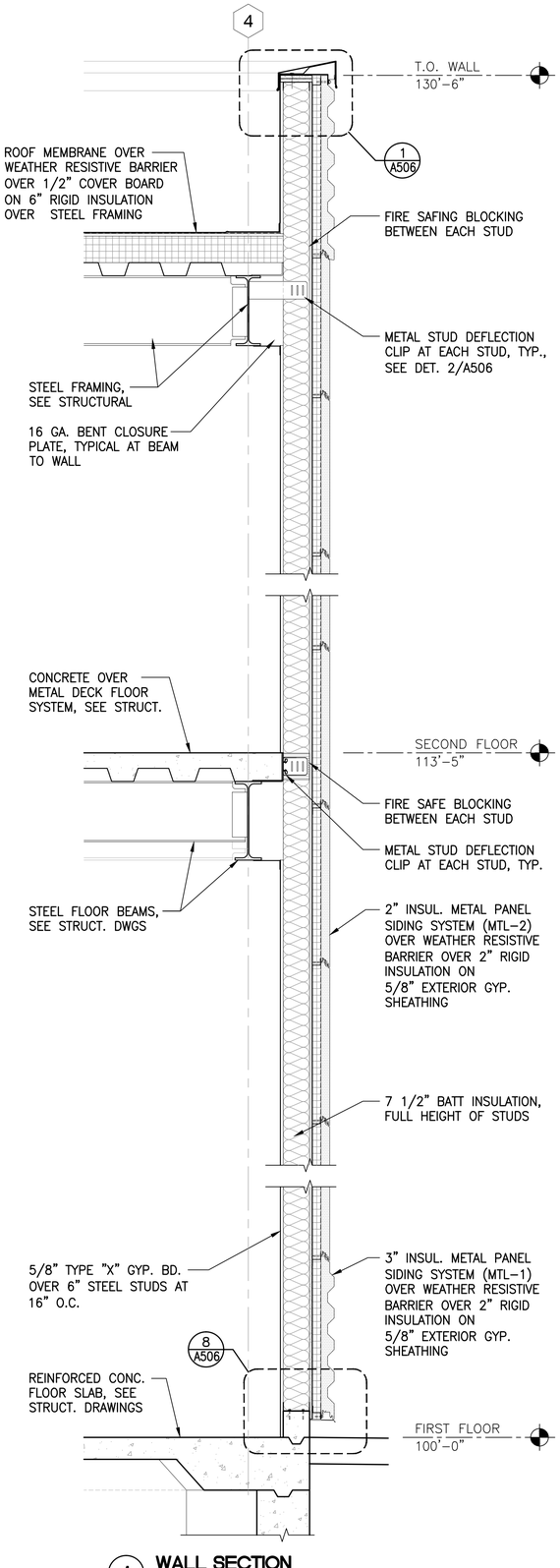
NOTE:
WINDOW CALLOUTS SHOWN ON FLOOR PLAN SHEETS A401, A402, AND WINDOW TYPES SHEET A602



3 **WALL SECTION**
3/4" = 1'-0"



2 **WALL SECTION**
3/4" = 1'-0"



1 **WALL SECTION**
3/4" = 1'-0"

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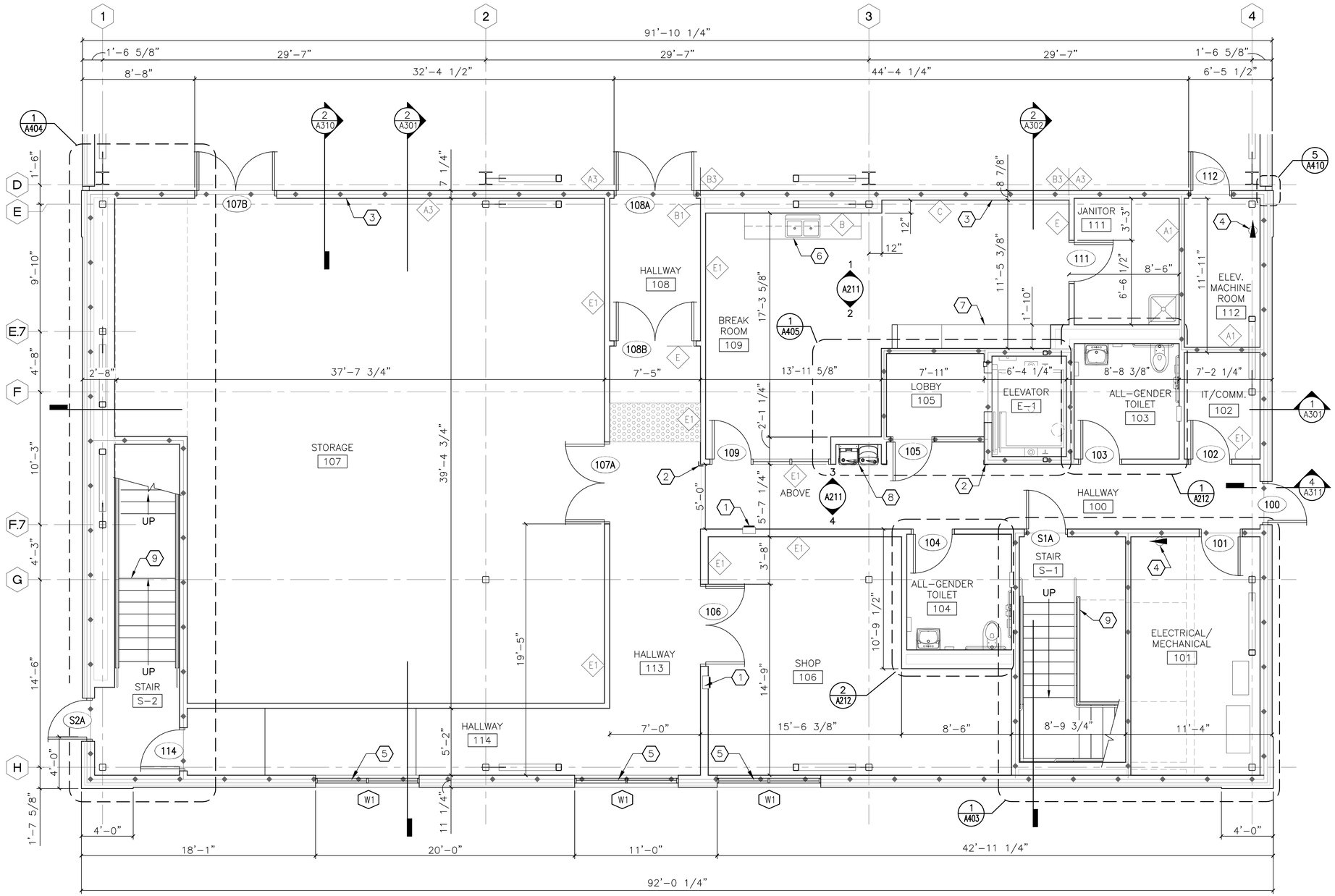
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
WALL SECTIONS

Sheet Number:
A311



PLAN NORTH

1 ENLARGED FIRST FLOOR PLAN

1/4" = 1'-0"

0 2' 4' 8'

GENERAL NOTES:

1. ALL DIMENSIONS SHALL BE COORDINATED w/ METAL BUILDING DESIGN. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER.
2. SEE PLAN CALLOUTS FOR WALL TYPES, SECTION MARKERS AND DIMENSIONS NOT SHOWN IN PLAN.

LEGEND:

ROOM NAME ###	ROOM NAME AND NUMBER, SEE FINISH SCHEDULE A701
A000 0	EXTERIOR ELEVATION CALLOUT
0 A000	BUILDING SECTION
0 A000	PLAN/DETAIL CALLOUT
100	DOOR NUMBER
	RECESSED FIRE EXTINGUISHER AND CABINET
	WALL MOUNTED FIRE EXTINGUISHER
XX	PARTITION TYPE, SEE SHEET A141
W#	WINDOW TYPE, SEE SHEET A602
	CORNER GUARD
	RATED WALLS–1 HR (FIRE)

KEYED NOTES:

1. RECESSED FIRE EXTINGUISHER CABINET, SPEC SECTION 10 44 13, SEE DETAILS 5 & 6/A503
2. STAINLESS STEEL CORNER GUARD
3. STUD WALL SITS ON TOP OF A 6"W. x 4'–0"H. CONCRETE WALL, SEE STRUCTURAL FOR CONCRETE WALL, SEE WALL SECTION 2/A310
4. WALL MOUNTED FIRE EXTINGUISHER
5. TRANSLUCENT WINDOW SYSTEM
6. LOWER AND UPPER CABINETS w/ ADJUSTABLE SHELVES AND DRAWERS, SEE ELEVATION CALLOUT
7. 42" HIGH COUNTERTOP
8. ADA ACCESSIBLE DRINKING FOUNTAIN, SEE SPECIFICATIONS, AND PLUMBING SHEET P101
9. METAL PAN CONCRETE STAIRS AND LANDING, SEE ENLARGED PLAN CALLOUT

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Revisions:
2 11-16-2020

BID SET

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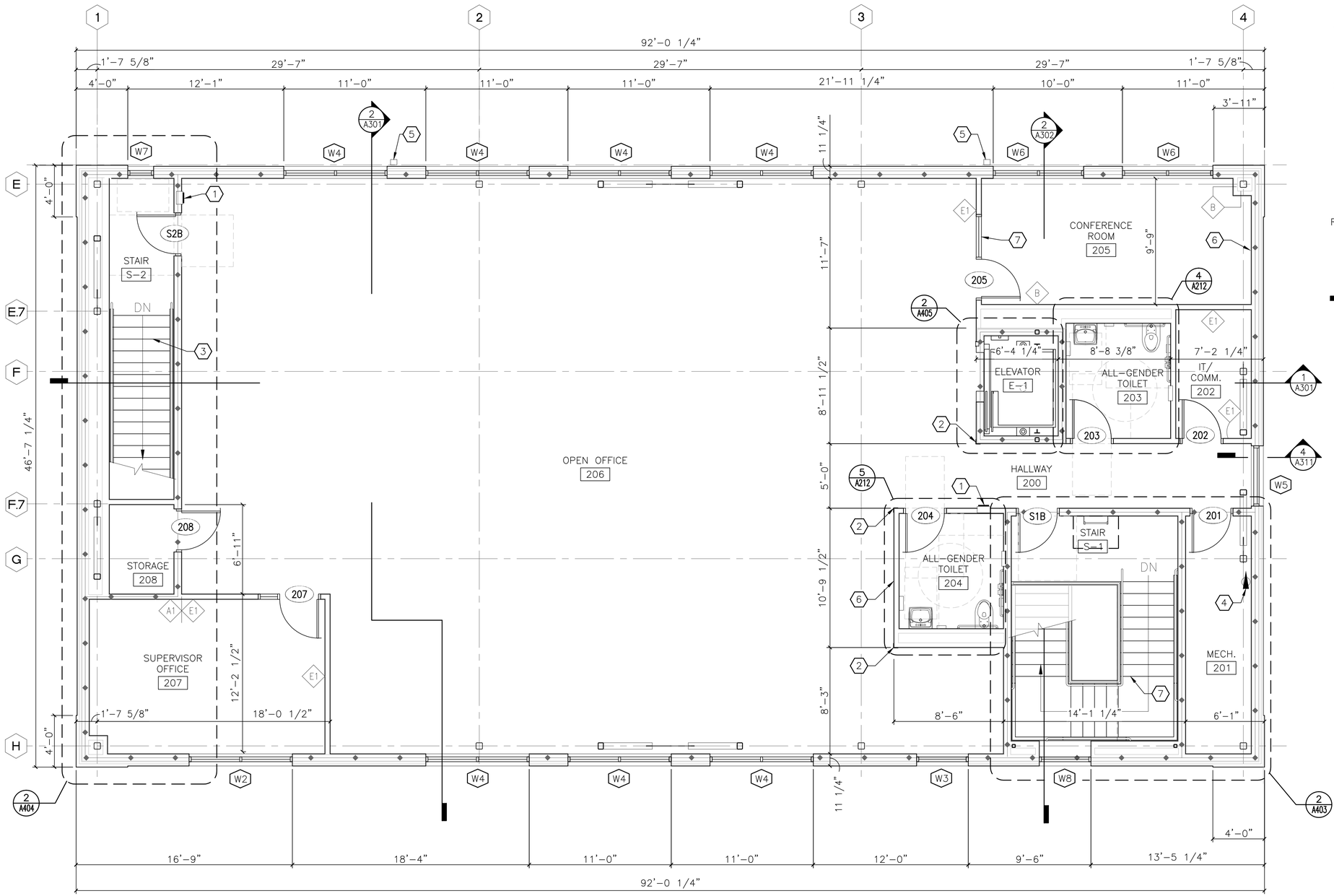
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
ENLARGED FIRST FLOOR PLAN

Sheet Number:
A401



PLAN NORTH

1 ENLARGED SECOND FLOOR PLAN

1/4" = 1'–0"

0 2' 4' 8'

GENERAL NOTES:

1. ALL DIMENSIONS SHALL BE COORDINATED w/ METAL BUILDING DESIGN. BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER.
2. SEE PLAN CALLOUTS FOR WALL TYPES, SECTION MARKERS AND DIMENSIONS NOT SHOW ON THIS PLAN.

LEGEND:

ROOM NAME ###	ROOM NAME AND NUMBER, SEE FINISH SCHEDULE A701
A000 0	EXTERIOR ELEVATION CALLOUT
0 A000	BUILDING SECTION
0 A000	PLAN/DETAIL CALLOUT
100	DOOR NUMBER
	RECESSED FIRE EXTINGUISHER AND CABINET
	WALL MOUNTED FIRE EXTINGUISHER
XX	PARTITION TYPE, SEE SHEET A141
W#	WINDOW TYPE, SEE SHEET A602

KEYED NOTES:

1. RECESSED FIRE EXTINGUISHER CABINET, SPEC SECTION 10 44 13, SEE DETAILS 5 & 6/A503
2. STAINLESS STEEL CORNER GUARD
3. METAL PAN CONCRETE FILLED STAIR TREADS WITH METAL RISERS, SEE PLAN CALLOUTS FOR ADDITIONAL REQUIREMENTS AND DETAIL CALLOUTS
4. WALL MOUNTED FIRE EXTINGUISHER
5. DOWNSPOUTS TO DRAIN ONTO METAL ROOF SYSTEM
6. PROVIDE BACKING FOR TV MOUNT, SEE ELECTRICAL DRAWINGS FOR ELECTRICAL/COMM CONNECTIONS.
7. PROVIDE "ASSISTIVE LISTENING SYSTEM AVAILABLE" SIGN, SEE D2/A604

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Revisions:
2 11-16-2020

BID SET

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APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
ENLARGED SECOND FLOOR PLAN

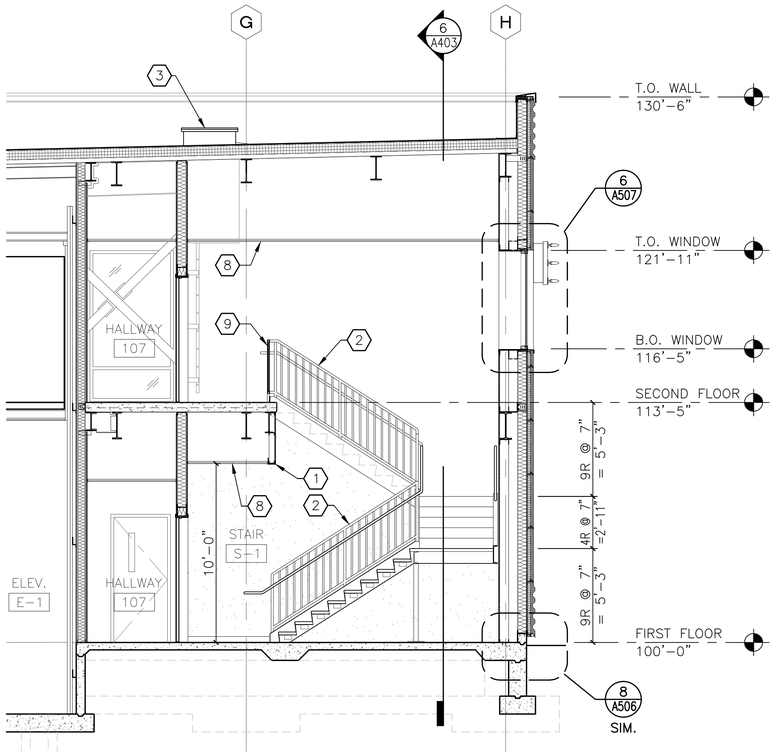
Sheet Number:
A402

KEYED NOTES:

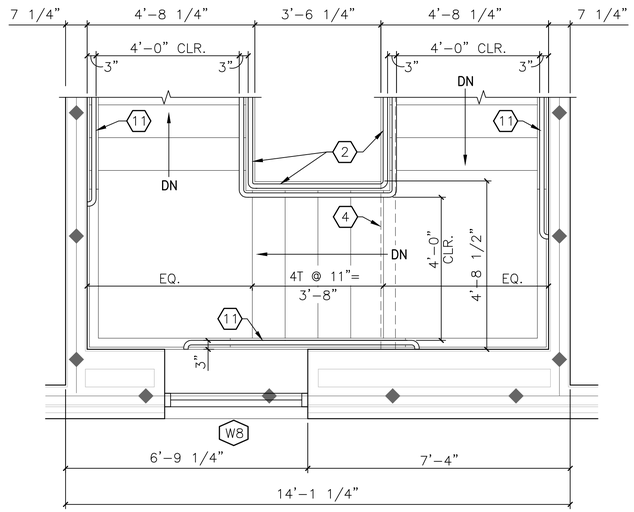
1. GYPSUM BOARD FASCIA/SOFFIT: 5/8" TYPE "X" GYP. BD. OVER 3 5/8" MTL. STUDS AT 16" O.C., BOTTOM OF SOFFIT AT 9'-11"
2. STD. 1 1/4 PIPE GUARDRAIL, 42" HIGH WITH STEEL PIPE HANDRAIL (PAINTED), SEE DETAILS ON SHEET A410. NO HANDRAILS AT LANDINGS
3. ROOF HATCH w/ 2'-6"x 3'-6" CLEAR OPENING
4. PARTITION WALL BELOW STAIR STRINGER AND LANDING
5. WALL MOUNTED LADDER UP TO ROOF HATCH, PROVIDE REQUIRED BACKING IN WALL FOR LADDER SUPPORTS
6. NOT USED
7. NOT USED
8. SUSPENDED CEILING SYSTEM AS SCHEDULED
9. STD. 1 1/4 PIPE GUARDRAIL, 42" HIGH (PAINTED), ANCHOR TO FLOOR, SEE DETAILS ON SHEET A410
10. (2) LAYERS OF 5/8" TYPE "X" GYP. BD. OVER 3 5/8" METAL STUDS AT 16" O.C. ALONG UNDERSIDE OF STAIR, FILL STUD CAVITY WITH BATT INSULATION
11. STD. 1 1/4 PIPE HANDRAIL (WALL MOUNTED), PAINTED. SEE DETAILS ON SHEET A410
12. BENT CLOSURE PLATE, SIM. 2/A506

GENERAL NOTES:

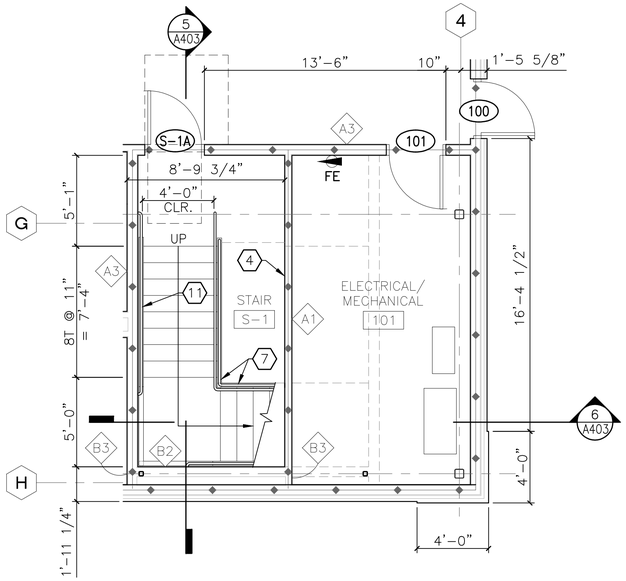
1. SEE SHEET G001 FOR ABBREVIATIONS AND LEGEND.
2. SEE TYPICAL GUARDRAIL AND HANDRAIL DETAILS ON SHEET A410
3. SHOP DRAWINGS FOR METAL PAN CONCRETE FILLED STAIR (SECTION 05 51 00) SHALL BE SUBMITTED PRIOR TO 60 DAYS AFTER NOTICE TO PROCEED.
4. SHOP DRAWINGS FOR STAIRS SHALL BE SUBMITTED PRIOR TO 120 DAYS AFTER NOTICE TO PROCEED FOR FRAMING AT STAIR S-1 AND S-2.
5. WARNING STRIPS SHALL BE INSTALLED AT THE LEADING EDGE OF STAIR TREADS, UPPER APPROACH AND LOWER TREAD, PER CBC 11B-504.4.1.



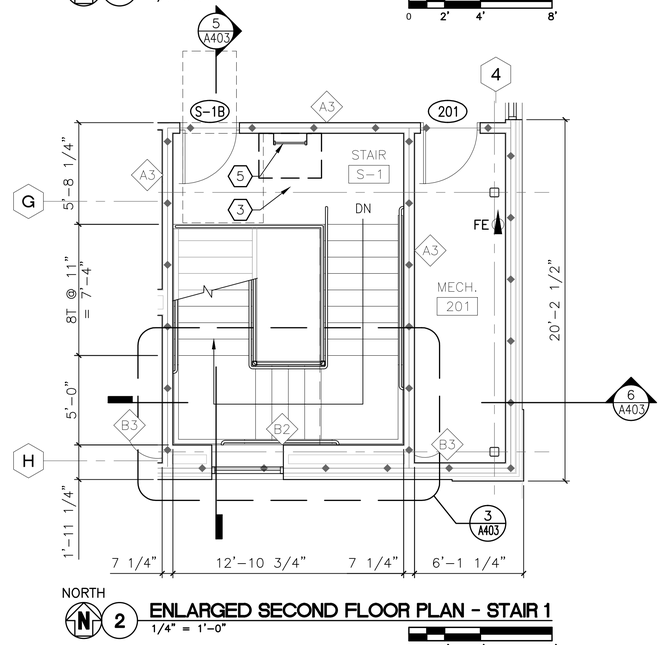
5 **STAIR SECTION**
1/4" = 1'-0"



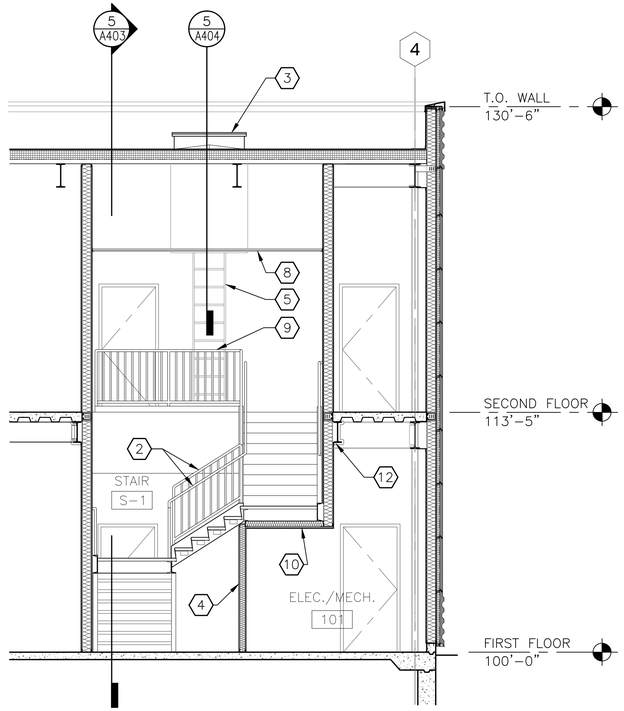
3 **ENLARGED PLAN**
1/2" = 1'-0"



NORTH
1 **ENLARGED FIRST FLOOR PLAN - STAIR 1**
1/4" = 1'-0"
0 2' 4' 8'



NORTH
2 **ENLARGED SECOND FLOOR PLAN - STAIR 1**
1/4" = 1'-0"
0 2' 4' 8'



6 **STAIR SECTION**
1/4" = 1'-0"

4 **NOT USED**

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Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
STAIR PLANS, SECTIONS, AND DETAILS

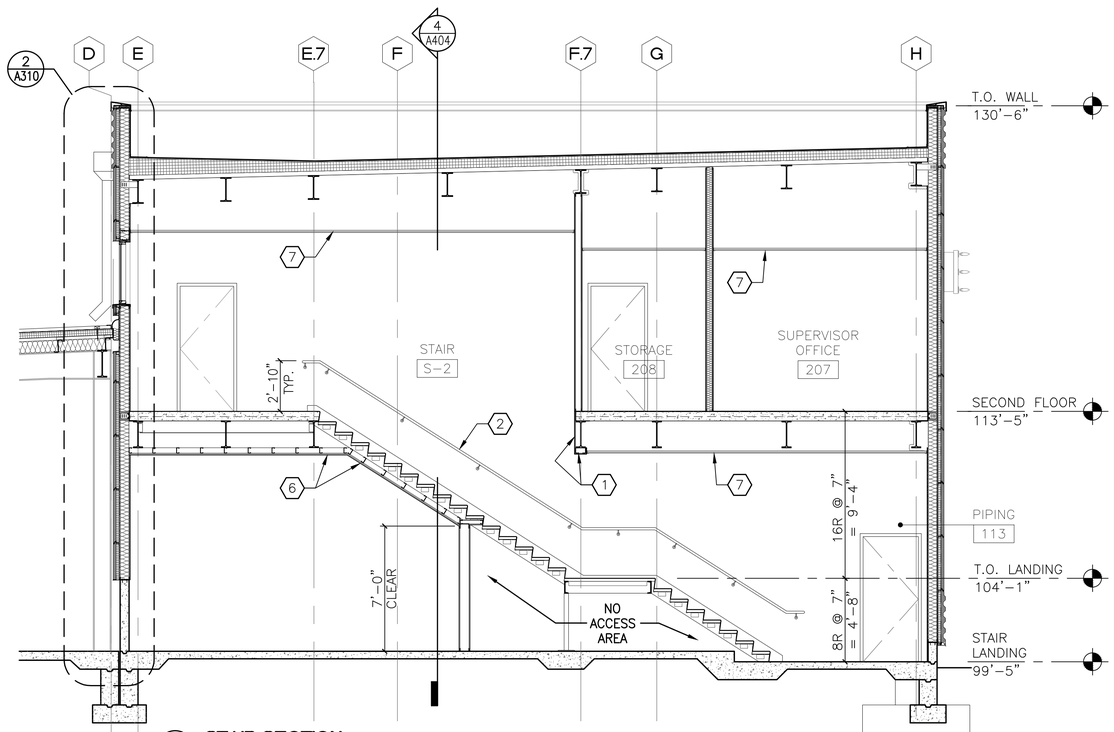
Sheet Number:
A403

KEYED NOTES:

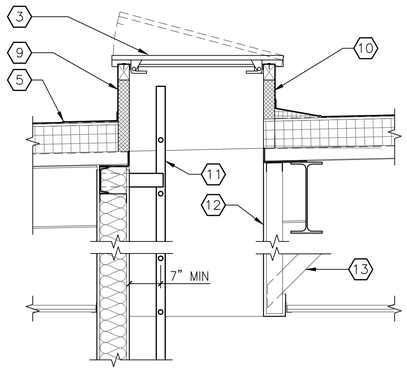
1. GYPSUM BOARD FASCIA/SOFFIT: 5/8" TYPE "X" GYP. BD. OVER 3 5/8" MTL. STUDS AT 16" O.C., BOTTOM OF SOFFIT AT 6'-11" ABOVE STAIR LANDING
2. STD. 1 1/4 PIPE HANDRAIL (WALL MOUNTED), PAINTED. SEE DETAILS ON SHEET A410
3. ROOF HATCH w/ 2'-6"x 3'-6" CLEAR OPENING
4. PROVIDE WEATHER-TIGHT FLASHING AT GUARDRAIL POST PENETRATION, TYPICAL
5. LAP CEMENT AND SEALANT, TYPICAL AT COUNTER FLASHING
6. (2) LAYERS OF 5/8" TYPE "X" GYP. BD. OVER 3 5/8" METAL STUDS AT 16" O.C. ALONG UNDERSIDE OF STAIR, FILL STUD CAVITY WITH BATT INSULATION
7. SUSPENDED CEILING SYSTEM AS SCHED.
8. HANDRAIL TO EXTEND PAST BOTTOM RISER 23" TYPICAL AND 12" PAST TOP RISER, TYPICAL
9. MEMBRANE COUNTER FLASHING, UP AND OVER TOP OF BLOCKING, TYPICAL AROUND PERIMETER OF ROOF HATCH CURB
10. PRE-FABRICATED INSULATED MECHANICAL EQUIPMENT CURB
11. ROOF HATCH LADDER: LADDER RUNGS AT 1'-0" O.C. MAX. (TYP.) TO UNDERSIDE OF ROOF DECK
12. 5/8" GYP. BD. OVER 3 5/8" MTL. STUDS AT 16" O.C., (3) SIDES OF OPENING TO ROOF HATCH
13. 3 5/8" METAL BRACING AT 32" O.C. TO UNDERSIDE OF STRUCTURE ABOVE
14. FIRE SAFE BLOCKING BETWEEN EACH STUD, TYP. EACH SIDE
15. DEFLECTION CLIP, EACH STUD, EACH SIDE, TYPICAL
16. BENT CLOSURE PLATE. SIM. DET. 2/A506
17. STEEL BEAM, SEE DET. 1/S602

GENERAL NOTES:

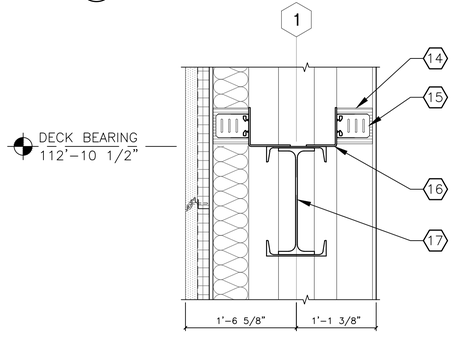
1. SEE SHEET G001 FOR ABBREVIATIONS AND LEGEND.
2. SEE TYPICAL GUARDRAIL AND HANDRAIL DETAILS ON SHEET A410
3. SHOP DRAWINGS FOR METAL PAN CONCRETE FILLED STAIR (SECTION 05 51 00) SHALL BE SUBMITTED PRIOR TO 60 DAYS AFTER NOTICE TO PROCEED.
4. SHOP DRAWINGS FOR STAIRS SHALL BE SUBMITTED PRIOR TO 120 DAYS AFTER NOTICE TO PROCEED FOR FRAMING AT STAIR S-2.
5. WARNING STRIPS SHALL BE INSTALLED AT THE LEADING EDGE OF STAIR TREADS, UPPER APPROACH AND LOWER TREAD, PER CBC 11B-504.4.1.



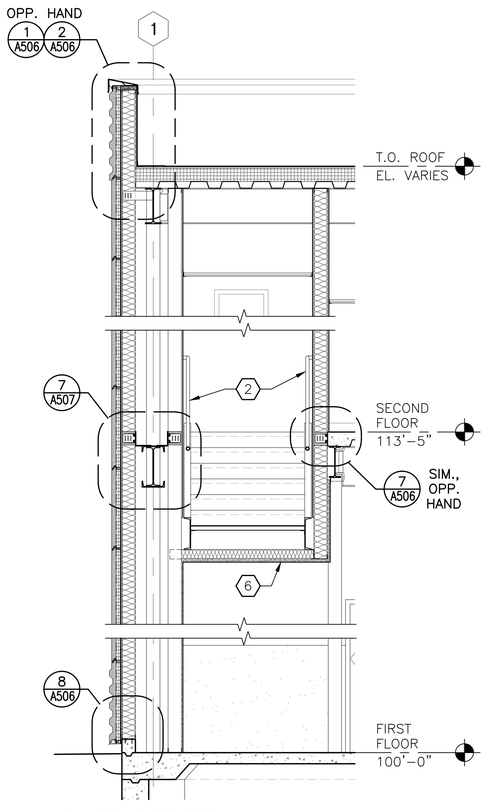
3 STAIR SECTION
1/4" = 1'-0"



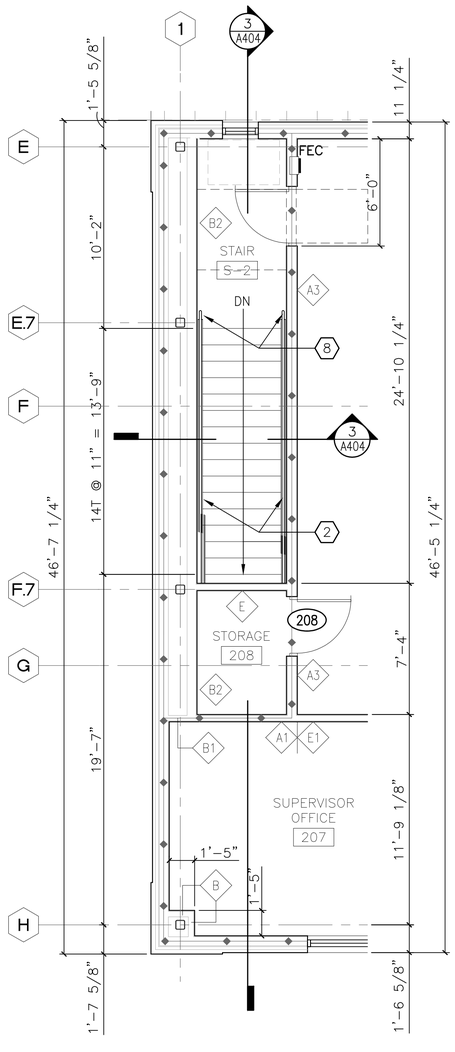
5 ROOF HATCH SECTION
3/4" = 1'-0"



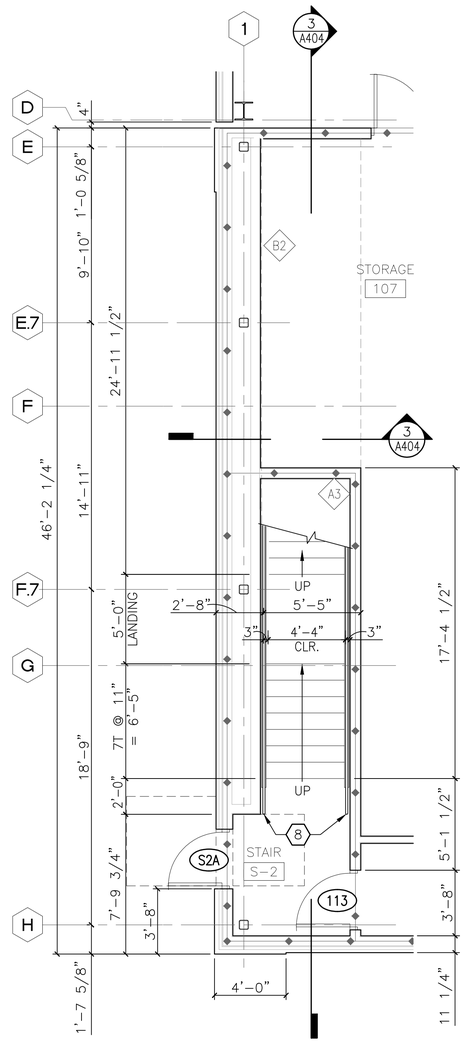
6 FLOOR CLOSURE AT STEEL BEAM
1"= 1'-0"



4 STAIR SECTION
3/8" = 1'-0"



PLAN NORTH
2 ENLARGED SECOND FLOOR PLAN - STAIR 2
1/4" = 1'-0"
0 2' 4' 8'



PLAN NORTH
1 ENLARGED FIRST FLOOR PLAN - STAIR 2
1/4" = 1'-0"
0 2' 4' 8'

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BID SET

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KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
STAIR PLANS, SECTIONS, AND DETAILS

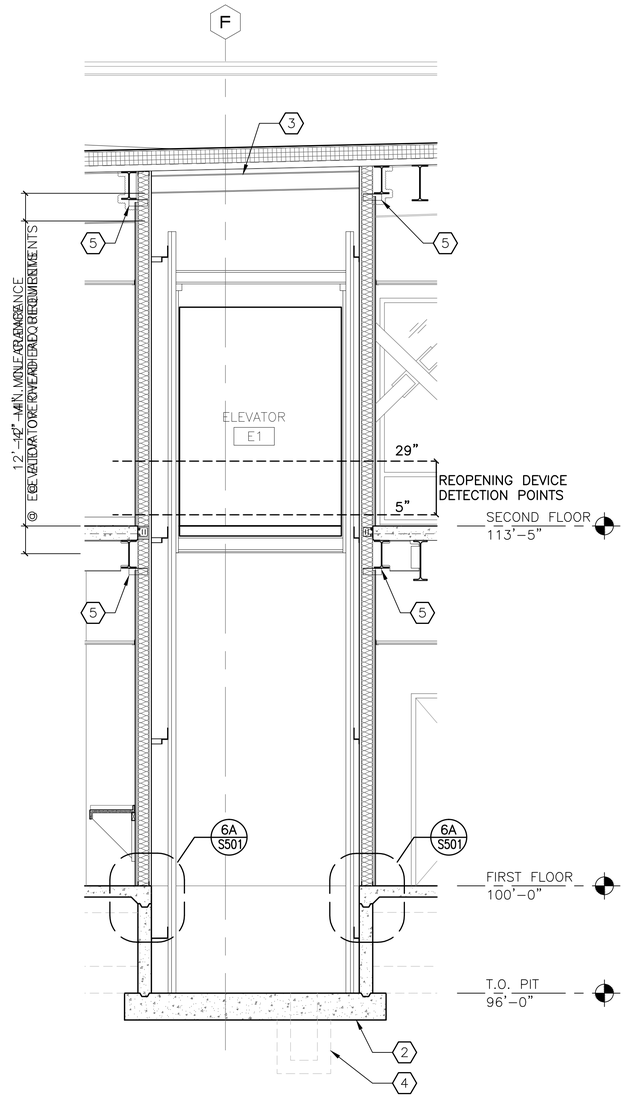
Sheet Number:
A404

GENERAL NOTES:

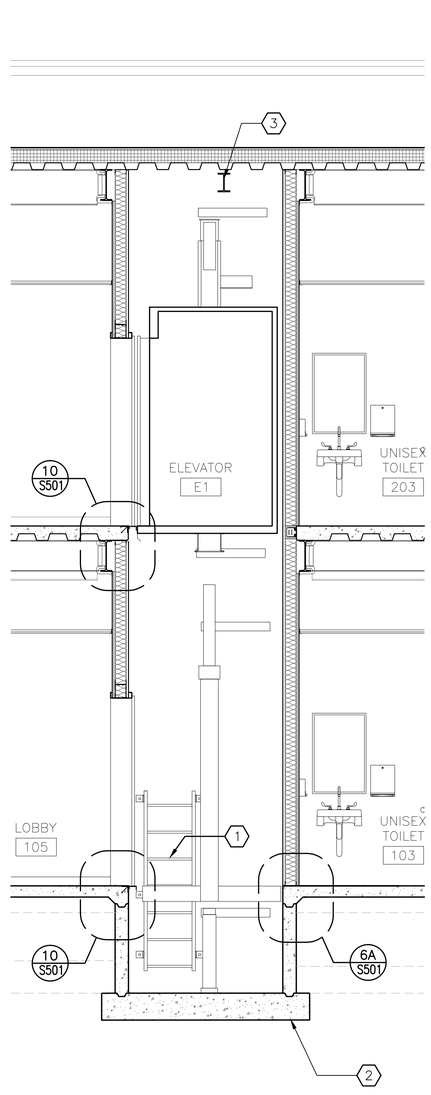
1. ELEVATOR SHALL COMPLY WITH ALL PROVISIONS AND REQUIREMENTS OF CBC, CHAPTER 11.
2. CONNECT ELEVATOR TELEPHONE TO BUILDING TELE/DATA SYSTEM.
3. SEE SPECIFICATION SECTION 09 06 00 FOR ELEVATOR FINISHES.
4. ELEVATOR SHALL MEET ASME A17.1.
5. LEVELING TOLERANCE SHALL BE 1/2 INCH.
6. SILL TO ELEVATOR EDGE NOT TO EXCEED 1 1/4".
7. DOOR WIDTH SHALL BE 36" MINIMUM.
8. DOOR SHALL REMAIN OPEN FOR 5 SECOND MINIMUM.
9. COMPLY WITH CBC 1116B.1.10 FOR HALL CALL BUTTONS.
10. MOUNT INTERIOR HANDRAIL AT 32 INCHES FROM FLOOR.
11. DOOR JAMB MARKING PER CBC 1116B.1.14.
12. ELEVATOR SIGNAGE TO COMPLY WITH CBC 1117B.
13. INCLUDE WEIGHT OF INTERIOR FINISHES TO CAB WEIGHT.
14. MINIMUM ELEVATOR PIT IS 4'–0". DEPTH SHALL BE PER ELEVATOR MANUFACTURER. ADDITIONAL PIT DEPTH SHALL NOT BE REASON TO ADJUST CONTRACT PRICE.
15. ELEVATOR MUST FULLY COMPLY WITH ALL ACCESSIBILITY REQUIREMENTS OF CBC 11B–407

KEYED NOTES:

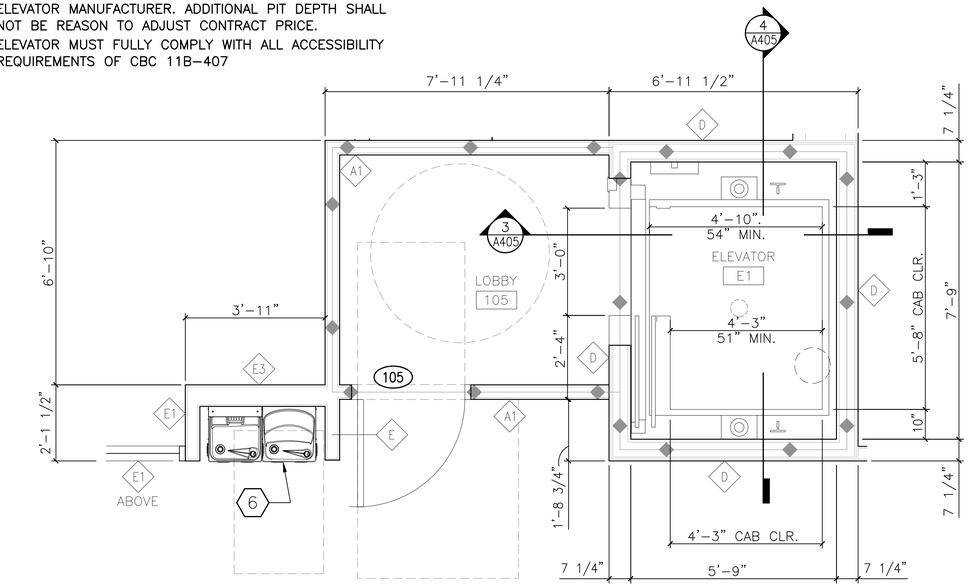
1. PAINTED STEEL PIT LADDER
2. WATERPROOF ENTIRE EXTERIOR PERIMETER OF ELEVATOR FOUNDATION WALLS AND UNDER MAT SLAB
3. SEE STRUCTURAL SHEETS FOR ELEVATOR HOIST BEAM
4. CONCRETE ELEVATOR SUMP PIT, SEE DETAIL 9/S501
5. ELEVATOR RAIL BRACE SUPPORT, SEE DETAIL 6/S602
6. DRINKING FOUNTAIN, SEE PLUMBING DRAWINGS



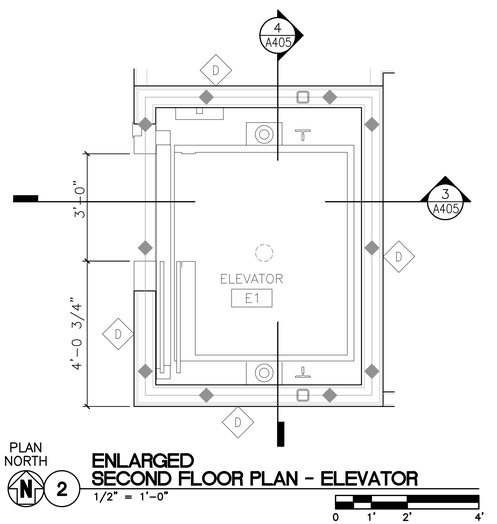
4 ELEVATOR SECTION
3/8" = 1'–0"



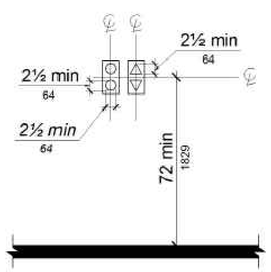
3 ELEVATOR SECTION
3/8" = 1'–0"



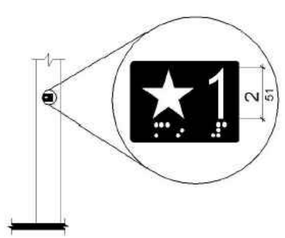
1 ENLARGED FIRST FLOOR PLAN - ELEVATOR
1/2" = 1'–0"



2 ENLARGED SECOND FLOOR PLAN - ELEVATOR
1/2" = 1'–0"



6 VISIBLE HALL SIGNALS



5 FLOOR DESIGNATIONS ON JAMBS OF ELEVATOR HOISTWAY ENTRANCES

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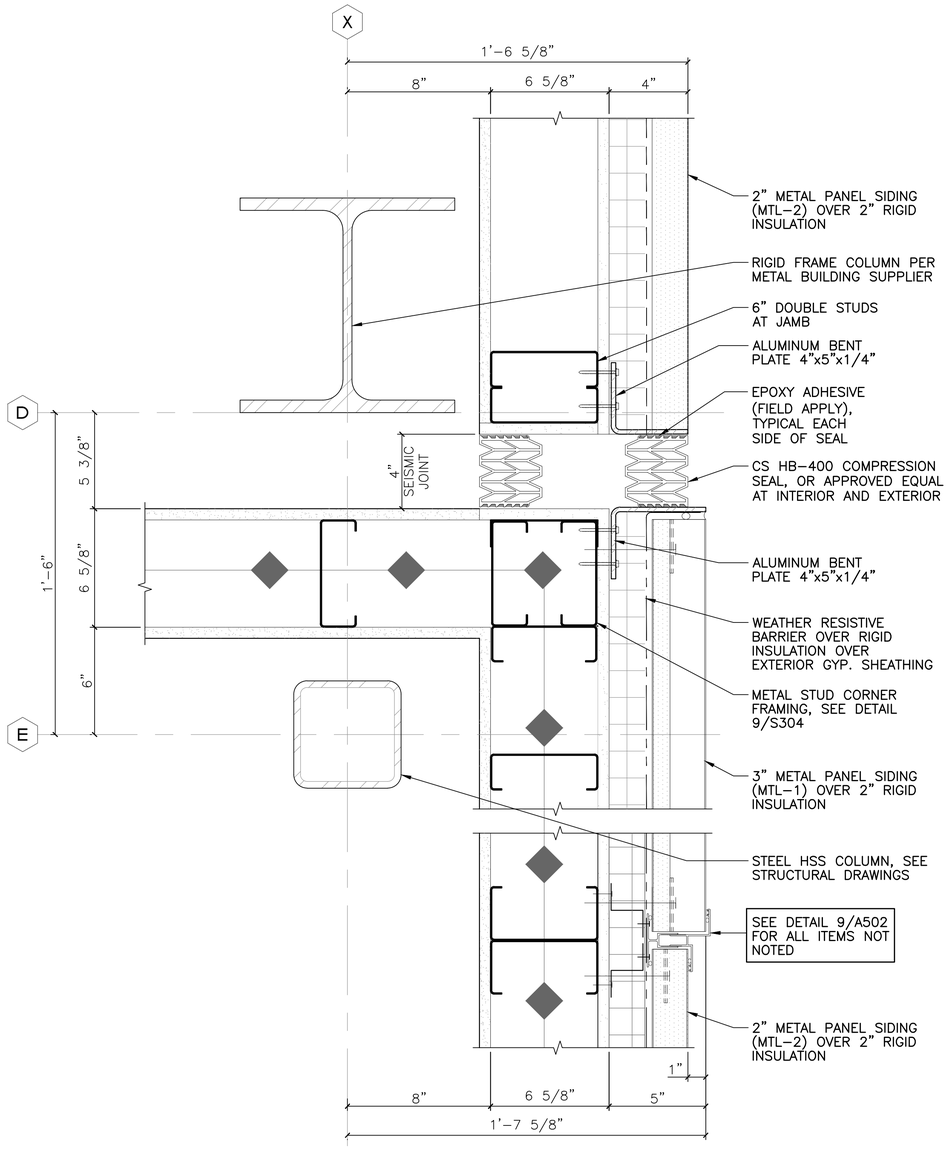
Revisions:
2 11-16-2020

BID SET

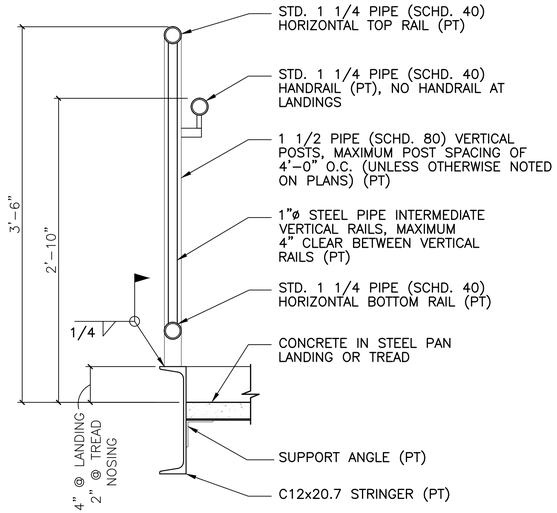
Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
ELEVATOR PLANS, SECTIONS, AND DETAILS

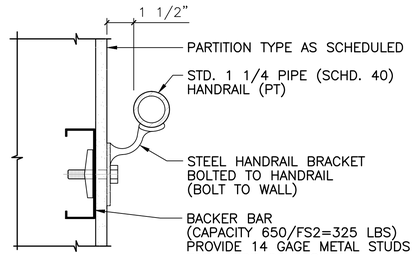
Sheet Number:
A405



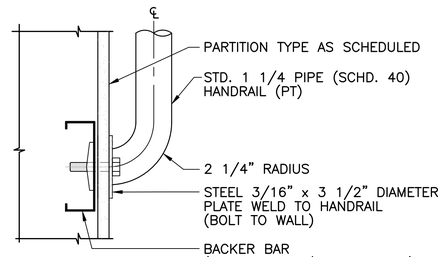
5 PLAN DETAIL - WALL EXPANSION JOINT
3"= 1'-0"



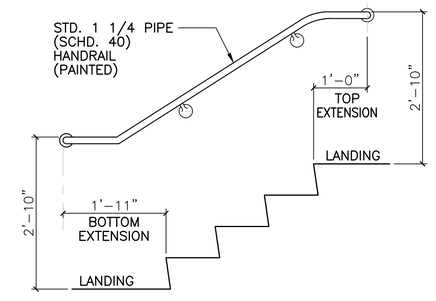
1 HANDRAIL/GUARDRAIL SECTION
1 1/2" = 1'-0"



2 STAIR HANDRAIL AT WALL - TYPICAL
3" = 1'-0"



3 STAIR HANDRAIL RETURN - TYPICAL
3" = 1'-0"



4 TYPICAL HANDRAIL EXTENSIONS
NOT TO SCALE

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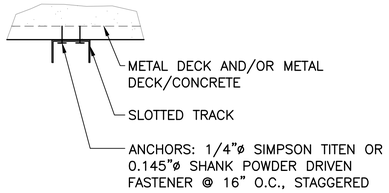
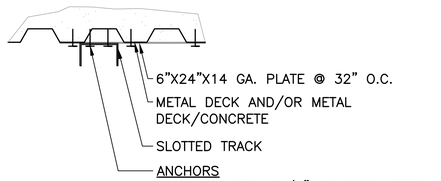
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
DETAILS

Sheet Number:
A410

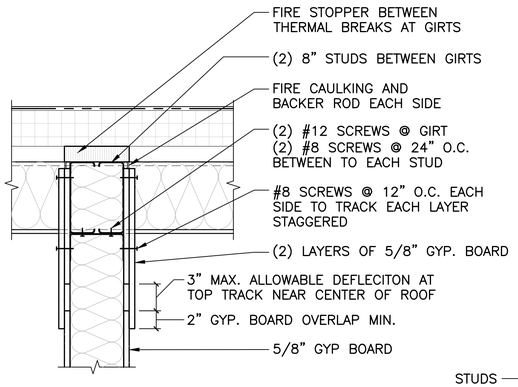


PERPENDICULAR TO DECK

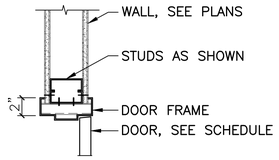


PARALLEL TO DECK

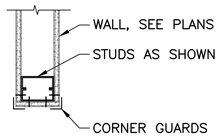
8 TYPICAL TOP TRACK ANCHOR DETAIL
NO SCALE



9 TOP OF WALL TRACK DETAIL AT DEFLECTION GREATER THAN 3/4"
3"=1'-0"



DOOR JAMB



END

DOOR FRAMES AT INTERSECTION

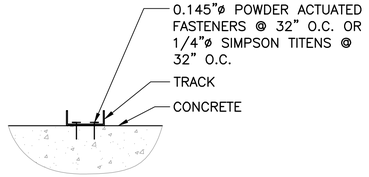
CORNER

NOTE: INTERSECTIONS OF WALLS WITH DIFFERENT RATINGS SHALL BE CONSTRUCTED SO THE HIGHER RATING IS MAINTAINED THROUGH THE INTERSECTION.

RATED INTERSECTION

INTERSECTION

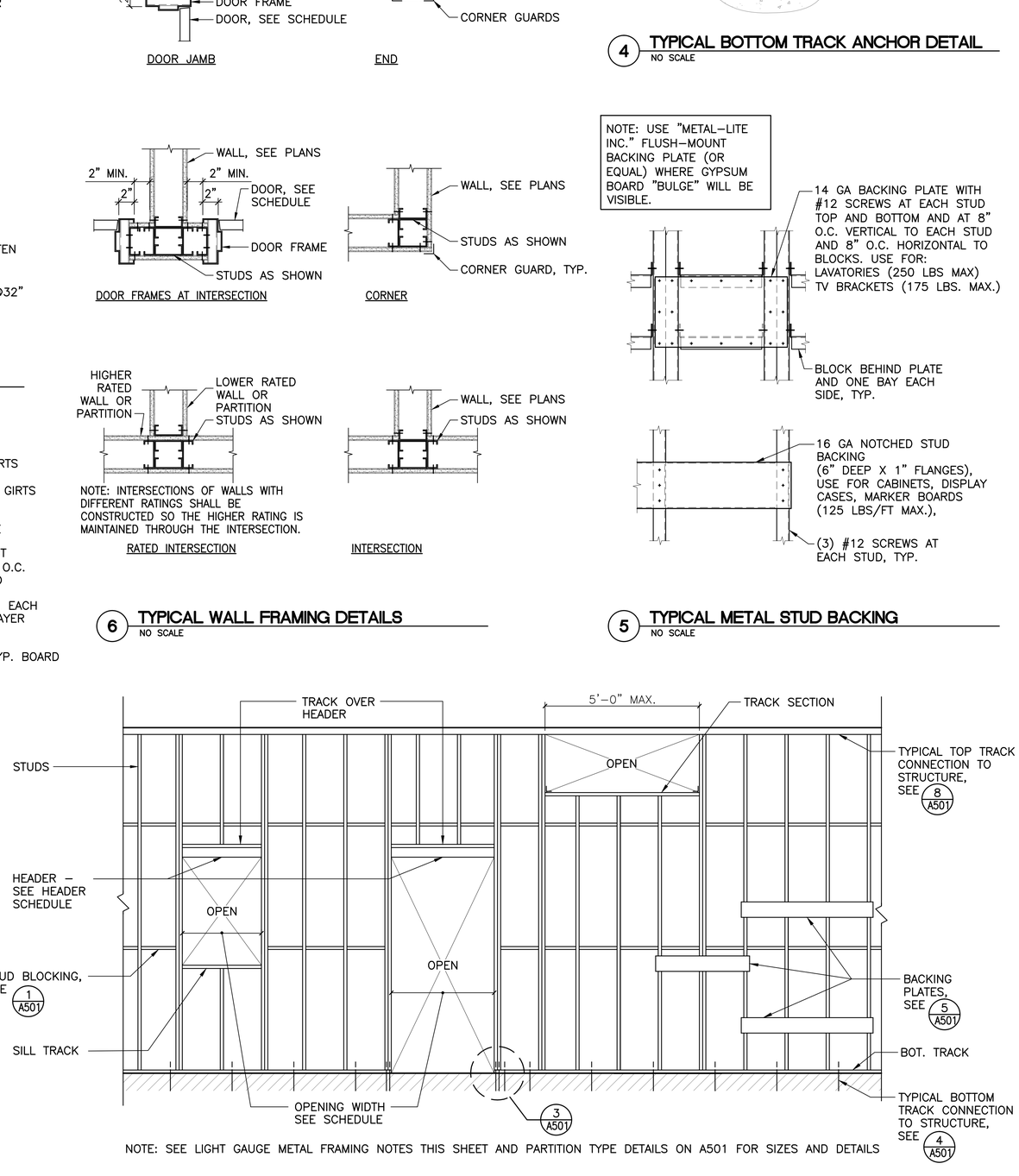
6 TYPICAL WALL FRAMING DETAILS
NO SCALE



4 TYPICAL BOTTOM TRACK ANCHOR DETAIL
NO SCALE

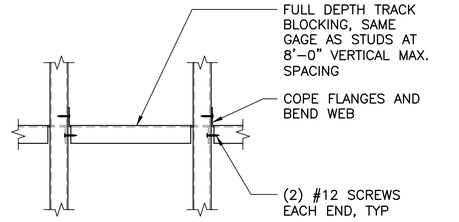
NOTE: USE "METAL-LITE INC." FLUSH-MOUNT BACKING PLATE (OR EQUAL) WHERE GYPSUM BOARD "BULGE" WILL BE VISIBLE.

5 TYPICAL METAL STUD BACKING
NO SCALE

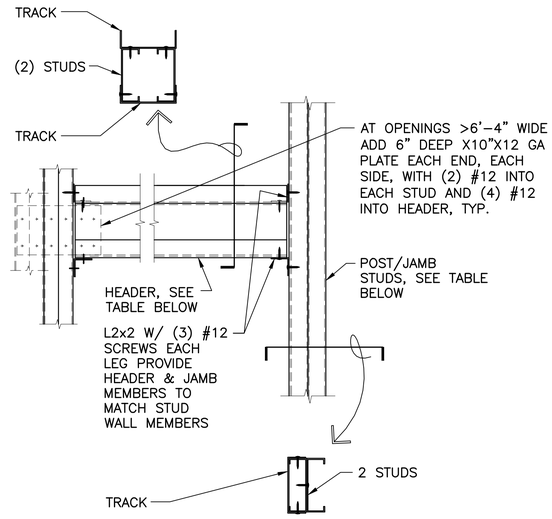


NOTE: SEE LIGHT GAUGE METAL FRAMING NOTES THIS SHEET AND PARTITION TYPE DETAILS ON A501 FOR SIZES AND DETAILS

7 NON-LOAD BEARING METAL STUD WALL FRAMING AT OPENINGS
NO SCALE

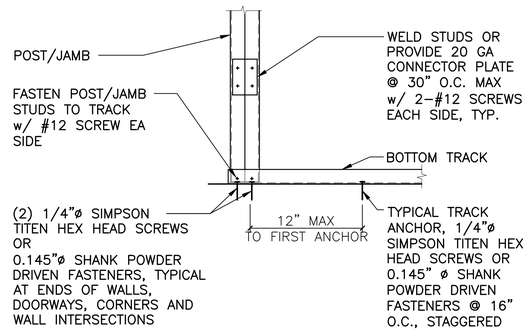


1 WALL BLOCKING DETAIL
NO SCALE



OPENING WIDTH (MAXIMUM)	HEADER	POST/JAMB
3'-4"	2-16 GA STUDS SAME DEPTH AS WALL STUDS	2-16 GA STUDS
6'-4"	2-16 GA X 6" DEEP STUDS	2-16 GA STUDS
12'-0"	3-16 GA X 6" DEEP STUDS or 2-16 GA X 10" DEEP STUDS	4-16 GA STUDS

2 TYPICAL HEADER DETAIL
NO SCALE



3 TYPICAL POST/JAMB ANCHOR DETAIL
NO SCALE

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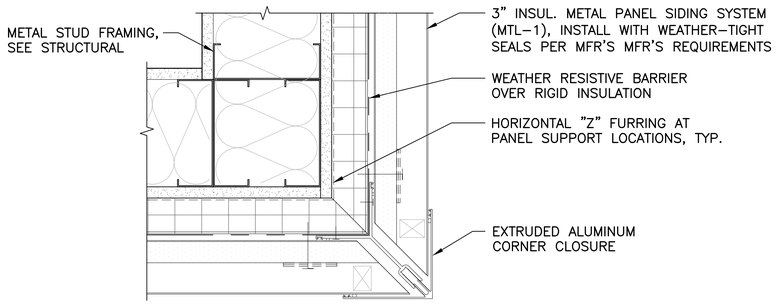
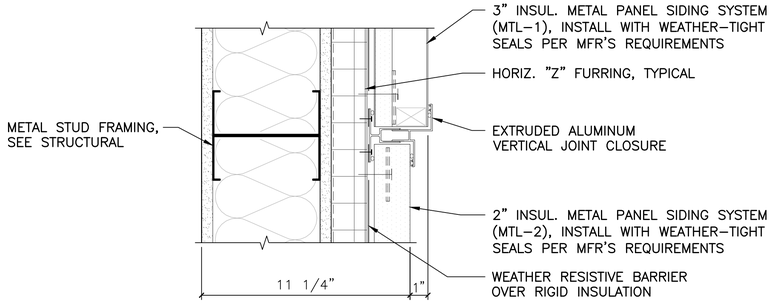
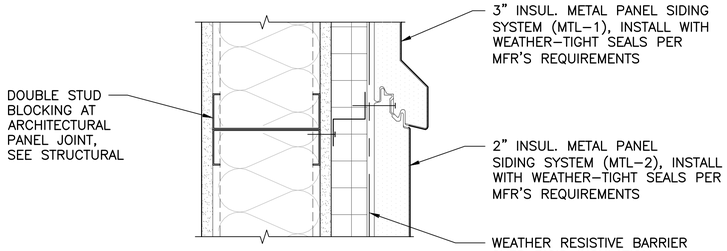


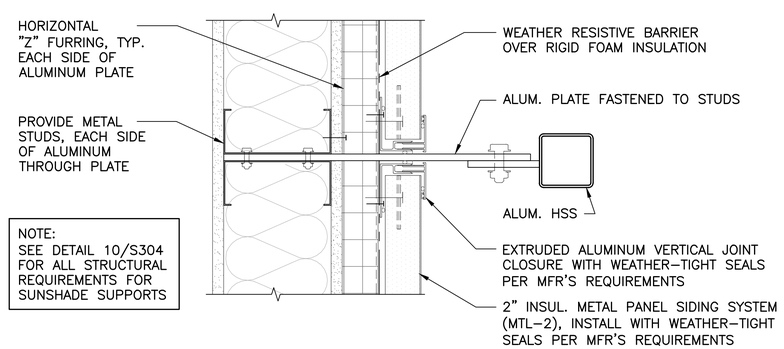
8 OUTSIDE CORNER DETAIL AT MTL-1
3"= 1'-0" PLAN VIEW



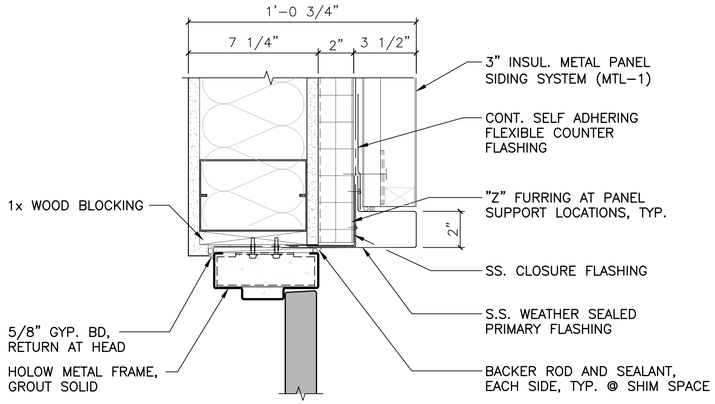
9 METAL PANEL VERTICAL JOINT TRANSITION
3"= 1'-0" PLAN VIEW



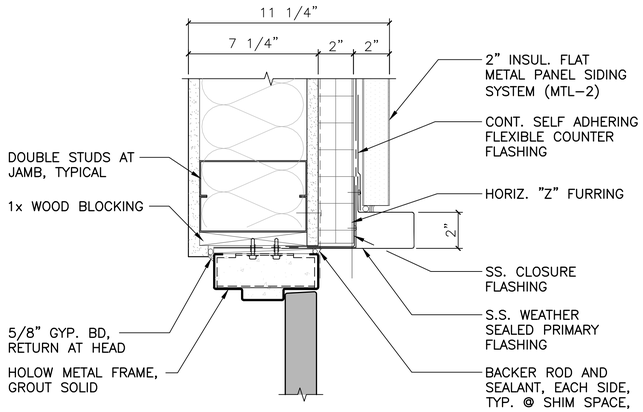
10 DETAIL AT HORIZONTAL PANEL JOINT
3"= 1'-0" SECTION VIEW



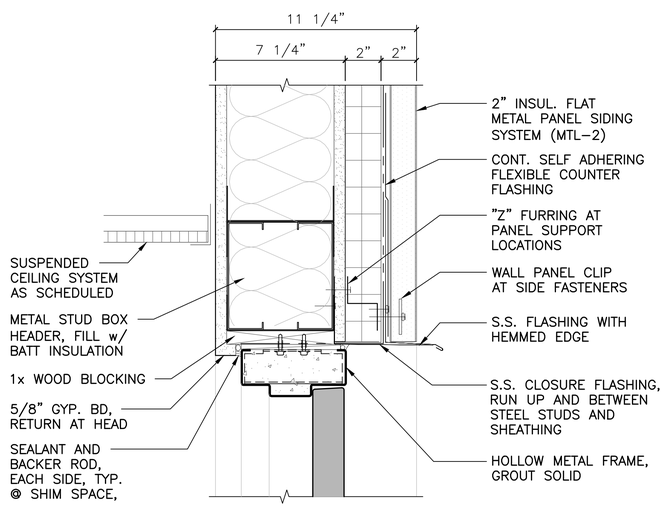
11 SUNSHADE CONNECTION DETAIL
3"= 1'-0" PLAN VIEW



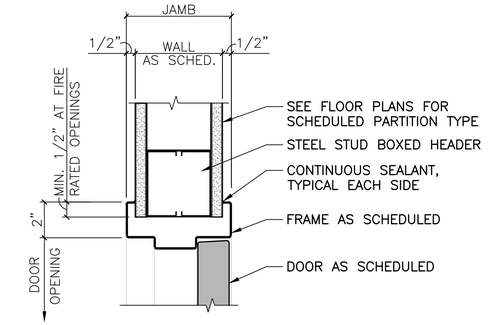
5 EXTERIOR DOOR JAMB DETAIL AT MTL-1
3"= 1'-0"



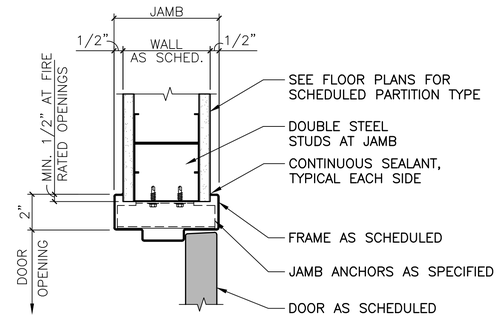
6 EXTERIOR DOOR JAMB DETAIL AT MTL-2
3"= 1'-0"



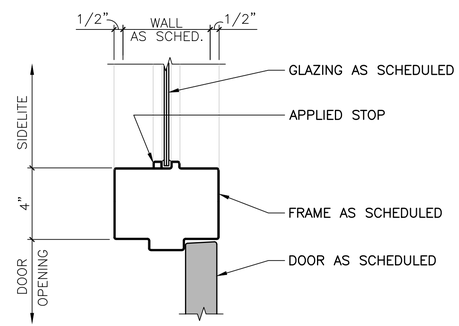
7 EXTERIOR DOOR HEAD DETAIL AT MTL-2
3"= 1'-0"



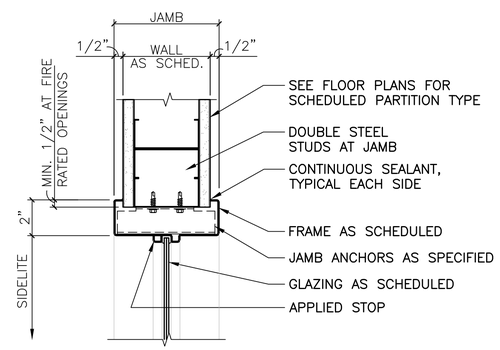
1 INTERIOR DOOR HEAD DETAIL
3"= 1'-0"



2 INTERIOR DOOR JAMB DETAIL
3"= 1'-0"



3 INTERIOR DOOR JAMB DETAIL
3"= 1'-0"



4 INTERIOR SIDELITE JAMB DETAIL
3"= 1'-0"

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BID SET

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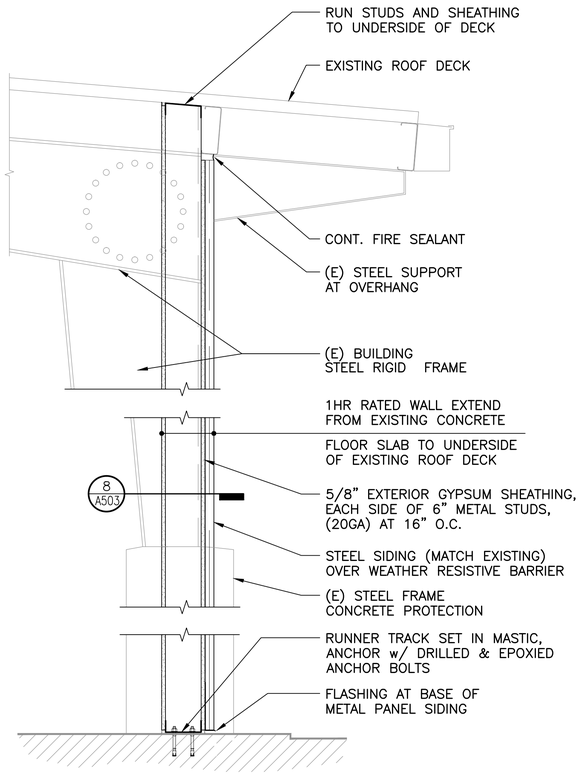
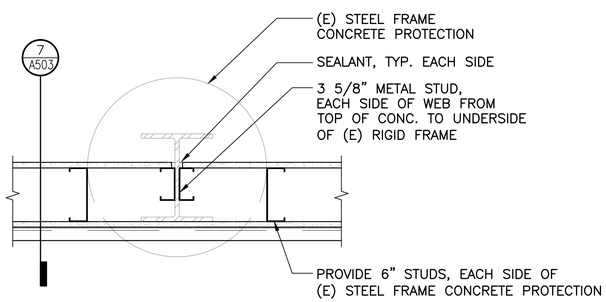
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
DETAILS

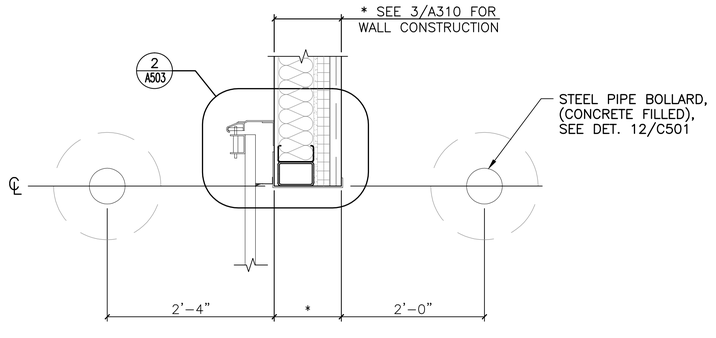
Sheet Number:
A502



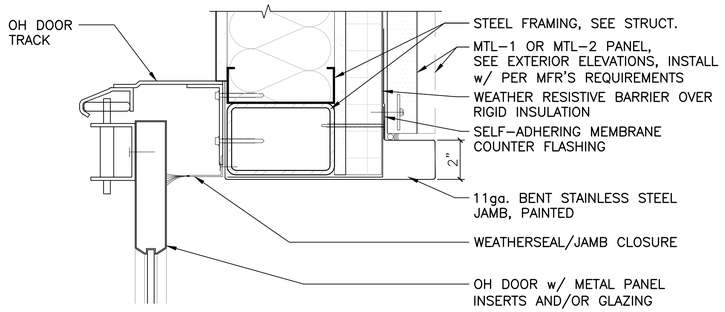
7 1HR RATED WALL • (E) STORAGE BLDG. - SECTION
1"=1'-0" UL #U465



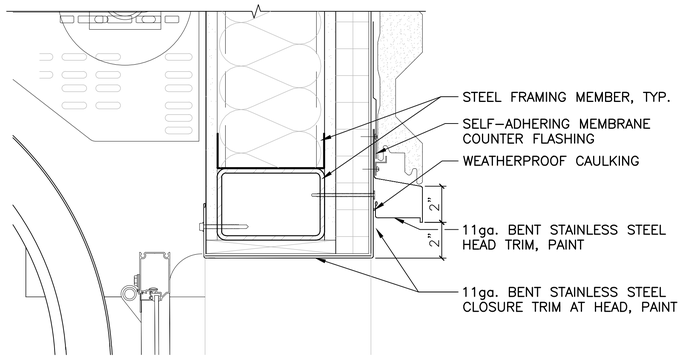
8 1HR RATED WALL • (E) STORAGE BLDG. - PLAN
1 1/2"=1'-0"



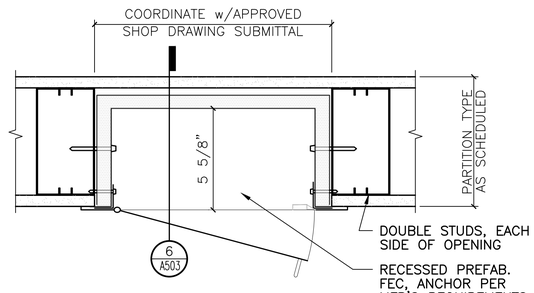
9 BOLLARD LOCATIONS AT OH DOOR OPENING
1"=1'-0" TYPICAL EACH SIDE OF DOOR OPENING



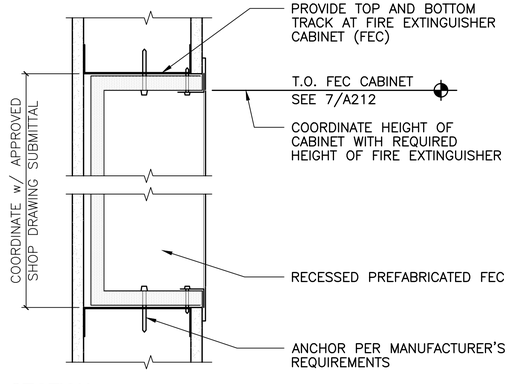
3 OVERHEAD DOOR JAMB AT METAL STUDS
3" = 1'-0"



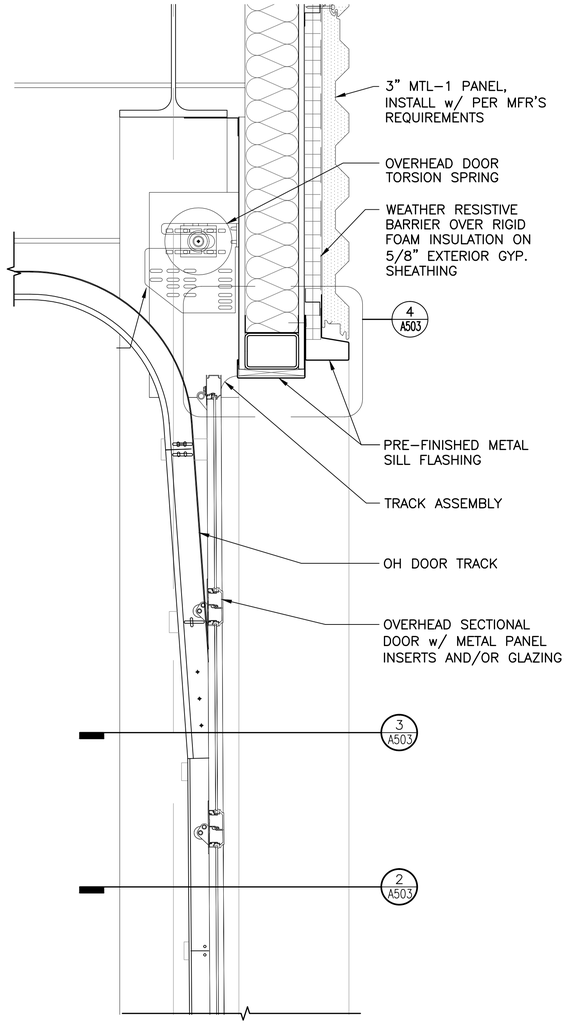
4 OVERHEAD DOOR HEAD AT MTL-1 PANEL
3" = 1'-0"



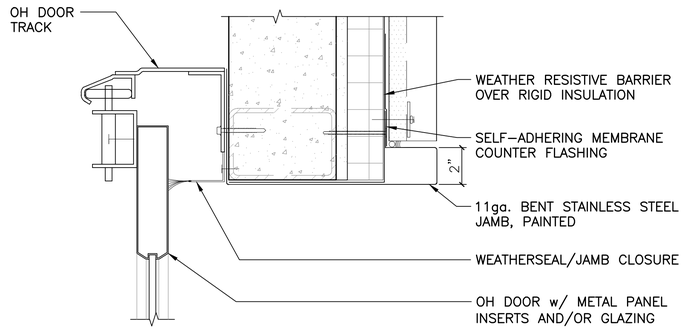
5 FEC PLAN SECTION
3" = 1'-0"



6 FEC SECTION
3" = 1'-0"



1 PARTIAL OVERHEAD DOOR SECTION
1 1/2"=1'-0"



2 OVERHEAD DOOR JAMB AT CONCRETE WALL
3" = 1'-0"

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PHARIS ENGINEERING

LICENSED ARCHITECT
PAUL W. POWERS
C-29713
RENEWAL DATE 3/28/2021
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11-16-2020

BID SET

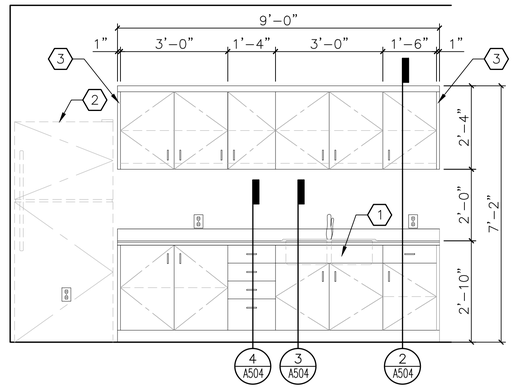
Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
DETAILS

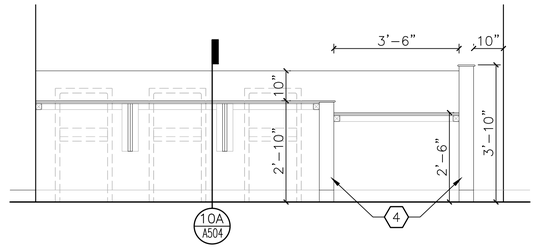
Sheet Number:
A503

KEYED NOTES:

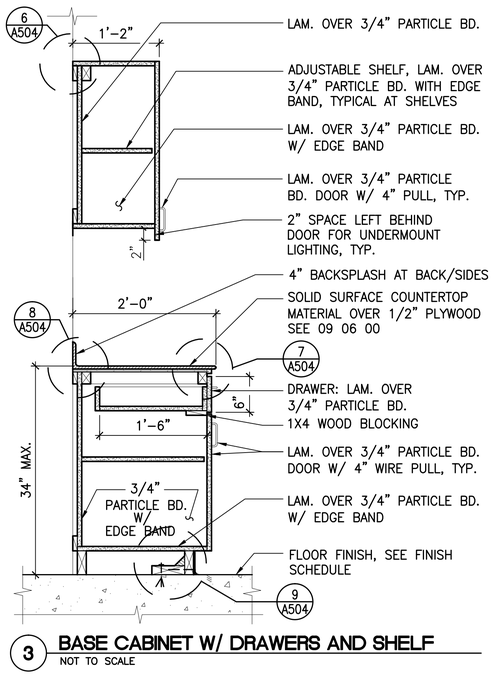
1. STAINLESS STEEL SINK, SEE PLUMBING DRAWINGS
2. REFRIGERATOR N.I.C. – BY OWNER
3. FILLER PANEL, END OF BASE AND/OR UPPER CABINETS
4. KNEE WALL FRAMING ANCHORED TO FLOOR, SEE DETAIL 10/A504



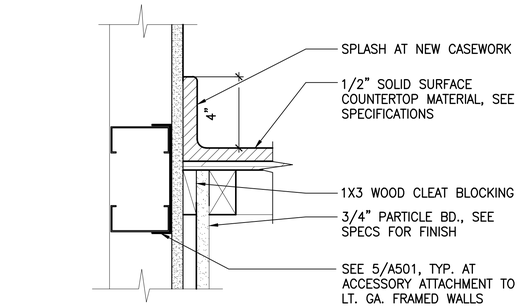
1 BREAK ROOM MILLWORK ELEVATION
1/2" = 1'–0"



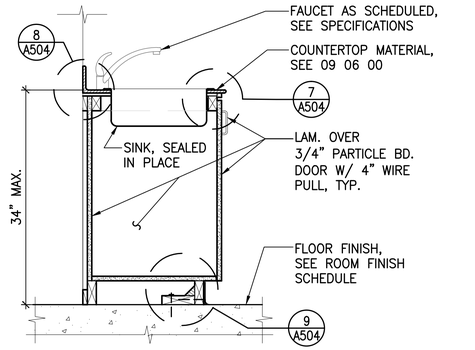
2 BREAK ROOM MILLWORK ELEVATION
1/2" = 1'–0"



3 BASE CABINET W/ DRAWERS AND SHELF
NOT TO SCALE



8 BASE CABINET ANCHORAGE
NOT TO SCALE



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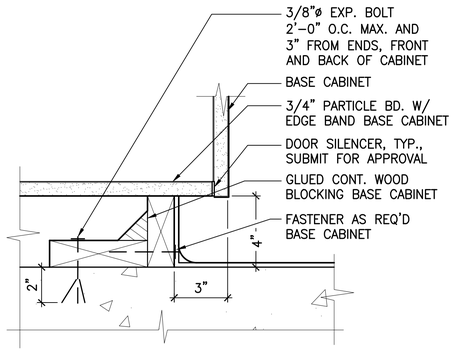
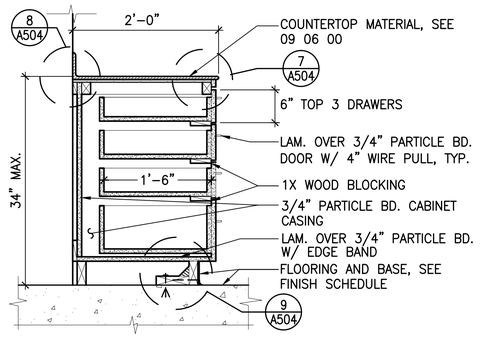
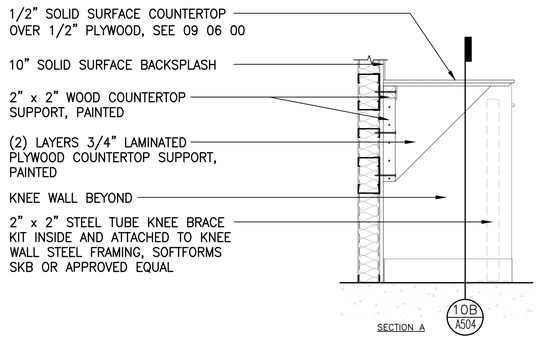
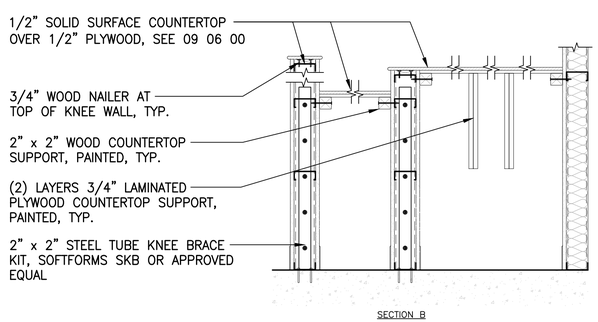


9 BASE CABINET ANCHORAGE
NOT TO SCALE

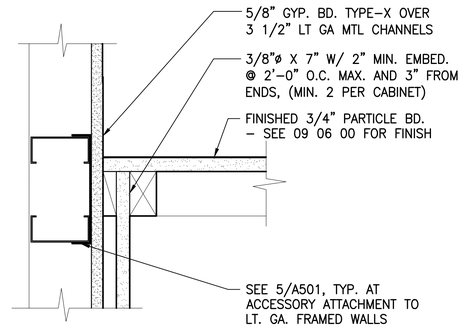


5 BASE CABINET W/ DRAWERS
NOT TO SCALE

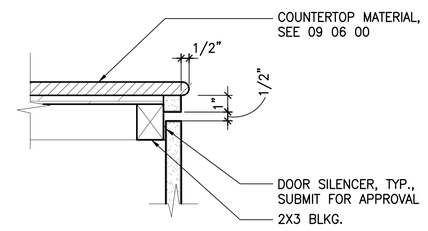




10 KNEE WALL AND COUNTER SECTION
NOT TO SCALE



6 UPPER CABINET ANCHORAGE
NOT TO SCALE



7 COUNTERTOP NOSING
NOT TO SCALE

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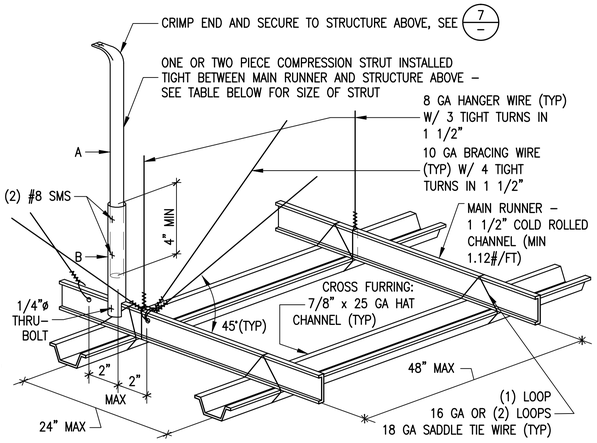
SUSPENDED GYPSUM BOARD CEILING GENERAL NOTES:

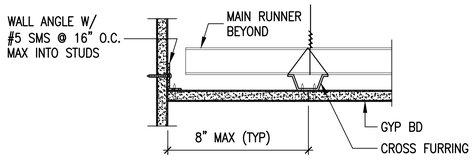
1. SUSPEND CEILING FROM STRUCTURE ABOVE USING WIRES AND COMPRESSION STRUTS PLACED IN LOCATIONS SHOWN IN SUSPENSION WIRE LOCATION DIAGRAM BELOW. PROVIDE ADDITIONAL HANGER AND BRACING WIRES AND COMPRESSION STRUT AS REQUIRED OR DETAILED AT ALL CEILING BREAKS, SOFFITS OR DISCONTINUOUS AREAS. HANGER WIRES THAT ARE MORE THAN 1 IN 6 OUT OF PLUMB SHALL BE PROVIDED WITH COUNTERSLOPING WIRES. SEPARATE ALL HANGER AND BRACING WIRES FROM UNBRACED DUCTS, CONDUITS, PIPES, ETC., BY AT LEAST 6 INCHES.
2. PROVIDE SUPPLEMENTAL FRAMING THAT IS SUPPORTED ON MAIN RUNNERS FOR ANY LIGHT FIXTURE OR DIFFUSER NOT SUPPORTED DIRECTLY ON THE MAIN RUNNER.
3. SPLICE MAIN RUNNERS BY LAPPING AND INTERLOCKING FLANGES 12 INCHES MINIMUM AND TYING EACH END OF SPLICE WITH TWO LOOPS OF 16 GAUGE WIRE. SPLICE CROSS-FURRING BY LAPPING AND INTERLOCKING PIECES 8 INCHES MINIMUM AND TYING EACH END WITH TWO LOOPS OF 16 GAUGE WIRE.
4. FOR HANGER AND BRACING WIRE ATTACHMENT TO STRUCTURE ABOVE SEE DETAIL 8/–.
5. FOR SUSPENDED PLASTER CEILINGS, IN WET AREAS, SUSPENSION CHANNELS SHALL BE GALVANIZED STEEL AND 3/16 INCH x 1 INCH GALV. MILD STEEL FLAT BAR SHALL BE SUBSTITUTED FOR HANGER WIRES SPECIFIED.



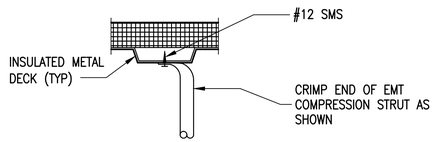
SEE GENERAL NOTES FOR SPLICING OF MAIN RUNNERS AND CROSS FURRING.

COMPRESSION STRUT SIZE	
MAXIMUM LENGTH	STRUT SIZE
UP TO 4'–0"	3/4" O.D. EMT X 0.107" WALL THICKNESS
UP TO 6'–0"	MEMBER (A) 1" O.D. EMT X 0.126" WALL THICKNESS MEMBER (B) 1 1/4" O.D. EMT X 0.133" WALL THICKNESS
UP TO 8'–0"	MEMBER (A) 1 1/4" O.D. EMT X 0.133" WALL THICKNESS MEMBER (B) 1 1/2" O.D. EMT X 0.138" WALL THICKNESS

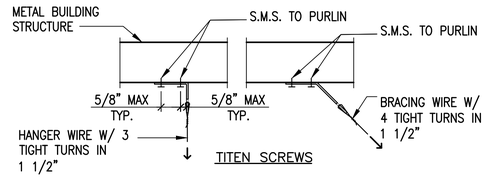
10 AXONOMETRIC OF GRID GYPSUM BOARD CEILING
NOT TO SCALE



6 TYPICAL CEILING PERIMETER DETAIL GYPSUM BOARD CEILING
NOT TO SCALE



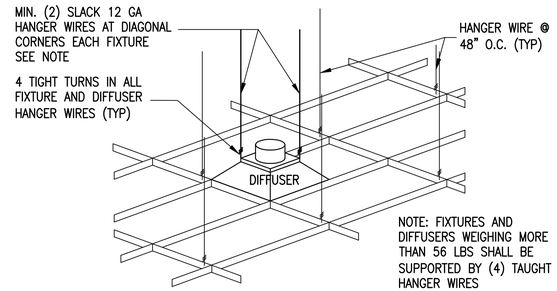
7 TYPICAL COMPRESSION STRUCT ATTACHMENT TO STRUCTURE
NOT TO SCALE

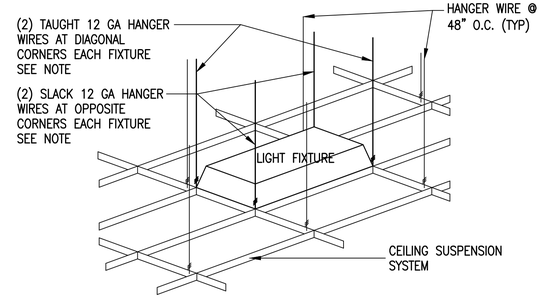


NOTES:

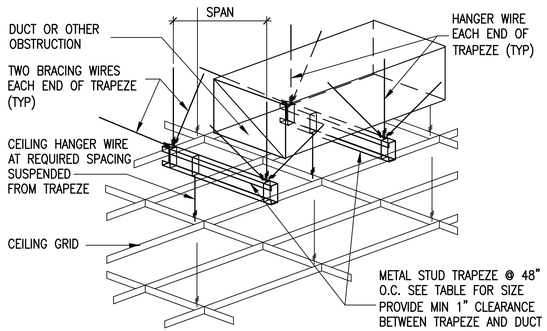
1. WHEN DRILLED–IN ANCHORS ARE USED IN REINFORCED CONCRETE FOR HANGER WIRES, 1 OUT OF 10 MUST BE FIELD TESTED FOR 200 LBS TENSION.
2. WHEN DRILLED–IN ANCHORS ARE USED IN REINFORCED CONCRETE FOR BRACING WIRES, 1 OUT OF 2 MUST BE FIELD TESTED FOR 400 LBS TENSION.
3. IF ANY DRILLED–IN ANCHOR FAILS, ALL ADJACENT ANCHORS MUST BE TESTED.
4. HILTI HHDCA 1/4"ø CEILING HANGER OR HILTI X–CW U27 CEILING WIRE ASSEMBLY MAY BE SUBSTITUTED FOR THE ANCHORS NOTED ABOVE FOR HANGER WIRES IN CONCRETE. HHDCA AND X–CW U27 MAY NOT BE USED AT BRACING WIRES.

8 CEILING HANGER/BRACING TO STRUCTURE
NO SCALE



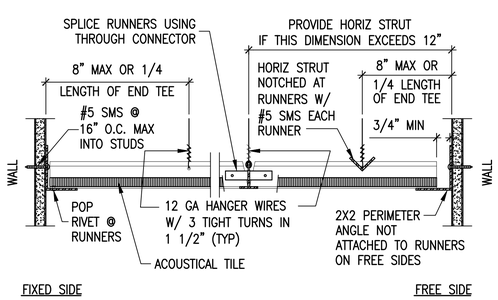


3 RECESSED FIXTURE AND DIFFUSER AT ACT
NOT TO SCALE



TRAPEZE FRAMING SIZE	
MAXIMUM SPAN	TRAPEZE SIZE
UP TO 4'–0"	2–1/2" x 1–5/8" x 16 GA MTL STUD
UP TO 8'–0"	4" x 1–5/8" x 16 GA MTL STUD
UP TO 12'–0"	6" x 1–5/8" x 16 GA MTL STUD

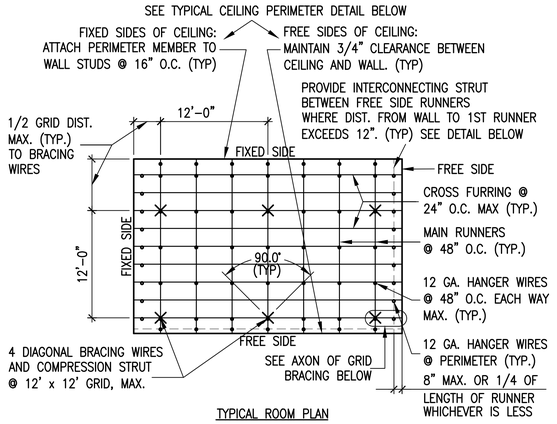
4 TRAPEZE FRAMING AT SUSPENDED CEILING
NOT TO SCALE



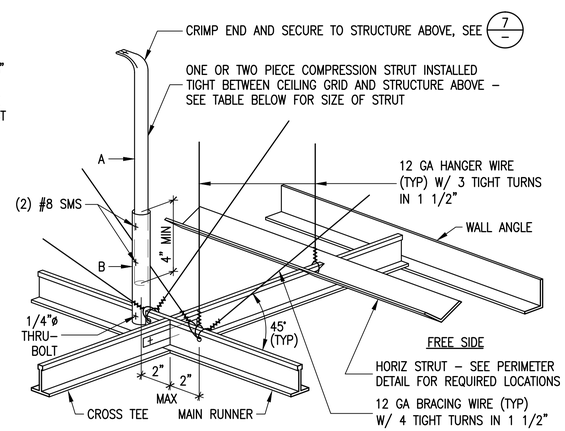
5 TYPICAL CEILING PERIMETER DETAIL ACOUSTICAL TILE CEILING
NOT TO SCALE

SUSPENDED ACOUSTICAL TILE CEILING GENERAL NOTES:

1. CEILINGS SHALL BE INSTALLED WITH TWO SIDES FIXED TO WALL AND TWO SIDES FREE FROM WALL AS DETAILED BELOW.
2. SUSPEND CEILING FROM STRUCTURE ABOVE USING WIRES AND COMPRESSION STRUTS PLACED IN LOCATIONS SHOWN IN SUSPENSION WIRE LOCATION DIAGRAM BELOW. PROVIDE ADDITIONAL HANGER AND BRACING WIRES AND COMPRESSION STRUT AS REQUIRED OR DETAILED AT ALL CEILING BREAKS, SOFFITS OR DISCONTINUOUS AREAS. HANGER WIRES THAT ARE MORE THAN 1 IN 6 OUT OF PLUMB SHALL BE PROVIDED WITH COUNTERSLOPING WIRES. SEPARATE ALL HANGER AND BRACING WIRES FROM UNBRACED DUCTS, CONDUITS, PIPES, ETC., BY AT LEAST 6 INCHES.
3. PROVIDE SUPPLEMENTAL FRAMING THAT IS SUPPORTED ON MAIN RUNNERS FOR ANY LIGHT FIXTURE OR DIFFUSER NOT SUPPORTED DIRECTLY ON THE MAIN RUNNER.
4. FOR HANGER AND BRACING WIRE ATTACHMENT TO STRUCTURE ABOVE SEE DETAIL 8/–.

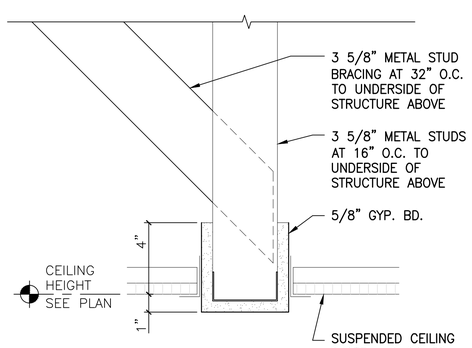


1 SUSPENSION WIRE LOCATION DIAGRAM ACOUSTICAL TILE CEILING
NOT TO SCALE

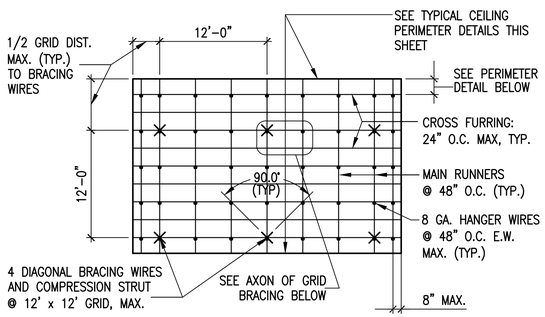


COMPRESSION STRUT SIZE	
MAXIMUM LENGTH	STRUT SIZE
UP TO 4'–0"	3/4" O.D. EMT X 0.107" WALL THICKNESS
UP TO 6'–0"	MEMBER (A) 1" O.D. EMT X 0.126" WALL THICKNESS MEMBER (B) 1 1/4" O.D. EMT X 0.133" WALL THICKNESS
UP TO 8'–0"	MEMBER (A) 1 1/4" O.D. EMT X 0.133" WALL THICKNESS MEMBER (B) 1 1/2" O.D. EMT X 0.138" WALL THICKNESS

2 AXONOMETRIC OF GRID BRACING ACOUSTICAL TILE CEILING
NOT TO SCALE



11 GYPSUM BOARD BULKHEAD
NOT TO SCALE



9 SUSPENSION WIRE LOCATION DIAGRAM GYPSUM BOARD CEILING
NOT TO SCALE

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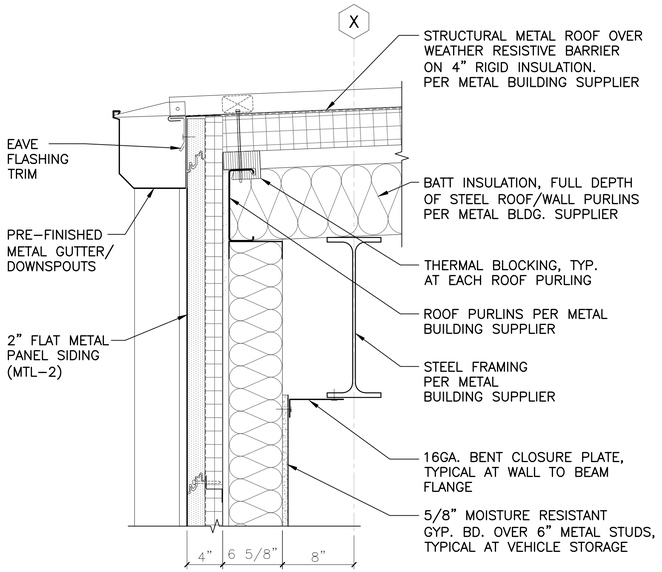
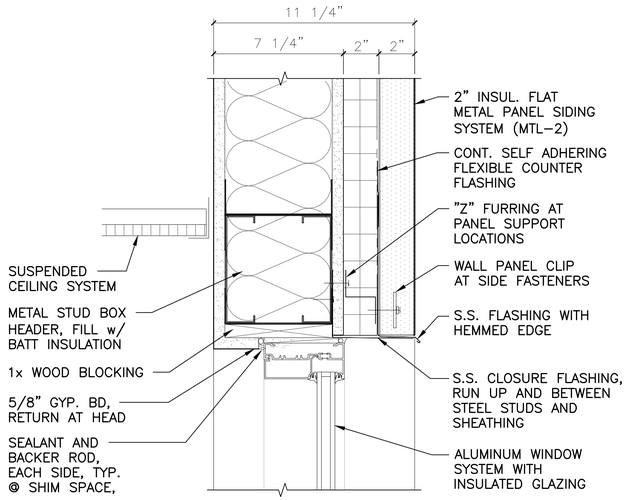
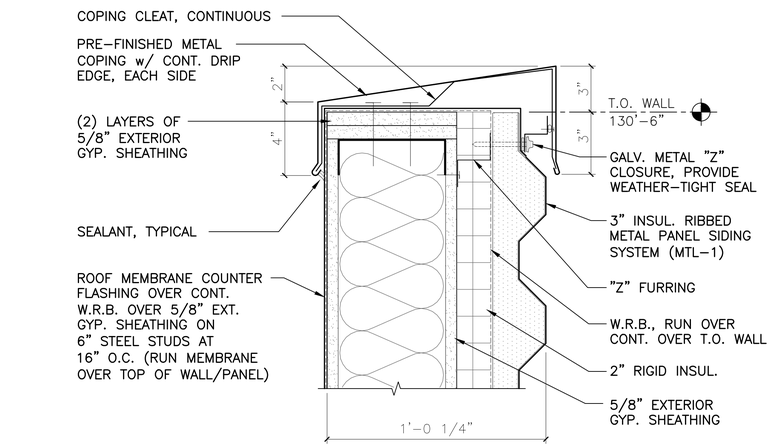


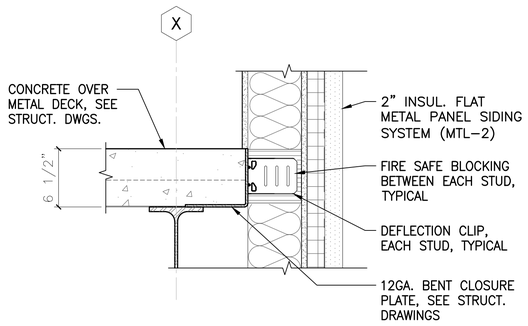
6 ROOF EAVE
1 1/2"= 1'-0"



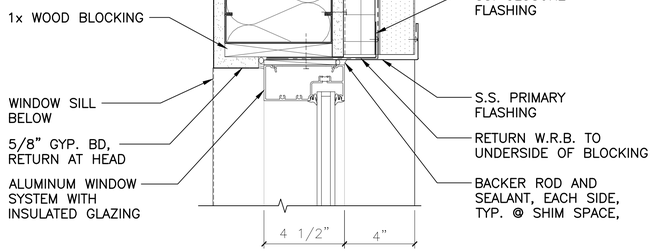
3 WINDOW HEAD
3"= 1'-0"



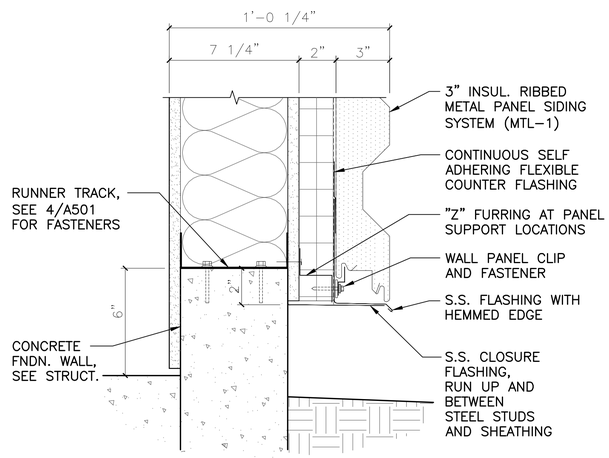
1 TOP OF WALL
3"= 1'-0"



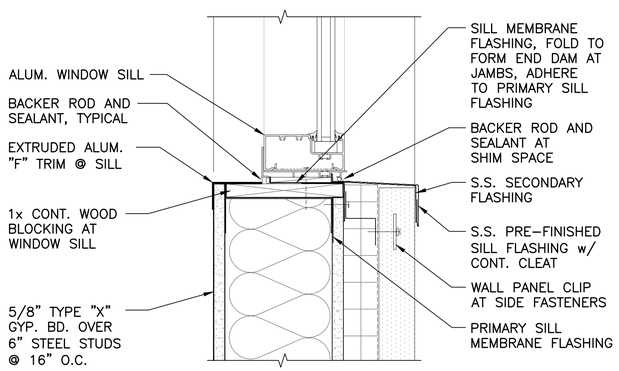
7 SLAB TO WALL CONNECTION
1 1/2"= 1'-0"



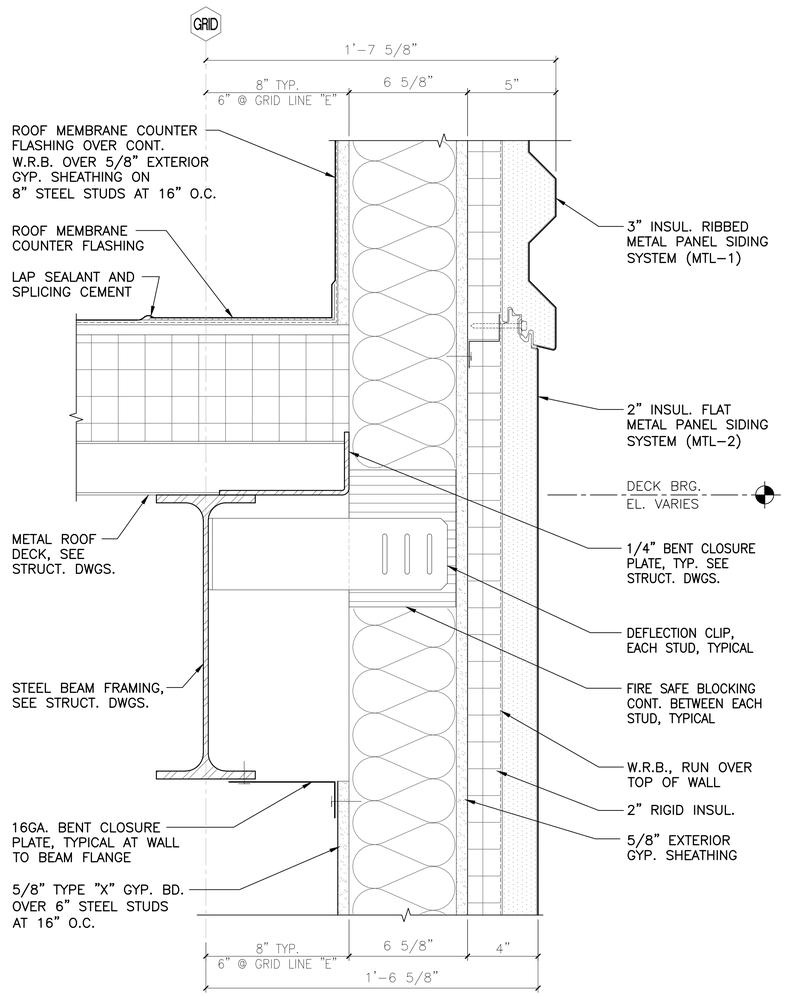
4 WINDOW JAMB
3"= 1'-0"



8 WALL BASE
3"= 1'-0"



5 WINDOW SILL
3"= 1'-0"



2 ROOF TO WALL CONNECTION
3"= 1'-0"

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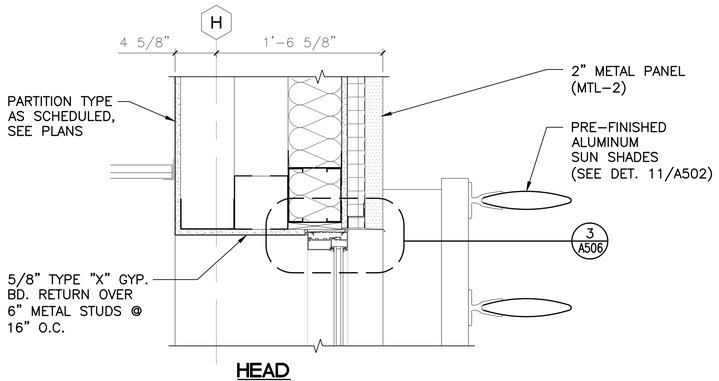
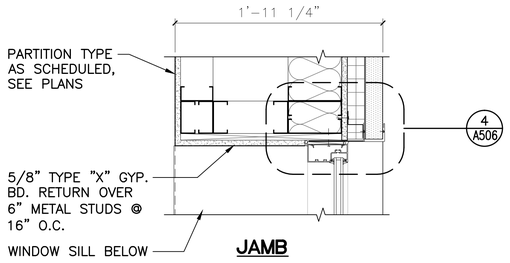
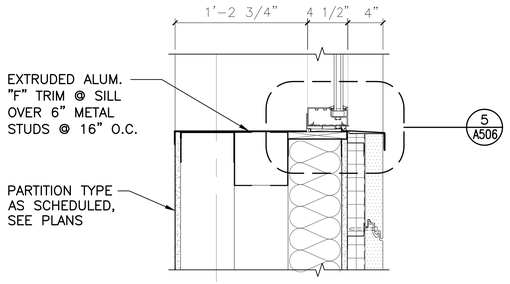


HEAD

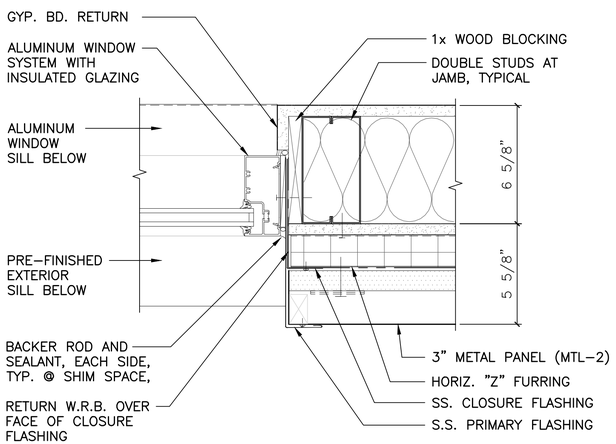


JAMB

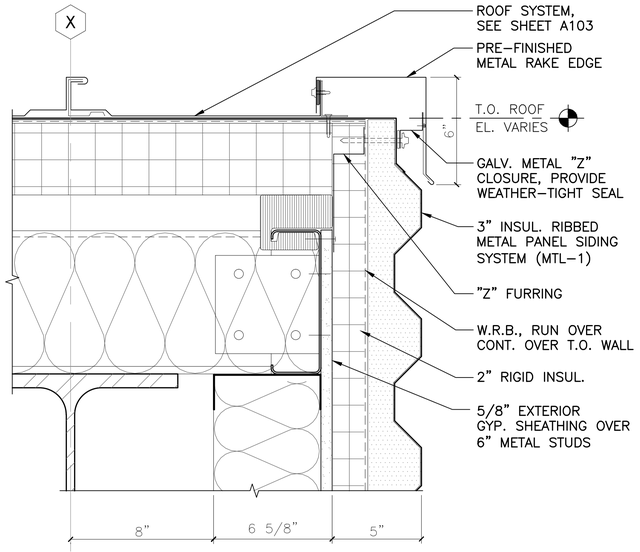


SILL

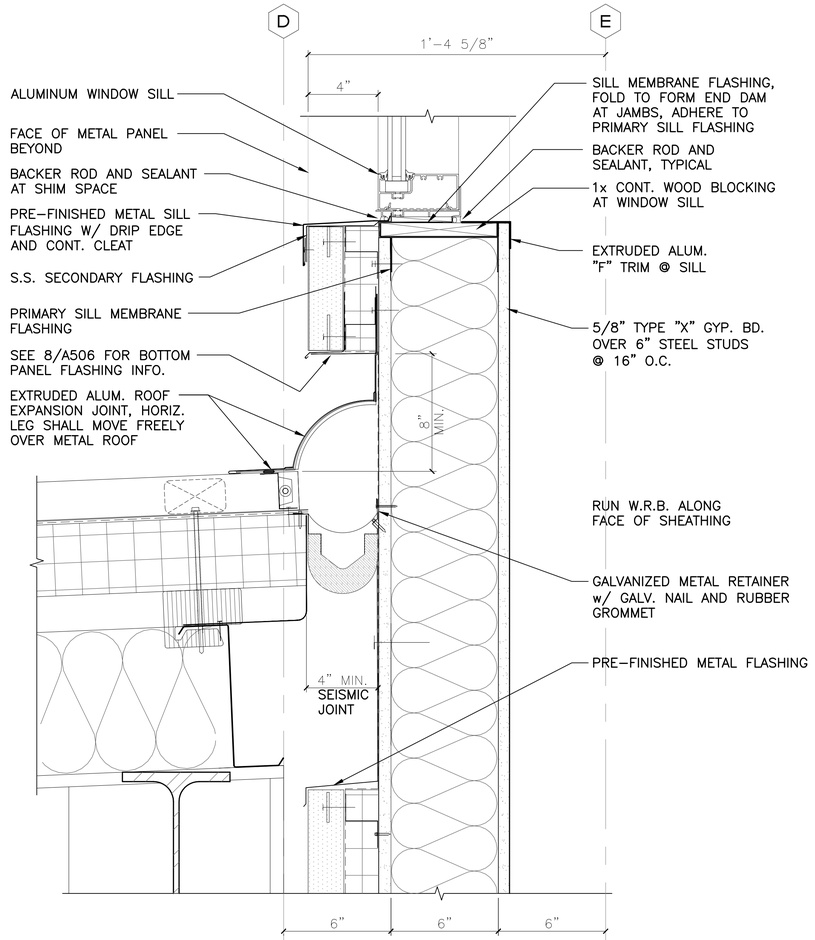
6 WINDOW DETAILS • STAIR 1
1 1/2"= 1'-0"



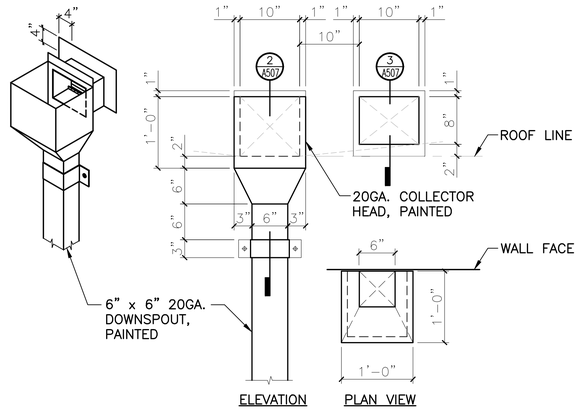
7 PANEL TRANSITION AT JAMB
3"= 1'-0"



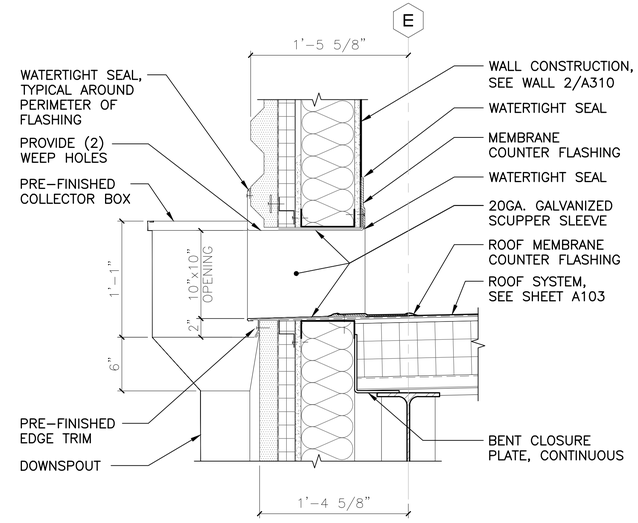
4 ROOF RAKE EDGE
3"= 1'-0"



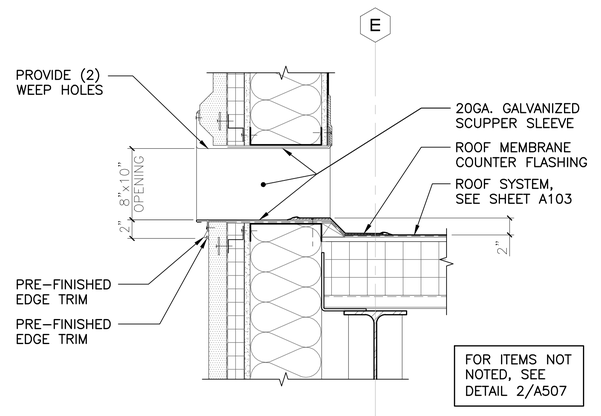
5 ROOF EXPANSION JOINT
3"= 1'-0"



1 SCUPPER AND OVERFLOW ELEVATION
1"= 1'-0"



2 SCUPPER AND COLLECTOR BOX
1 1/2"= 1'-0"



3 OVERFLOW SCUPPER
1 1/2"= 1'-0"

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C-29713
RENEWAL DATE 3/28/2021
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
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752 CHESTNUT STREET
REDWOOD CITY, CA 94063

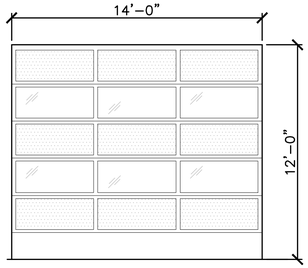
Revisions:
2 11-16-2020

BID SET

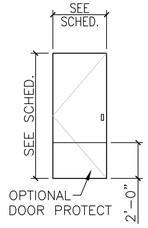
Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
DETAILS

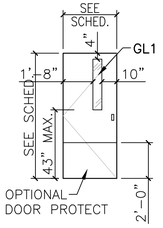
Sheet Number:
A507



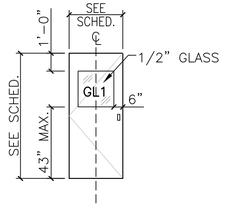
SC1
OVERHEAD SECTIONAL
WITH ALUMINUM AND GLASS PANELS



FP1
FULL PANEL

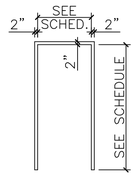


PG1
PARTIAL GLAZING



PG2
PARTIAL GLAZING

DOOR TYPES



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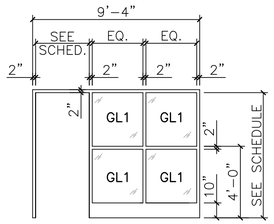

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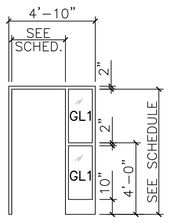

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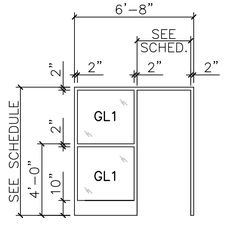

4

DOOR FRAME TYPE (S)

DOOR AND HARDWARE SCHEDULE

DOOR NUMBER	ROOM NUMBER	ROOM NAME	DOOR						FRAME						MISCELLANEOUS		REMARKS
			SIZE		TYPE	PANEL MAT'L	GLASS	DOOR FINISH	TYPE	MAT'L	DETAILS			FRAME FINISH	LABEL	HDWR SET	
			WIDTH	HEIGHT							HEAD	JAMB	MISC.				
100	100	HALLWAY	3'-0"	7'-0"	PG1	HM	GL1	PT-2	1	HM	7/A502	5,6/A502	–	–	–	8	4,5
101	101	ELECTRICAL/MECHANICAL	3'-0"	7'-0"	FP1	WD	–	ST-1	1	HM	1/A502	2/A502	–	PT-2	45MIN	1	–
102	102	IT/COMM.	3'-0"	7'-0"	FP1	WD	–	ST-1	1	HM	1/A502	2/A502	–	PT-2	–	9	–
103	103	ALL-GENDER TOILET	3'-0"	7'-0"	FP1	WD	–	ST-1	1	HM	1/A502	2/A502	–	PT-2	–	14	3
104	104	ALL-GENDER TOILET	3'-0"	7'-0"	FP1	WD	–	ST-1	1	HM	1/A502	2/A502	–	PT-2	–	14	3
105	105	ELEVATOR LOBBY	3'-0"	7'-0"	FP1	WD	–	ST-1	1	HM	1/A502	2/A502	–	PT-2	45MIN	2	–
106	106	SHOP	(2)3'-0"	7'-0"	PG1	WD	GL1	ST-1	1	HM	1/A502	2/A502	–	PT-2	–	3	–
107A	107	STORAGE	(2)3'-0"	7'-0"	FP1	WD	–	ST-1	1	HM	1/A502	2/A502	–	PT-2	–	4	–
107B	107	STORAGE	(2)3'-0"	7'-0"	FP1	HM	–	PT-2	1	HM	1/A502	2/A502	–	PT-2	45MIN	5	–
108A	108	HALLWAY	(2)3'-0"	7'-0"	FP1	HM	–	PT-2	1	HM	1/A502	2/A502	–	PT-2	45MIN	6	–
108B	108	HALLWAY	(2)3'-0"	7'-0"	FP2	HM	GL1	PT-2	1	HM	1/A502	2/A502	–	PT-2	–	?	–
109	109	BREAK ROOM	3'-0"	7'-0"	FP1	WD	GL1	ST-1	2	HM	1/A502	2/A502	–	PT-2	–	7	–
110A	110	VEHICLE STORAGE	14'-0"	12'-0"	SC1	---	–	PF	---	---	4/A503	2,3/A503	–	PT-2	–	–	1,2
110B	110	VEHICLE STORAGE	14'-0"	12'-0'	SC1	---	–	PF	---	---	4/A503	2,3/A503	–	PT-2	–	–	1,2
110C	110	VEHICLE STORAGE	3'-0"	7'-0"	PG1	HM	GL1	PT-2	1	HM	7/A502	5,6/A502	–	PT-2	–	8	4
110D	110	VEHICLE STORAGE	3'-0"	7'-0"	PG1	HM	GL1	PT-2	1	HM	7/A502	5,6/A502	–	PT-2	–	8	4
111	111	UTILITY	3'-0"	7'-0"	FP1	HM	–	PT-2	1	HM	1/A502	2/A502	–	PT-2	–	9	–
112	112	ELEVATOR MACHINE ROOM	3'-0"	7'-0"	FP1	HM	–	PT-2	1	HM	1/A502	2/A502	–	PT-2	45MIN	1	–
114	114	HALLWAY	3'-0"	7'-0"	FP1	HM	–	PT-2	1	HM	1/A502	2/A502	–	PT-2	45MIN	9	4,6
201	201	MECHANICAL ROOM	3'-0"	7'-0"	FP1	WD	–	ST-1	1	HM	1/A502	2/A502	–	PT-2	45MIN	12	–
202	202	IT/COMM.	3'-0"	7'-0"	FP1	WD	–	ST-1	1	HM	1/A502	2/A502	–	PT-2	–	9	–
203	203	ALL-GENDER TOILET	3'-0"	7'-0"	FP1	WD	–	ST-1	1	HM	1/A502	2/A502	–	PT-2	–	14	3
204	204	ALL-GENDER TOILET	3'-0"	7'-0"	FP1	WD	–	ST-1	1	HM	1/A502	2/A502	–	PT-2	–	14	3
205	205	CONFERENCE ROOM	3'-0"	7'-0"	FP1	WD	GL1	ST-1	4	HM	1/A502	2/A502	–	–	–	7	–
207	207	SUPERVISOR OFFICE	3'-0"	7'-0"	FP1	WD	–	ST-1	3	HM	1/A502	2/A502	–	PT-2	–	15	–
208	208	STORAGE	3'-0"	7'-0"	FP1	WD	–	ST-1	1	HM	1/A502	2/A502	–	PT-2	45MIN	9	–
S1A	S-1	STAIR 1	3'-0"	7'-0"	FP1	WD	–	ST-1	1	HM	1/A502	2/A502	–	PT-2	45MIN	10	4
S1B	S-1	STAIR 1	3'-0"	7'-0"	FP1	WD	–	ST-1	1	HM	1/A502	2/A502	–	PT-2	45MIN	13	4
S2A	S-2	STAIR 2	3'-0"	7'-0"	FP1	HM	–	PT-2	1	HM	7/A502	5,6/A502	–	PT-2	45MIN	11	4.5
S2B	S-2	STAIR 2	3'-0"	7'-0"	FP1	WD	–	ST-1	1	HM	1/A611	2/A611	–	PT-2	45MIN	10	4

DOOR AND FRAME MATERIALS			
DOOR AND FRAMES		GLAZING	
HM	HOLLOW METAL	GL1	TEMPERED GLASS
WD	WOOD	GL2	INSULATED TEMPERED GLASS – EXTERIOR
PT	PAINT	GL3	TRANSLUCENT KALWALL GLAZING PANEL
ST	STAIN	GL4	3/4 HOUR FIRE PROTECTION RATING GLASS
AL	ALUMINUM		
PF	PRE-FINISHED		

REMARKS

1. DOOR SHALL BE PRE-FINISHED PER MANUFACTURER.
2. FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.
3. UNDERCUT BOTTOM OF DOOR 1-1/2" FOR CIRCULATION.
4. EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.
5. A READILY VISIBLE DURABLE SIGN IS POSTED ON THE EGRESS SIDE ON OR ADJACENT TO THE DOOR STATING: THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. THE SIGN SHALL BE IN LETTERS 1 INCH (25 MM) HIGH ON A CONTRASTING BACKGROUND.
6. ADD WEATHERSTRIPING AND THRESHOLD.

NOTE: ALL THRESHOLDS TO CONFORM TO CBC 11B-303.

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COUNTY OF SAN MATEO
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752 CHESTNUT STREET
REDWOOD CITY, CA 94063

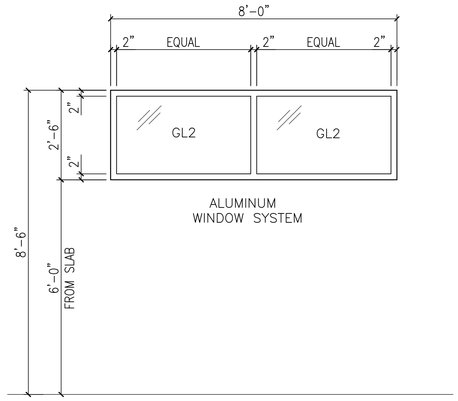
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
DOOR AND WINDOW SCHEDULE

Sheet Number:
A601



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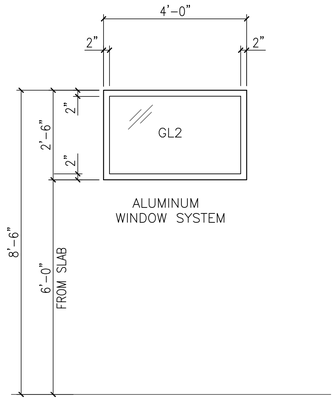

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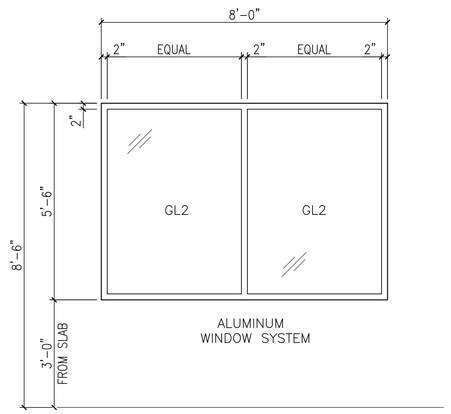

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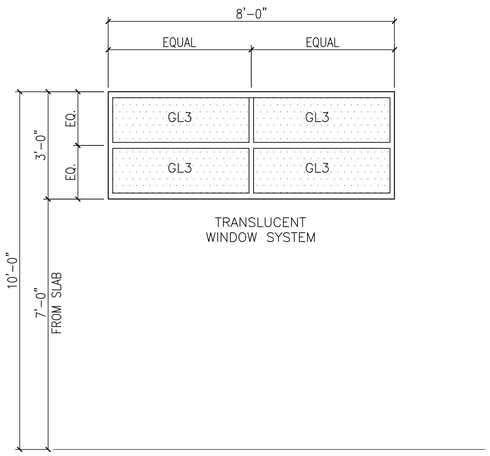

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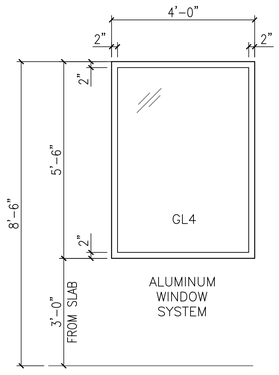

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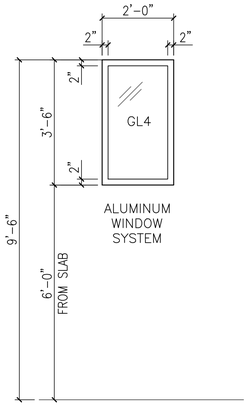

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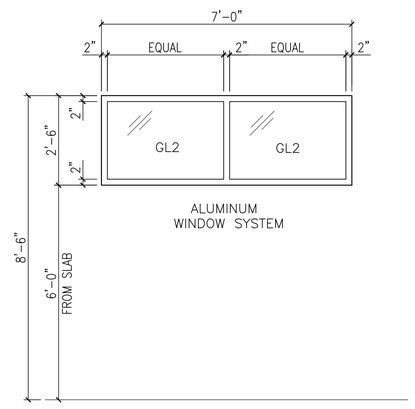

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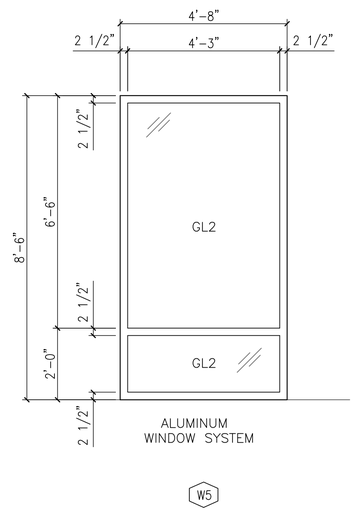

W5

WINDOW TYPE(S) (NOT TO SCALE)

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Revisions:
2 11-16-2020

BID SET

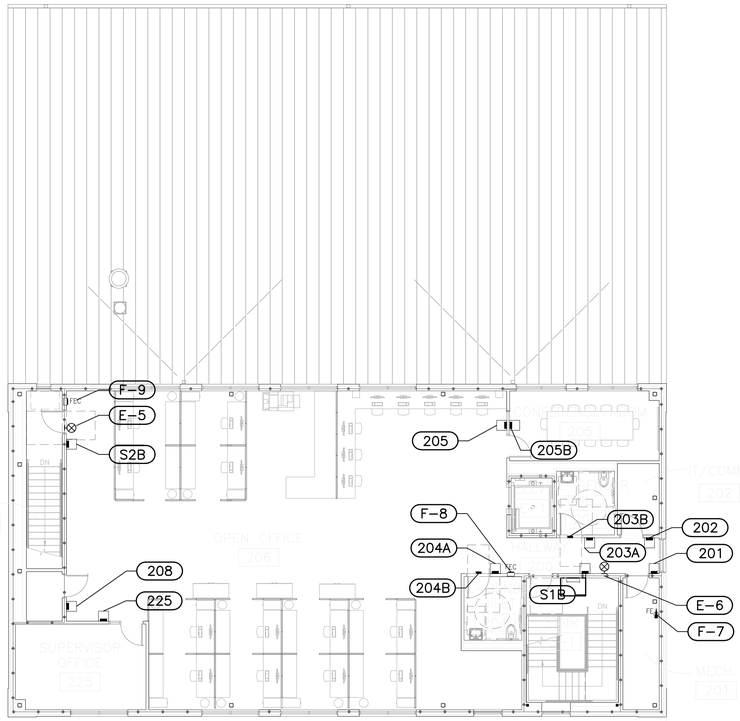
Client Project Number: **P30J1**
APN Number: **054-063-180**
KPA Project Number: **714.00**
Date: **NOV 16, 2020**

Sheet Title:

WINDOW TYPES

Sheet Number:

A602

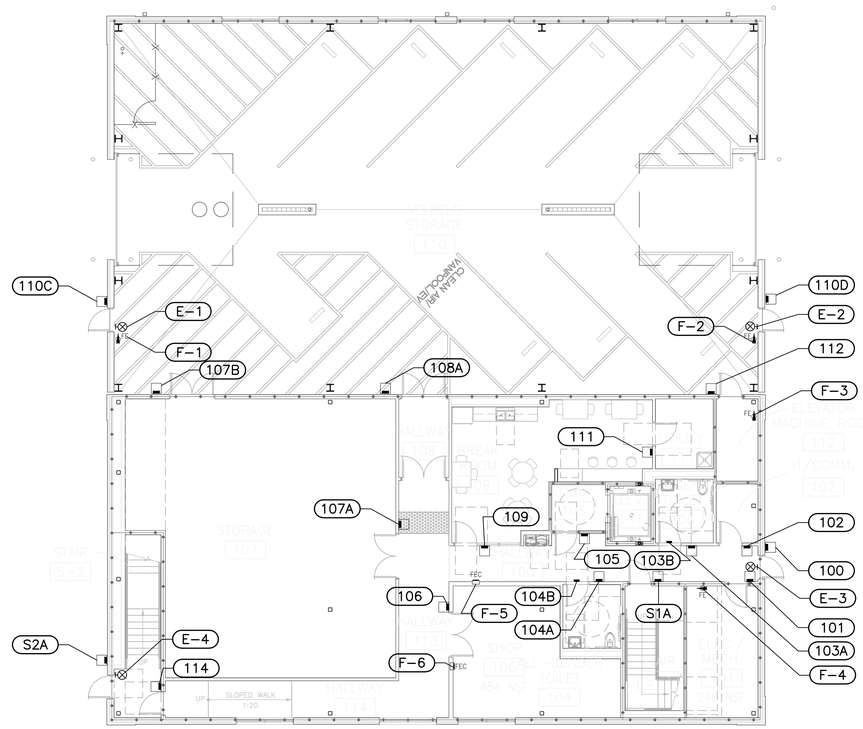


TRUE NORTH

2 SECOND FLOOR SIGNAGE PLAN

1" = 10'-0"

0 5 10 20



TRUE NORTH

1 FIRST FLOOR SIGNAGE PLAN

1" = 10'-0"

0 5 10 20

INTERIOR SIGN SCHEDULE CONTINUED

SIGN NUMBER	ROOM or AREA	ROOM NUMBER	SIGN FUNCTION	TYPE	SIGN TEXT	NOTES
100	HALLWAY	100	ACCESSIBILITY	D1	–	
101	ELETRICAL/MECHANICAL	101	ROOM ID – TACTILE	A2	ELETRICAL/MECHANICAL	
102	IT/COMM	102	ROOM ID – TACTILE	A2	IT/COMM. ROOM	
103A	ALL-GENDER TOILET	103	ROOM ID – TACTILE	A2	ALL-GENDER TOILET	
103B	ALL-GENDER TOILET	103	ROOM ID – TACTILE	E1	ALL GENDER	
104A	ALL-GENDER TOILET	104	ROOM ID – TACTILE	A2	ALL-GENDER TOILET	
104B	ALL-GENDER TOILET	104	ROOM ID – TACTILE	E1	ALL GENDER	
105	LOBBY	105	ROOM ID – TACTILE	A2	LOBBY	
106	SHOP	106	ROOM ID – TACTILE	A2	SHOP	
107A	STORAGE	107	ROOM ID – TACTILE	A2	STORAGE	
107B	STORAGE	107	ROOM ID – TACTILE	A2	STORAGE	
108A	HALLWAY	108A	ROOM ID – TACTILE	A2	HALLWAY	
108B	HALLWAY	108B	ROOM ID – TACTILE	A2	HALLWAY	
109	BREAKROOM	109	ROOM ID – TACTILE	A2	BREAKROOM	
110C	VEHICLE/STORAGE	110	ACCESSIBILITY	D1	–	
110D	VEHICLE/STORAGE	110	ACCESSIBILITY	D1	–	
111	JANITOR	111	ROOM ID – TACTILE	A2	JANITOR	
112	ELEVATOR/MACHINE ROOM	112	ROOM ID – TACTILE	A2	ELEVATOR/MACHINE ROOM	
114	HALLWAY	114	ROOM ID – TACTILE	A2	HALLWAY	
S1A	STAIR	S-1	ROOM ID – TACTILE	A2	STAIR	
S1B	STAIR	S-2	ROOM ID – TACTILE	A2	STAIR	
S2A	STAIR	S-1	ROOM ID – TACTILE	A2	STAIR	
S2B	STAIR	S-2	ROOM ID – TACTILE	A2	STAIR	
200	HALLWAY	200	ROOM ID – TACTILE	A2	HALLWAY	
201	MECHANICAL ROOM	201	ROOM ID – TACTILE	A2	MECHANICAL ROOM	

INTERIOR SIGN SCHEDULE

SIGN NUMBER	ROOM or AREA	ROOM NUMBER	SIGN FUNCTION	TYPE	SIGN TEXT	NOTES
202	IT/COMM	202	ROOM ID – TACTILE	A2	IT/COMM	
203A	ALL-GENDER TOILET	103	ROOM ID – TACTILE	A2	ALL-GENDER TOILET	
203B	ALL-GENDER TOILET	103	ROOM ID – TACTILE	E1	ALL GENDER	
204A	ALL-GENDER TOILET	104	ROOM ID – TACTILE	A2	ALL-GENDER TOILET	
204B	ALL-GENDER TOILET	104	ROOM ID – TACTILE	E1	ALL GENDER	
205	CONFERENCE ROOM	205	ROOM ID – TACTILE	A2	CONFERENCE ROOM	
205	CONFERENCE ROOM	205	ROOM ID – TACTILE	D2	ASSISTIVE LISTENING SYSTEM AVAILABLE	
206	OPEN OFFICE	206	ROOM ID – TACTILE	A2	OPEN OFFICE	
207	SUPERVISOR OFFICE	207	ROOM ID – TACTILE	A2	SUPERVISOR OFFICE	
208	STORAGE	208	ROOM ID – TACTILE	A2	STORAGE	
E-1	VEHICLE STORAGE	110	EXIT SIGN	C1	EXIT	
E-2	VEHICLE STORAGE	110	EXIT SIGN	C1	EXIT	
E-3	HALLWAY	100	EXIT SIGN	C1	EXIT	
E-4	STAIR	S-2A	EXIT SIGN	C1	EXIT	
E-5	STAIR	S-2B	EXIT SIGN	C1	EXIT	
E-6	STAIR	S-1B	EXIT SIGN	C1	EXIT	
F-1	VEHICLE STORAGE	110	FIRE EXTINGUISHER	B1	SEE ASSOC. DETAIL	
F-2	VEHICLE STORAGE	110	FIRE EXTINGUISHER	B1	SEE ASSOC. DETAIL	
F-3	ELEVATOR/MACHINE ROOM	112	FIRE EXTINGUISHER	B1	SEE ASSOC. DETAIL	
F-4	ELETRICAL/MECHANICAL	101	FIRE EXTINGUISHER	B1	SEE ASSOC. DETAIL	
F-5	HALLWAY	100	FIRE EXTINGUISHER	B1	SEE ASSOC. DETAIL	
F-6	SHOP	106	FIRE EXTINGUISHER	B1	SEE ASSOC. DETAIL	
F-7	MECHANICAL ROOM	201	FIRE EXTINGUISHER	B1	SEE ASSOC. DETAIL	
F-8	HALLWAY	200	FIRE EXTINGUISHER	B1	SEE ASSOC. DETAIL	
F-9	OPEN OFFICE	206	FIRE EXTINGUISHER	B1	SEE ASSOC. DETAIL	

3 SIGNAGE SCHEDULE

RADIO SHOP

COUNTY OF SAN MATEO

3 BUILDING SIGN DETAIL

GENERAL NOTES:

1. ALL SIGNAGE SHALL COMPLY WITH 2019 CBC CHAPTER 11B, DIVISION 11 COMMUNICATION ELEMENTS AND FEATURES.
2. ALL SIGN SURFACES SHALL HAVE A NON-GLARE FINISH.
3. PROTRUSION FROM FACE OF WALL NOT TO EXCEED 4".
4. ALL EXIT SIGN LED LIGHTS SHALL OPERATE ON NORMAL (AC INPUT) AND EMERGENCY (DC INPUT).
5. BUILDING OWNER TO APPROVE ALL SIGNS.
6. SEE SHEET A604 FOR SIGN TYPES AND TYPICAL MOUNTING HEIGHTS

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PAUL W. POWERS
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RENEWAL DATE 3/28/2021
STATE OF CALIFORNIA

COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

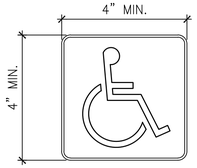
Sheet Title:
SIGNAGE PLANS

Sheet Number:
A603

NOTES:
THIS SIGN SHALL BE POSTED IN A PROMINENT PLACE AT OR NEAR THE ASSEMBLY AREA ENTRANCE – CBC 11B–216.10

VISUAL CHARACTERS SHALL COMPLY WITH CBC 11B–703.5

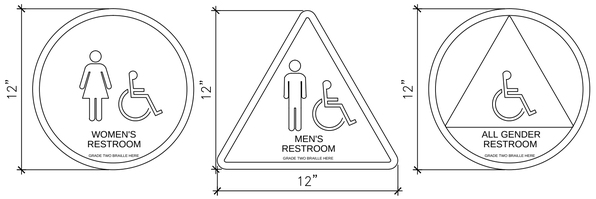
D2 ASSISTIVE LISTENING SYSTEM SIGN



NOTES:
VINYL DECAL

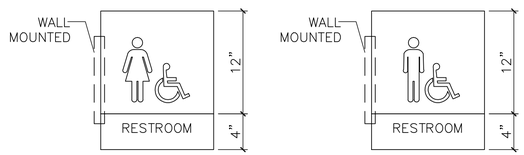
SYMBOL SHALL CONSIST OF WHITE FIGURE ON A BLUE (FS15090) BACKGROUND

D1 INTNTL SYMBOL OF ACCESSIBILITY DECAL



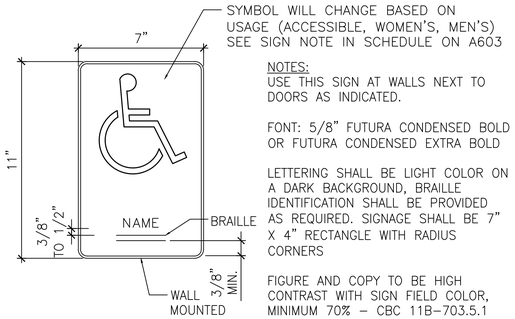
NOTES:
PP: 12"x12"x1/4" PHOTOPOLYMER – COPY & ASI, WHITE; BACKGROUND, DARK
ATTACHMENT: DOUBLE FACED TAPE & SILICONE
CBC 11B–703.5.1 BACKGROUND TO CONTRAST WITH DOOR & PROVIDE 70% CONTRAST WITH COPY/FIGURE
11B–703.7.2.6.3 TRIANGLE SYMBOL TO CONTRAST WITH THE CIRCLE SYMBOL, CIRCLE SYMBOL SHALL BE DARK TO CONTRAST WITH LIGHT COLOR OF MAPLE WOOD VENEER.

E1 TOILET DOOR SIGNAGE



NOTES:
PP: 12"x12"x1/4" PHOTOPOLYMER – COPY & ASI, WHITE; BACKGROUND, DARK
ATTACHMENT: DOUBLE FACED TAPE & SILICONE
CBC 11B–703.5.1 BACKGROUND TO CONTRAST WITH DOOR & PROVIDE 70% CONTRAST WITH COPY/FIGURE

F1 TOILET SIGNAGE - WALL MOUNTED (FLAG)



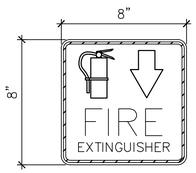
NOTES:
USE THIS SIGN AT WALLS NEXT TO DOORS AS INDICATED.

FONT: 5/8" FUTURA CONDENSED BOLD OR FUTURA CONDENSED EXTRA BOLD

LETTERING SHALL BE LIGHT COLOR ON A DARK BACKGROUND, BRAILLE IDENTIFICATION SHALL BE PROVIDED AS REQUIRED. SIGNAGE SHALL BE 7" X 4" RECTANGLE WITH RADIUS CORNERS

FIGURE AND COPY TO BE HIGH CONTRAST WITH SIGN FIELD COLOR, MINIMUM 70% – CBC 11B–703.5.1

A4 7" X 11" ROOM IDENTIFICATION SIGN



NOTES:
USE THIS SIGN AT WALLS ABOVE FIRE EXTINGUISHERS.

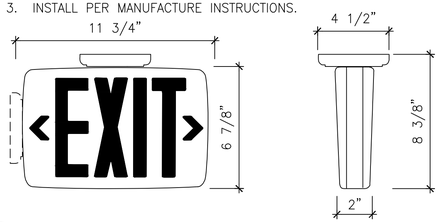
INSTALL ACCORDING TO MANUFACTURE INSTRUCTIONS.

WALL MOUNTED

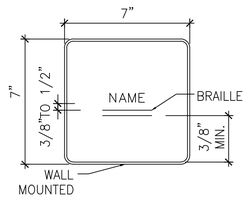
B1 FIRE EXTINGUISHER SIGN

NOTES:

1. PROVIDE TACTILE SIGN OF TYPE A2 WITH TEXT "EXIT" OR EXIT ROUTE PER CBC 1013.4 ADJACENT TO EXIT DOOR ON EGRESS SIDE, MOUNTED PER 3/A604.
2. INSTALL CEILING MOUNTED OR FLAG TYPE ACCORDING TO 3/A604.
3. INSTALL PER MANUFACTURE INSTRUCTIONS.



C1 EXIT SIGN - CEILING OR FLAG MOUNTED

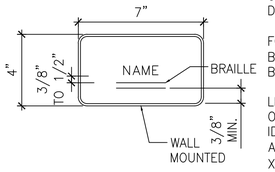


NOTES:
USE THIS SIGN AT WALLS NEXT TO DOORS AS INDICATED.

FONT: 5/8" FUTURA CONDENSED BOLD OR FUTURA CONDENSED EXTRA BOLD

LETTERING SHALL BE LIGHT COLOR ON A DARK BACKGROUND, BRAILLE IDENTIFICATION SHALL BE PROVIDED AS REQUIRED. SIGNAGE SHALL BE 7" X 7" SQUARE WITH RADIUS CORNERS

A1 7" X 7" SUITE IDENTIFICATION SIGN



NOTES:
USE THIS SIGN AT WALLS NEXT TO DOORS AS INDICATED.

FONT: 5/8" FUTURA CONDENSED BOLD OR FUTURA CONDENSED EXTRA BOLD

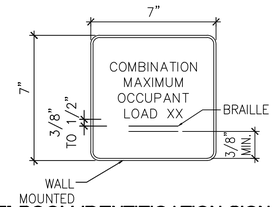
LETTERING SHALL BE LIGHT COLOR ON A DARK BACKGROUND, BRAILLE IDENTIFICATION SHALL BE PROVIDED AS REQUIRED. SIGNAGE SHALL BE 7" X 4" RECTANGLE WITH RADIUS CORNERS

A2 7" X 4" ROOM IDENTIFICATION SIGN

NOTES:
USE THIS SIGN AT WALLS AS INDICATED.

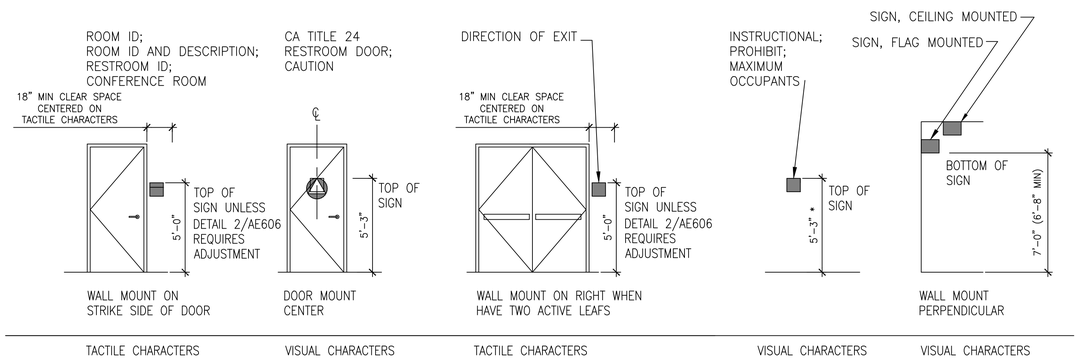
FONT: 5/8" FUTURA CONDENSED BOLD OR FUTURA CONDENSED EXTRA BOLD

LETTERING SHALL BE LIGHT COLOR ON A DARK BACKGROUND, BRAILLE IDENTIFICATION SHALL BE PROVIDED AS REQUIRED. SIGNAGE SHALL BE 7" X 7" SQUARE WITH RADIUS CORNERS



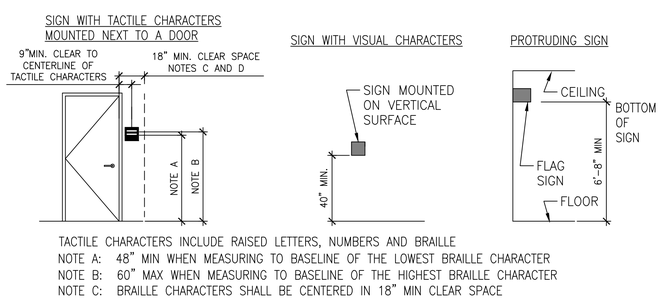
A3 7" X 7" ROOM IDENTIFICATION SIGN WITH OCCUPANCY LOAD

1 SIGN TYPES
NOT TO SCALE



* ALIGN WITH TACTILE SIGN IF MOUNTED ADJACENT
** ALL SIGNS TO PROVIDE LOW GLARE, HIGH CONTRAST (MINIMUM 70%) COPY AND FIGURE AGAINST BACKGROUND FIELD COLOR AND CONTRAST W/ DOOR COLOR – SEE CBC 703.5.1

3 TYPICAL SIGN MOUNTING REQUIREMENTS
NOT TO SCALE



TACTILE CHARACTERS INCLUDE RAISED LETTERS, NUMBERS AND BRAILLE
NOTE A: 48" MIN WHEN MEASURING TO BASELINE OF THE LOWEST BRAILLE CHARACTER
NOTE B: 60" MAX WHEN MEASURING TO BASELINE OF THE HIGHEST BRAILLE CHARACTER
NOTE C: BRAILLE CHARACTERS SHALL BE CENTERED IN 18" MIN CLEAR SPACE
NOTE D: 18" MIN CLEAR SPACE EXTENDS BOTH PARALLEL AND PERPENDICULAR TO THE SIGN

2 WALL MOUNTING HEIGHT REQUIREMENTS PER 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
NOT TO SCALE

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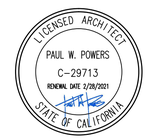


COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

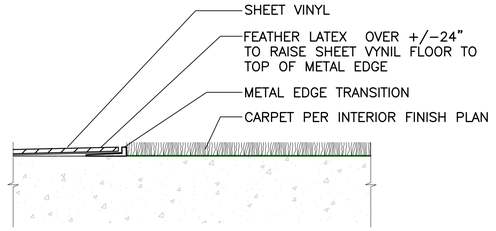
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
SIGNAGE DETAILS

Sheet Number:
A604



2 TRANSITION BETWEEN CARPET TO SHEET VYNIL FLOORING
NOT TO SCALE

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR	BASE	NORTH	EAST	SOUTH	WEST	CEILING	REMARKS
				FINISH	FINISH	FINISH	FINISH	MATERIAL	
E–1	ELEVATOR	VCT1	SS	HPL	HPL	HPL	HPL	SSP	09 06 60
S–1	STAIR	PT–1	RB1	PT1	PT1	PT1	PT2	ACT1	1
S–2	STAIR	PT–1	RB1	PT1	PT2	PT1	PT1	ACT1	1
100	HALLWAY	LVT–1	RB1	PT1	PT1	PT2	PT1	ACT1	2
101	ELECTRICAL/MECHANICAL	SC	RB1	PT1	PT1	PT1	PT1	EXP	–
102	IT/COMM	SC	RB1	PT1	PT1	PT1	PT1	EXP	–
103	ALL–GENDER TOILET	CT–1	CT2	CT2	CT2	CT2	CT2	ACT2	–
104	ALL–GENDER TOILET	CT–1	CT2	CT2	CT2	CT2	CT2	ACT2	–
105	LOBBY	LVT–1	RB1	PT2	PT1	PT1	PT2	ACT2	–
106	SHOP	SC	RB1	PT1	PT1	PT1	PT1	ACT2	–
107	STORAGE	SC	RB1	PT1	PT1	PT1	PT1	ACT2	–
108A	HALLWAY	LVT–1	RB1	PT1	PT1	PT2	PT2	ACT1	–
108B	HALLWAY	LVT–1	RB1	PT1	PT1	PT2	PT2	ACT1	–
109	BREAKROOM	LVT–2	RB1	PT1	PT1	PT2	PT2	ACT1	–
110	VEHICLE STORAGE	SC	RB1	PT1	PT1	MTL–2	PT1	EXP	4
111	UTILITY	SC	RB1	PT1	PT1	PT1	PT1	EXP	3, 4
112	ELEVATOR MACHINE ROOM	SC	RB1	PT1	PT1	PT1	PT1	EXP	4
113	HALLWAY	LVT–1	RB1	–	PT1	PT1	PT1	ACT1	
114	HALLWAY	LVT–1	RB1	PT1	PT1	PT1	PT1	ACT1	
200	HALLWAY	CVT–1	RB1	PT1	PT1	PT2	PT1	ACT1	–
201	MECHANICAL ROOM	SC	RB1	PT1	PT1	PT1	PT1	EXP	4
202	IT/COMM	LVT–3	RB1	PT1	PT1	PT1	PT1	EXP	4
203	ALL–GENDER TOILET	CT–1	CT2	CT2	CT2	CT2	CT2	ACT2	–
204	ALL–GENDER TOILET	CT–1	CT2	CT2	CT2	CT2	CT2	ACT2	–
205	CONFERENCE ROOM	CPT–2	RB1	PT1	PT1	PT1	PT1	ACT1	–
206	OPEN OFFICE	CPT–1	RB1	PT1	PT1	PT1	PT1	ACT1	–
207	SUPERVISOR OFFICE	CPT–3	RB1	PT1	PT1	PT1	PT1	ACT1	–
208	STORAGE	CPT–1	RB1	PT1	PT1	PT1	PT1	ACT1	–

FINISH SCHEDULE REMARKS

SEE SECTION 09 06 00 FOR ADDITIONAL FINISH NOTES AND MATERIAL INFORMATION
1. PAINT HANDRAILS, GUARDS, STRINGERS, RISERS
2. CT-3, THREE WALLS DRINKING FOUNTAIN ALCOVE
3. CT-4, SURROUNDING AT MOP SINK
4. SHOP PRIME ALL EXPOSED STEEL AND/OR METAL DECK TO RECEIVE PAINT. PAINT PT-3

FINISH SCHEDULE ABBREVIATIONS

ACT	ACOUSTIC CEILING TILE	RB	RUBBER BASE	RF	RUBBER FLOORING
CT	CERAMIC TILE	SC	SEALED CONCRETE	MTL	METAL DECK
EXP	EXPOSED TO STRUCTURE	SS	STAINLESS STEEL		
GWB	GYPSUM WALL BOARD	SSP	STAINLESS STEEL PANEL		
HPL	HIGH PRESSURE LAMINATE PANEL	LVT	LUXURY VINYL TILE		
PT	PAINT	CPT	CARPET TILE		

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RENEWAL DATE 3/28/2021
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752 CHESTNUT STREET
REDWOOD CITY, CA 94063

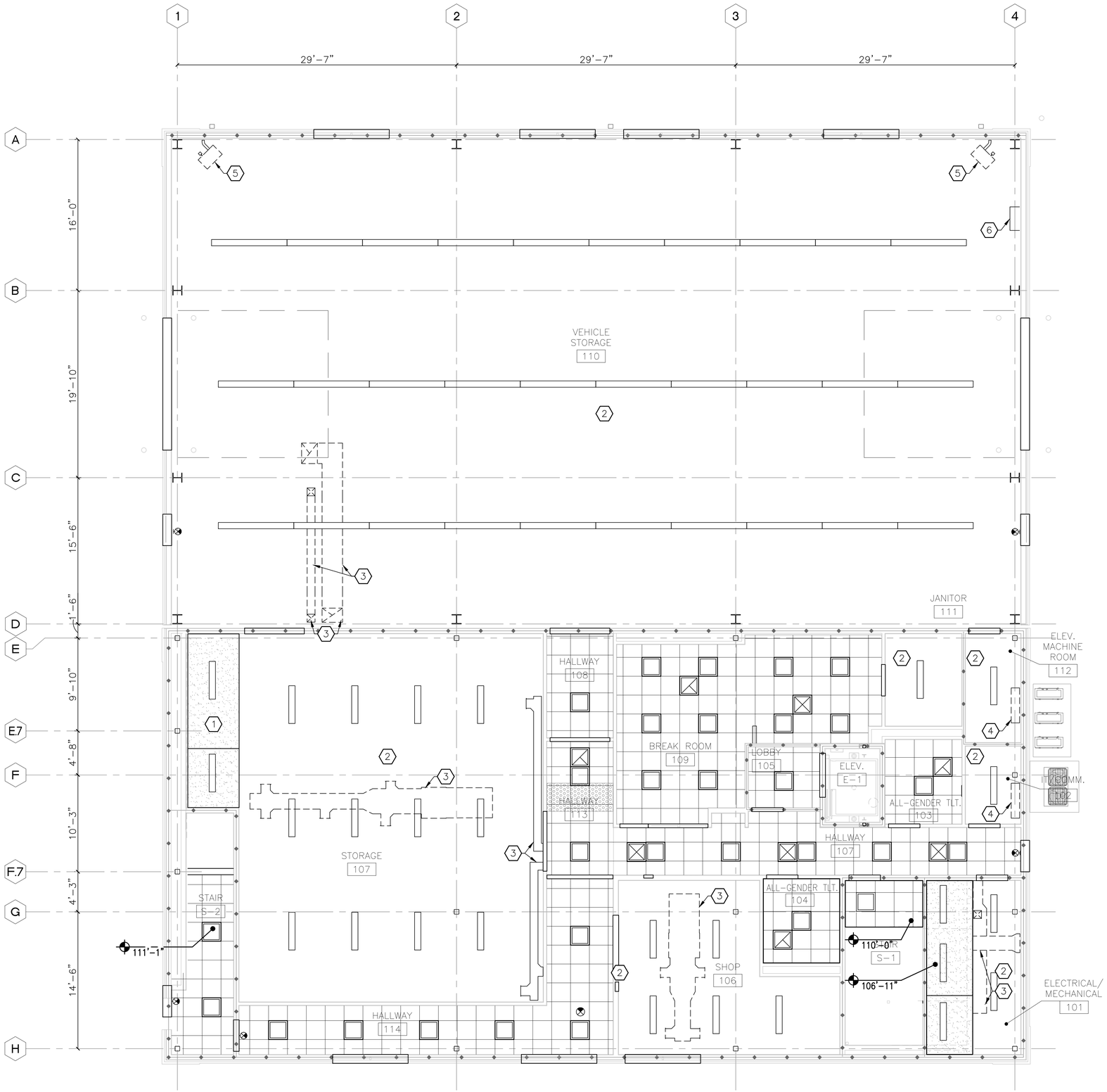
Revisions:
2 11–16–2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
FINISH SCHEDULE

Sheet Number:
A701



GENERAL NOTES:

1. REFER TO MECHANICAL DRAWINGS FOR DETAILS ON EXPOSED DUCTWORK FLEXDUCT FOR TENANT FINISH-OUT.
2. SEE SHEET A505 FOR TYPICAL CEILING DETAILS
3. ELECTRICAL CONTRACTOR TO PROVIDE EXIT LIGHT AND EXTERIOR LIGHT AT ALL EXTERIOR DOORS.
4. ALL CEILINGS TO BE AT 9'-0" ABOVE FINISHED FLOOR U.O.N
5. FIXTURE LOCATIONS SHOWN ON THIS CEILING PLAN OVER RULE ANYTHING SHOWN ON MECH AND ELEC PLANS

KEYED NOTES:

1. PROVIDE (2) LAYERS TYPE 'X' GP. BD. OVER 3-5/8" METAL STUD FRAMING, SEE 3/A404
2. EXPOSED STRUCTURE ABOVE
3. EXPOSED MECHANICAL UNITS AND/OR DUCT WORK, SEE GENERAL NOTE 1
4. MINI-SPLIT DUCTLESS SYSTEM, SEE M1.1
5. GAS-FIRED HEATER, SEE M1.1
6. MECHANICAL DUCT, SEE M1.1

LEGEND:

- 2'x2' ACOUSTICAL CEILING TILE
- 2'x2' HVAC RETURN
- 2'x2' HVAC SUPPLY
- 2'x2' LIGHT
- 4' STRIP LIGHT
- 8' STRIP LIGHT
- EXIT LIGHT

PLAN NORTH

1 FIRST FLOOR REFLECTED CEILING PLAN
3/16" = 1'-0"

0 4' 8' 12'

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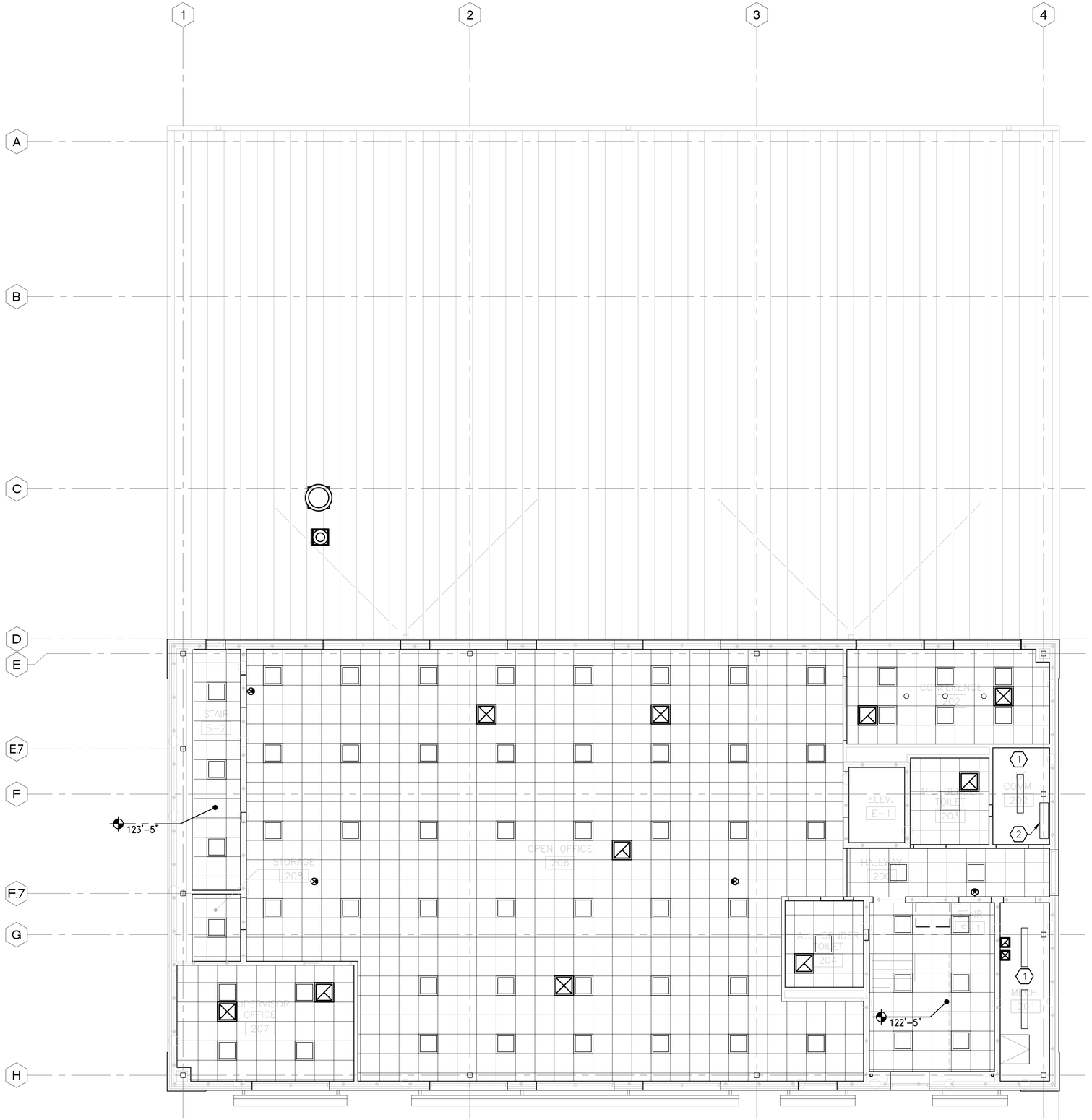
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
FIRST FLOOR REFLECTED CEILING PLAN

Sheet Number:
A721



GENERAL NOTES:

1. REFER TO MECHANICAL DRAWINGS FOR DETAILS ON EXPOSED DUCTWORK.
2. SEE SHEET A505 FOR TYPICAL CEILING DETAILS
3. ELECTRICAL CONTRACTOR TO PROVIDE EXIT LIGHT AND EXTERIOR LIGHT AT ALL EXTERIOR DOORS.
4. ALL CEILINGS TO BE AT 9'–0" ABOVE FINISHED FLOOR U.O.N
5. FIXTURE LOCATIONS SHOWN ON THIS CEILING PLAN OVER RULE ANYTHING SHOWN ON MECH AND ELEC PLANS

KEYED NOTES:

1. EXPOSED STRUCTURE ABOVE
2. MINI–SPLIT DUCTLESS SYSTEM, SEE M1.2

LEGEND:

- 2'x2' ACOUSTICAL CEILING TILE
- 2'x2' HVAC RETURN
- 2'x2' HVAC SUPPLY
- 2'x2' LIGHT
- 4' STRIP LIGHT
- 8' STRIP LIGHT
- EXIT LIGHT

PLAN NORTH

1 **SECOND FLOOR REFLECTED CEILING PLAN**
3/16" = 1'–0"

0 4' 8' 12'

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RENEWAL DATE 3/28/2021
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752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
SECOND FLOOR REFLECTED CEILING PLAN

Sheet Number:
A722

GENERAL STRUCTURAL NOTES:

1. THE DRAWINGS SHOW THE FORM OF THE COMPLETED STRUCTURE(S) EXCLUSIVE OF ANY PROVISIONS FOR BRACING OR SHORING DURING CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER OF ANY CONDITION THAT MIGHT ENDANGER THE STABILITY OF THE STRUCTURE(S) OR CAUSE DISTRESS OF THE STRUCTURE(S). THE DESIGN ENGINEER IS NOT RESPONSIBLE FOR INSPECTION OF THE ELEMENTS DESCRIBED ABOVE, NOR WILL THE DESIGN ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES OR SEQUENCES OF CONSTRUCTION.

2. REFER TO THE GEOTECHNICAL REPORT 20–1835, DATE MAY 17, 2020 BY ROCKRIDGE GEOTECHNICAL FOR: SITE CONDITIONS, EXCAVATION, SHORING REQUIREMENTS, UNDERPINNING, BACKFILL BEHIND WALLS AND SUBGRADE PREPARATIONS.

3. POUR FOOTINGS AND SLAB ON GRADE AFTER REVIEW OF EXCAVATIONS, BACKFILLS, AND COMPACTION AND WRITTEN ACCEPTANCE OF THE EXCAVATIONS, BACKFILLS, AND COMPACTION BY THE GEOTECHNICAL ENGINEER.

4. ALL CUTS, FILLS, COMPACTIONS, SUBGRADES AND TRENCH BACKFILLS MUST BE TESTED BY A LICENSED SOILS ENGINEER EMPLOYED BY CONTRACTOR WHO WILL PROVIDE CERTIFICATION THAT THE WORK CONFORMS TO THE REQUIREMENTS OF THE CONTRACT, CITY CODES AND STATE CODES.

5. WHERE UNSTABLE OR UNSUITABLE MATERIALS ARE ENCOUNTERED DURING SUBGRADE PREPARATION, THE AREA IN QUESTION SHALL BE OVER EXCAVATED AND REPLACED BY SELECT BACKFILL MATERIAL, AS DIRECTED IN WRITING BY THE GEOTECHNICAL ENGINEER.

6. ALL CONCRETE INTERIOR WALL SURFACES SHALL BE CLEANED AND PATCHED SMOOTH TO RECEIVE A PRIMER COAT OF PAINT AND TWO FINISH COATS OF PAINT. PRIMER CANNOT BE APPLIED UNTIL 90 DAYS AFTER APPLICATION OF A CURING COMPOUND. THIS REQUIREMENT MAY BE OMITTED WHERE CONTRACT DOCUMENTS SPECIFICALLY DENOTE AN APPLIED FINISH OTHER THAN PAINT. NO FINISH IS SPECIFICALLY CALLED OUT THEN WALLS SHALL BE PREPARED FOR PAINTING AS DESCRIBED.

DESIGN DATA

ALL WORK SHALL CONFORM TO MOST STRINGENT REQUIREMENTS OF:

1. ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS AS WELL AS ALL REQUIREMENTS OF CONTRACT DOCUMENTS.

2. TO THE REQUIREMENTS OF THE CITY OF REDWOOD CITY AND THE COUNTY OF SAN MATEO.

3. CALIFORNIA BUILDING CODE, 2019 EDITION. TITLE 24, PART 2, ALL REFERENCES TO "TITLE 24" REFER TO THIS EDITION.

   a. LIVE LOADS (PSF):

ROOF	20
OFFICE FLOORS	50
ASSEMBLY AREAS	100
EXIT STAIRS	100
LIGHT STORAGE	125
PARTITIONS	15
PARKING	85
OR	SINGLE AXLE 10,000 LBS
	5,000 LBS ON 4.5" x 4.5" AREA

   LIVE LOADS REDUCED PER CODE.

   b. WIND LOADS: STATIC

BASIC WIND SPEED	110 MPH
EXPOSURE CATEGORY	C
WIND IMPORTANCE FACTOR, I_w	1.0

   c. SEISMIC LOADS PER ASCE 7–16

OCCUPANCY CATEGORY	II	
IMPORTANCE FACTOR	I_E	= 1.0
MAPPED SPECTRAL RESPONSE ACCELERATORS		
	S_S	= 1.69g
	S_1	= 0.69g
	SD_S	= 1.12g
	SD_1	= 0.78g
SEISMIC DESIGN CATEGORY	D	
RESPONSE MODIFICATION FACTORS		
BRACED FRAME	R_{STEEL}	= 3.25
SEISMIC RESPONSE COEFF. (STL BLDG)	Cs	= 0.35
DESIGN BASE SHEAR (ASD) (STL BLDG)	V	= 159 Kips
APPROXIMATE BUILDING PERIOD (STL BLDG)	T	= 0.25s
LONG–PERIOD TRANSITION PERIOD (MAPPED)	TL	= 12.0s

4. SOIL CAPACITY (PER GEOTECHNICAL REPORT):

SOIL BEARING CAPACITY (SERVICE LOADS)	3000	PSF
SOIL BEARING CAPACITY (TOTAL LOADS)	4000	PSF

5. COLUMN LOADS

MAXIMUM COLUMN BEARING SERVICE LOAD	110	KIPS (D+L)
MAXIMUM COLUMN BEARING TOTAL LOAD	127	KIPS (D+L+E)

6. ROOF ALLOWANCE FOR SOLAR PANELS 4 PSF

SPECIAL INSPECTIONS

A SPECIAL INSPECTOR MEETING THE QUALIFICATION REQUIREMENTS DESCRIBED IN CHAPTER 17 OF TITLE 24 SHALL BE RETAINED FOR THIS PROJECT BY THE OWNER. THE FOLLOWING SPECIAL INSPECTIONS SHALL BE PROVIDED AS A MINIMUM:

STRUCTURAL WELDING – VISUAL INSPECTION OF FILLET WELDS
(UT INSPECTION OF PENETRATIONS WELDS)
STRUCTURAL BOLTING
ANCHOR BOLTS
HEADED STUDS AND ANCHORS
CEMENT TREATMENT OF FILLS (SEE SPECIFICATIONS
DECK ATTACHMENT

STRUCTURAL OBSERVATION

THE OWNER SHALL EMPLOY THE ENGINEER OR ARCHITECT RESPONSIBLE FOR THE STRUCTURAL DESIGN TO PERFORM STRUCTURAL OBSERVATION PER CBC SECTION 1702 & 1710.

STRUCTURAL STEEL U.O.N.

1. ALL STEEL SHOWN ON STRUCTURAL DRAWINGS TO BE ASTM A992 FOR BEAMS AND GIRDERS WITH Fy=50 KSI UNLESS OTHERWISE NOTED. EXCEPT AT HSS TUBES.

2. CONNECTING PLATES, BASE PLATES, STIFFENERS, DOUBLER PLATES, CONTINUITY PLATES, SHEAR TABS, ETC., TO BE SAME GRADE AS HIGHEST GRADE MEMBER AT CONNECTION, EXCEPT WHERE NOTED OTHERWISE.

3. ALL HSS TUBES TO BE ASTM A500 GRADE B Fy=46 KSI, EXCEPT WHERE NOTED OTHERWISE.

4. ALL PIPES TO BE ASTM A53 GRADE B Fy=35 KSI, EXCEPT WHERE NOTED OTHERWISE.

5. ALL ANCHOR BOLTS TO BE ASTM F1554 GRADE 36 EMBEDDED AS SHOWN ON DRAWINGS, EXCEPT ANCHOR BOLTS AT COLUMNS WITH DIAGONAL BRACES TO BE A354 GRADE BD WITH MINIMUM TENSILE STRESS Fu=150 KSI.

6. ALL STEEL FABRICATION AND DETAILS TO COMPLY WITH MOST STRINGENT OF AISC CODE, THE AWS CODE, THE REFERENCED CODES AND STANDARDS, AND CONTRACT DOCUMENTS.

7. UNLESS OTHERWISE NOTED, ALL BOLTS TO BE ASTM A325X BEARING TYPE BOLTS WITH THREADS EXCLUDED FROM THE SHEAR PLANE. SIZES AS PER DRAWINGS. BOLT HOLES TO BE 1/16 INCH LARGER THAN BOLT DIAMETER UNLESS OTHERWISE NOTED. ALL BOLTS SHALL BE TIGHTENED AS PER MINIMUM TENSIONS NOTED ON THIS SHEET.

8. MINIMUM PLATE THICKNESS IS 3/8 INCH UNLESS OTHERWISE NOTED. MINIMUM WELD IS 5/16 INCH UNLESS OTHERWISE NOTED.

9. ALL WELDS SHALL BE E70XX UNLESS NOTED OTHERWISE.

10. ALL PENETRATION WELDS TO HAVE COMPLETE ULTRASONIC INSPECTIONS IN THE SHOP AND AFTER COMPLETION OF ASSEMBLY IN THE FIELD. ALL COMPLETE JOINT PENETRATION WELDS (CJP) SHALL HAVE ANY BACK–UP BARS REMOVED. EXCEPT AT HSS COLUMN TO BASE PLATES, WELDS TO BE BACK GOUGED AND MINIMUM 1/4" FILLET ADDED, U.O.N.

11. INSPECTIONS AND ACCEPTANCE OF ALL WELDS, INCLUDING ALL PENETRATION WELDS, IS PER THE MOST STRINGENT OF THE CODE, AWS REQUIREMENTS, AND CONTRACT DOCUMENTS.

12. MATERIALS TO BE WELDED WITH COMPLETE JOINT PENETRATION WELDS SHALL BE FREE OF DELAMINATION AT WELD LOCATIONS AND FOR 6 INCHES ON EITHER SIDE OF THE WELD AND SHALL BE ULTRASONICALLY INSPECTED BEFORE WELDING AND AFTER WELDING AND COMPLETION OF ASSEMBLY.

13. FILLER METALS FOR ALL COMPLETE PENETRATION GROOVE WELDS SHALL HAVE A MINIMUM CHARPY V–NOTCH TOUGHNESS OF 20 FT–LBS AT –20°F AS DETERMINED BY AWS CLASSIFICATION.

14. ALL WELDING TO BE BY WELDERS CERTIFIED IN TYPE OF WELD AND SHALL CONFORM TO ALL CODE AND AWS REQUIREMENTS.

15. ALL FIELD WELDING TO BE CONTINUOUSLY INSPECTED BY A SPECIAL INSPECTOR APPROVED BY THE ENGINEER.

16. COLUMNS AT BRACED BAYS SHALL NOT BE SPLICED. PARTIAL PENETRATION GROOVE WELDS WHEN USED IN NON–BRACE BAY COLUMN, SPLICES SHALL BE TESTED EITHER BY ULTRASONIC TESTING OR RADIOGRAPHY.

17. ALL STEEL WITH YIELD STRENGTHS OF 36 KSI OR GREATER SHALL BE IDENTIFIED BY MILL AND FABRICATOR IN ACCORDANCE WITH DESIGN CODE.

18. "ALL THREAD" MATERIAL SHALL NOT BE SUBSTITUTED FOR BOLTS IN STEEL, CONCRETE, OR ANY OTHER STRUCTURAL APPLICATION, U.O.N.

19. ALL INSPECTIONS AND TESTS BY AN INDEPENDENT TESTING AND INSPECTION AGENCY.

20. ALL STRUCTURAL STEEL, BOLTS, CONNECTING HARDWARE, AND WELDS SHALL BE PRIMED AND PAINTED OR GALVANIZED EXCEPT AT EXPOSED LOCATIONS, SEE ARCHITECTURAL DETAILS.

CONCRETE U.O.N.

1. ALL CONCRETE SHALL BE REINFORCED WITH REINFORCING BARS IN TWO DIRECTIONS, EXCEPT WHERE SPECIFICALLY NOTED "UN–REINFORCED" ON THE STRUCTURAL DRAWINGS. MINIMUM REINFORCING SHALL BE #4 @ 12 INCHES EACH WAY; OR AN AREA OF UNIFORMLY DISPERSED REBAR EQUAL TO 0.0020 TIMES THE GROSS CONCRETE SECTION; WHICHEVER IS GREATER EXCEPT WHERE SHOWN OTHERWISE.

2. ALL CONCRETE MIXES SHALL BE DESIGNED BY AN INDEPENDENT TESTING LABORATORY. TEST CYLINDERS SHALL BE PREPARED AND TESTED AT 7 DAYS, 14 DAYS, & 28 DAYS, PRIOR TO SUBMITTALS OF DESIGN MIXES. SEE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

3. ALL CONCRETE FOR FOUNDATIONS, SLABS–ON–GRADE, CURBS SHALL BE NORMAL WEIGHT CONCRETE WITH 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI, UNLESS NOTED OTHERWISE.

4. CONCRETE FILL ON SECOND FLOOR DECK TO BE NORMAL WEIGHT WITH 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.

5. CONCRETE REINFORCING COVER AS FOLLOWS:

FOOTINGS AND SLABS CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3	INCHES
CONCRETE EXPOSED TO EARTH OR WEATHER		
FOR #6 AND LARGER	2	INCHES
FOR #5 AND SMALLER	1–1/2	INCHES
CONCRETE NOT EXPOSED TO EARTH OR WEATHER		
WALLS AND SLABS, #11 OR SMALLER	3/4	INCHES
BEAM STIRRUPS	1–1/2	INCHES

6. LIMIT POURS OF SLABS ON GRADE TO 900 SQ. FT. AND SUPPORTED SLABS AND POUR IN ALTERNATE STRIPS FOR ALL SLABS OR SAWCUT AT 10'–0"x10'–0" PATTERN WITHIN 48 HOURS OF POUR UNLESS NOTED OTHERWISE. SEE TYPICAL DETAILS FOR JOINT AND SPLICE LENGTH. MAXIMUM DISTANCE BETWEEN CONSTRUCTION JOINTS 20 FEET.

7. ROUGHEN SURFACES AT ALL JOINTS. PROVIDE SHEAR KEYS AND PREPARE JOINTS AS PER DRAWINGS AND SPECIFICATIONS.

8. ALL CONCRETE DIMENSIONS SHOWN ARE MINIMUM DIMENSIONS. CONTRACTOR TO REVIEW FORMING, REINFORCING DETAILS, AND EMBEDDED ITEMS PLACEMENT REQUIREMENTS AND DETERMINE PRIOR TO FABRICATION OF ANY REINFORCING REQUIREMENTS AND CLEARANCES FOR PROPERLY PLACING AND CONSOLIDATING CONCRETE. CONTRACTOR MAY SUBMIT FOR ENGINEER'S REVIEW LARGER DIMENSIONS FOR PARTICULAR CONDITIONS TO FACILITATE CONTRACTOR'S WORK AT NO ADDITIONAL COST TO OWNER.

9. ALL SLABS, UNLESS OTHERWISE NOTED, TO BE POURED AND FINISHED LEVEL WITHIN THE TOLERANCES INDICATED IN THE PROJECT SPECIFICATIONS. CONTRACTOR TO PROVIDE ADDITIONAL CONCRETE AS REQUIRED TO COMPENSATE FOR FORMWORK/METAL DECK DEFLECTION FROM THE WET WEIGHT OF CONCRETE. WHERE FINISHED TOP OF CONCRETE IS NOT WITHIN TOLERANCES, CONTRACTOR SHALL PROVIDE SUITABLE ADDITIONAL FLOOR LEVELING COMPOUND AT NO COST.

10. PROVIDE GROUT–CLEANED FINISH FOR ALL FORMED CONCRETE WALLS AND FLOOR EDGES EXPOSED TO VIEW.

REINFORCING U.O.N.

1. ALL CONCRETE REINFORCING IS ASTM A615, Fy=60 KSI, EXCEPT WHERE OTHERWISE NOTED.

2. REINFORCING SHALL BE CONTINUOUS FOR THE DIMENSION SHOWN, STAGGER ALL SPLICES.

3. SPLICES IN REINFORCING AND SPLICE LENGTHS TO BE AS SHOWN ON TYPICAL DETAILS AND ON PLANS AND SECTIONS.

4. LOCATE JOINTS AND SPLICES AS SHOWN ON DRAWINGS. SUBMIT FOR REVIEW ALL OTHER JOINT LOCATIONS AND SPLICE DETAILS. STAGGER ALL SPLICES WHERE POSSIBLE & PROVIDE SPLICES AS SHOWN ON CONTRACT DOCUMENTS. WHERE NO SPLICE IS SHOWN PROVIDE SPLICES AND DEVELOPMENT LENGTHS OF AT LEAST 48 BAR DIAMETERS.

5. NO WELDING OF ANY REINFORCING IS PERMITTED EXCEPT WHERE SPECIFICALLY SHOWN ON STRUCTURAL DOCUMENTS. REBAR SHOWN TO BE WELDED SHALL CONFORM TO ASTM A706.

6. LOCATE ALL REINFORCING AS SHOWN ON DRAWINGS AND FASTEN SECURELY.

7. ALL REINFORCING TO TERMINATE WITH STANDARD HOOKS AS SHOWN ON TYPICAL DETAILS. UNLESS NOTED OTHERWISE, ALL STIRRUPS AND TIES TO BE CLOSED WITH 135 DEGREE BENDS.

BOLT TIGHTENING U.O.N.

1. ALL FRAMING BOLTS SHALL BE A325X BEARING TYPE WITH THREADS EXCLUDED FROM THE SHEAR PLANE. ALL BOLTS SHALL BE TIGHTENED TO SPECIFIED MINIMUM TENSILE STRENGTHS TABULATED BELOW. AVOID EXCESSIVE AND/OR UNCONTROLLED TIGHTENING.

2. THE REQUIRED MINIMUM TENSION FOR ALL A325 BOLTS IS:

MINIMUM TIGHTENING TENSION, KIPS	
DIA., IN.	A325X
7/8	39
1	51

3. ALL BOLTS TO BE FURNISHED WITH LOAD INDICATING WASHERS OR TIGHTENED BY A CALIBRATED WRENCH WITH MEANS OF A POWERED WRENCH WITH AUTOMATIC CUTOFF AND CALIBRATION ON THE JOB. CONTROL AND TEST TO BE ACCOMPLISHED WITH A HYDRAULIC DEVICE EQUIPPED WITH A GAGE THAT REGISTERS THE TENSILE STRESS DEVELOPED AND WITNESSED BY PROJECT INSPECTOR.

4. SEE SEPARATE REQUIREMENTS FOR ANCHOR BOLTS ON S301 AND S500.

MISCELLANEOUS STEEL U.O.N.

1. ALL MISCELLANEOUS STEEL SHALL COMPLY WITH CONTRACT DOCUMENTS AND ALL REQUIREMENTS OF STRUCTURAL STEEL GENERAL NOTES SECTION, THIS SHEET.

2. ALL MISCELLANEOUS STEEL THAT IS NOT SHOWN TO BE PERMANENTLY COVERED WITH FIREPROOFING SHALL BE GALVANIZED OR SHOP PRIMED AND PAINTED. SEE SPECIFICATIONS AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

GEOTECHNICAL OBSERVATIONS OF FOUNDATIONS FILLS AND COMPACTIONS

AFTER A PORTION OF THE SITE IS EXCAVATED TO THE DESIGN ELEVATIONS AND GRADES NOTED ON CONTRACT DOCUMENTS THE PROJECT GEOTECHNICAL ENGINEER SHALL:

1. OVEREXCAVATE, PREPARE AND TREAT TO A DISTANCE OF 5–FT BEYOND NEW BUILDING PERIMETER INDICATED ON C101, KEYNOTE 2 AND DIMENSIONED ON FOUNDATION PLANS S101 AND S102.

2. REVIEW ACTUAL BEARING LAYERS UNDER EACH BUILDING FOUNDATION AND VERIFY THAT THE LAYER IS CAPABLE OF SUPPORTING THE MAXIMUM LOADS IDENTIFIED IN THE PROJECT GEOTECHNICAL REPORT AND WITHIN MAXIMUM SETTLEMENT OF 1/2 INCH.

3. WHERE SITE CONDITIONS UNDER ANY BUILDING ELEMENT DIFFER FROM THE GEOTECHNICAL REPORT, THE GEOTECHNICAL ENGINEER SHALL DETERMINE WHAT MODIFICATIONS ARE NECESSARY TO ACHIEVE THE MAXIMUM PERMITTED LOADING IDENTIFIED IN THE GEOTECHNICAL REPORT AND A TOTAL SETTLEMENT OF 1/2 INCH.

4. AT EACH BUILDING FOOTING AND EACH BUILDING SLAB CARRYING ANY LOADS OF WALLS, ADDITIONAL LEVELS, OTHER FINISHES, EQUIPMENT, ETC. THE GEOTECHNICAL ENGINEER SHALL REVIEW FILLS AND DETERMINE SELECTION OF MATERIALS AND COMPACTION METHODS NECESSARY TO ACHIEVE LOAD SUPPORT AND LIMIT SETTLEMENTS TO 1/2 INCH.

5. BASED ON PROJECT GEOTECHNICAL ENGINEER'S REVIEW OF #2, #3 AND #4 ABOVE, THE PROJECT GEOTECHNICAL ENGINEER SHALL COMMENT ON OBSERVATIONS AND IDENTIFY ANY FIELD CORRECTIVE MEASURES AS DEEMED APPROPRIATE FOR SATISFACTORY SUPPORT AND PERFORMANCE OF BUILDING FOUNDATIONS AND SLABS.

6. GEOTECHNICAL ENGINEER SHALL IDENTIFY LIMITS AND DEPTHS OF AREAS UNDER BUILDINGS REQUIRING MODIFICATIONS TO ADDRESS EFFECTS OF SWELLING/CONTRACTION OF THE SOILS UNDER FOOTINGS OR SLABS WITH MOISTURE CHANGES.

7. GEOTECHNICAL ENGINEER SHALL IDENTIFY ADDITIONAL DRAINAGE REQUIREMENTS UNDER BUILDINGS BASED ON OBSERVED SITE CONDITIONS AND FILL MATERIALS.

8. GEOTECHNICAL ENGINEER SHALL REVIEW EXCAVATED AREAS OF EXISTING SWELL AND RECOMMEND APPROPRIATE MATERIALS AND METHODS FOR SUPPORTING BUILDING ELEMENTS AT SUCH LOCATIONS.

9. PRIOR TO POURING ANY BUILDING FOUNDATION, RETAINING WALL OR SLAB ON GRADE THE GEOTECHNICAL ENGINEER SHALL PROVIDE A WRITTEN AND SIGNED LETTER IDENTIFYING THAT HE HAS REVIEWED THE EXCAVATIONS, FILLS AND COMPACTIONS FOR A SPECIFIC AREA IDENTIFIED BY GRIDS AND ELEVATIONS AND MARKED UPON FOUNDATION PLANS AND HAS DETERMINED THAT ALL RELEVANT PROJECT REQUIREMENTS, INCLUDING SPECIFIC REQUIREMENTS OF THIS SECTION, ARE MET.

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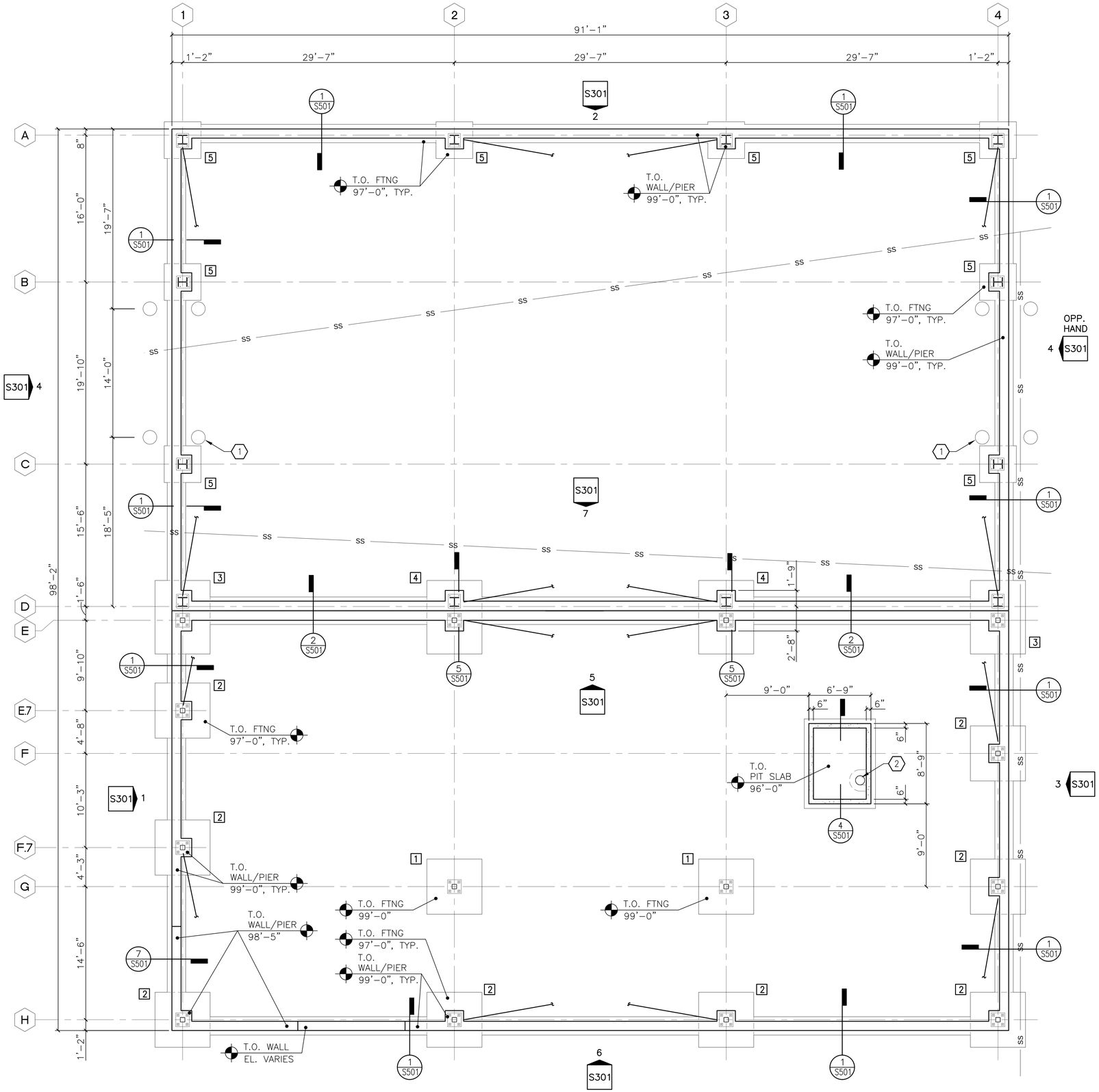
Revisions:
2 11–16–2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
GENERAL STRUCTURAL NOTES & DESIGN DATA

Sheet Number:
SG001



GENERAL NOTES:

1. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
2. SOILS TO BE CEMENT-TREATED PER GEOTECHNICAL REPORT.
3. SEE SHEET S102 FOR FLATWORK PLAN.
4. ALL INTERMEDIATE COLUMN PIERS SHALL BE (P1) 24"x26", ALL PERIMETER CORNER COLUMN PIERS SHALL BE (P2) 26"x26". SEE DETAILS 4,5 & 6/S502.

LEGEND:

BRACE UP — BRACE NOTATION INDICATES STEEL VERTICAL BRACE CONFIGURATION SEE FRAMING ELEVATION CALLOUT

0 / S000 — DETAIL CALLOUT

S000 / 0 — BRACED BAY FRAMING ELEVATION CALLOUT

[#] — FOOTING IDENTIFICATION, SEE SCHEDULE BELOW

KEYED NOTES:

1. PIPE BOLLARD FOOTING (TYP. OF 4 PER DOOR), SEE DETAIL 12/C501 FOR PIPE BOLLARD DETAIL, SEE DETAIL 9/A503 FOR BOLLARD LOCATIONS
2. SUMP PIT, SEE DETAIL 9/S501

SPREAD FOOTING SCHEDULE

FTNG MARK	SIZE FT.	THICK IN.	BOTTOM BARS	TOP BARS	PIER REINF.	NOTES
1	6'-0"x6'-0"	24"	7 #5 E.W.	–	–	
2	6'-0"x6'-0"	24"	7 #5 E.W.	–	4/S502	
3	6'-0"x8'-0"	24"	6 #7 E.W.	6 #5 E.W.	4/S502	
4	6'-0"x8'-0"	24"	6 #7 E.W.	6 #5 E.W.	4/S502	SEE 2/S501
5	4'-0"x4'-0"	12"	4 #5 E.W.	–	4/S502	

PLAN NORTH

FOOTING AND FOUNDATION PLAN

1 — 3/16" = 1'-0"

0 4' 8' 12'

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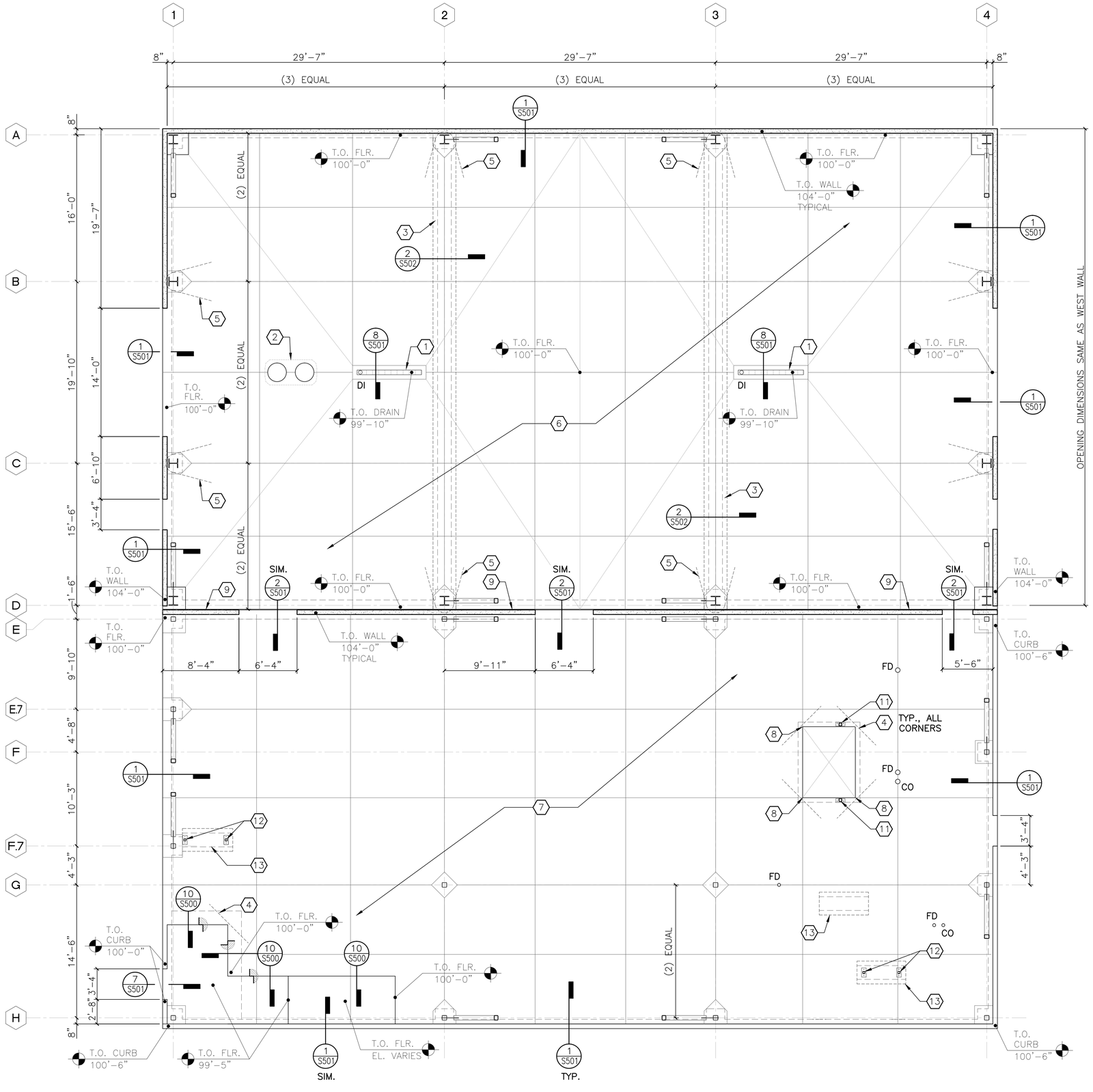
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
FOOTING AND FOUNDATION PLAN

Sheet Number:
S101



GENERAL NOTES:

1. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.
2. SOILS TO BE CEMENT-TREATED PER GEOTECHNICAL REPORT.
3. SLAB CONTROL JOINT SAWCUTS TO BE MADE PRIOR TO ADDING CURBS OR STEM WALLS.
4. SAWCUT AT COLUMNS, TYPICAL 24" x 24".
5. DI = DRAIN INLET

KEYED NOTES:

1. TRENCH DRAIN, COORDINATE WITH PLUMBING DRAWINGS
2. ACCESS COVERS FOR UNDER SLAB OIL SEPARATOR, SEE PLUMBING DRAWING, P1.1
3. TIE-BEAM/THICKENED SLAB, SEE DET. 2/S502
4. (2) #4 x 6'-0" L. DIAGONAL BARS, T. & B. AT CORNER OF FLOOR EDGE
5. #6 HAIRPIN AROUND EACH COLUMN OF PRE-ENGINEERED BUILDING — 60"
6. 6" REINFORCED SLAB-ON-GRADE, SEE DETAIL 3/S501
7. 5" REINFORCED SLAB-ON-GRADE, SEE DETAIL 3/S501
8. ALIGN CONTROL JOINT WITH EDGE OF ELEVATOR PIT OPENING
9. 1" ISOLATION JOINT (FILLED w/ SEALANT), SEE DETAIL 5/S501
10. BRACE FRAMING, SEE SHEET S301
11. VERTICAL HSS RAIL BRACE COLUMNS, SEE DETAILS 6A/S501 AND 6B/S501
12. HSS3X3X1/4 VERTICAL POSTS TO UNDERSIDE OF STAIR STRINGER PER STAIR SUPPLIER
13. PROVIDE TIE-BEAM/THICKENED SLAB AT STAIR STRINGER BASE AND/OR STAIR LANDING POSTS, SEE DET. 2/S502, COORDINATE WITH APPROVED STAIR SHOP DRAWINGS

PLAN NORTH

1 **FLATWORK PLAN**
3/16" = 1'-0"

0 4' 8' 12'

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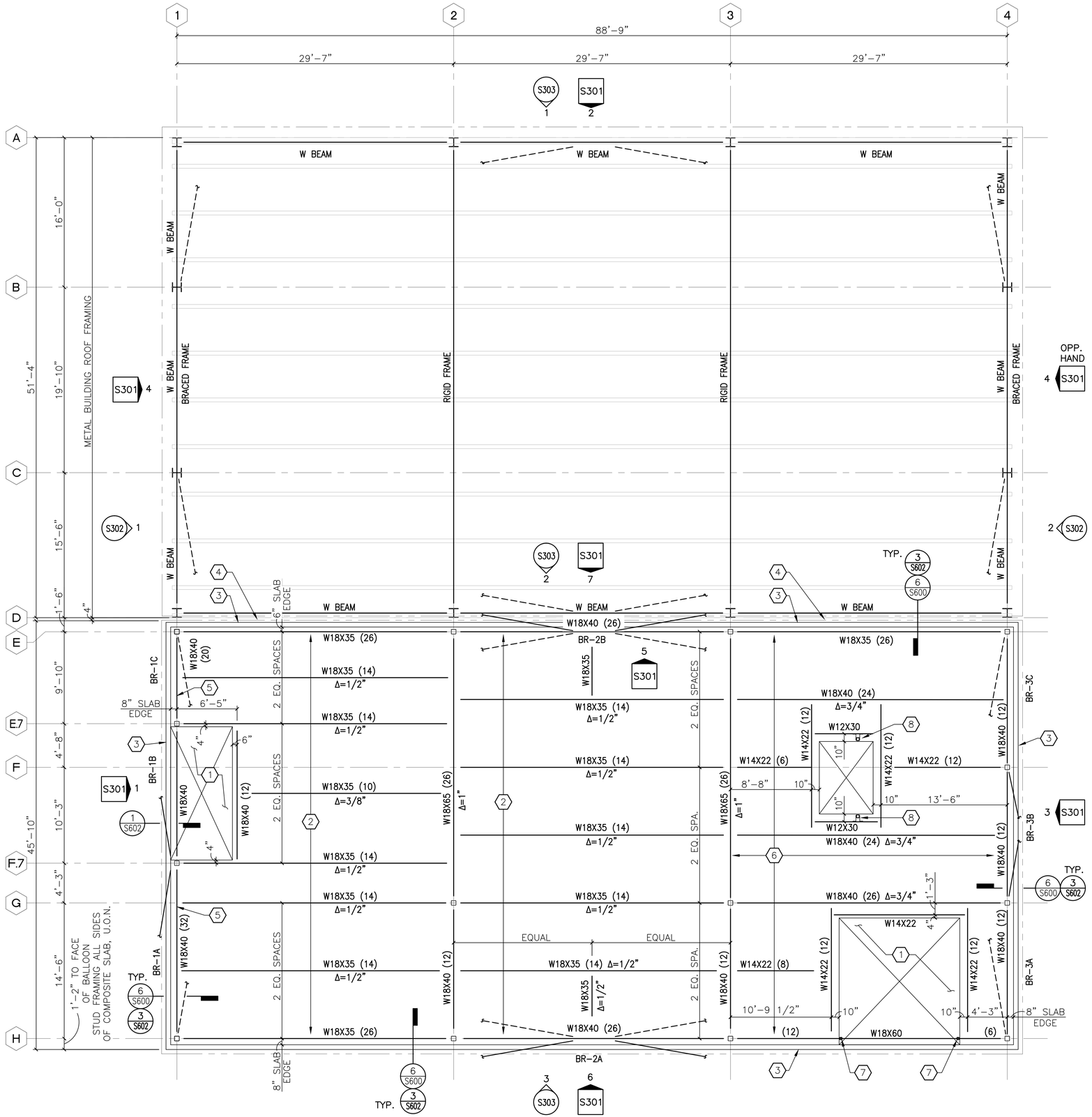
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
FLATWORK PLAN

Sheet Number:
S102



GENERAL NOTES:

1. TYPICAL COMPOSITE STEEL BEAM AND SLAB CONSTRUCTION DETAILS, SEE SHEET S600.
2. ALL BUILDING COLUMNS 'E THRU H' AND '1 THRU 4' SHALL BE HSS6X6X3/8, U.O.N.
3. SEE SHEET 301 BRACED BAY ELEVATIONS.
4. SEE SHEET 302 & 303 FOR LIGHT GAUGE FRAMING ELEVATIONS.
5. TOP OF FLOOR SLAB AT SECOND FLOOR = 113'-5".
6. TOP OF STEEL AT SECOND FLOOR = 112'-10 1/2".
7. TOP OF STEEL IN VEHICLE STORAGE (METAL BUILDING) VARIES, SEE SECTIONS/ELEVATIONS.

LEGEND:

BEAM SIZE (16) Δ=1/2" — REFERS TO NUMBER OF EQUALLY SPACED 3/4"ø x 5" L. WELDED HEADED STUDS; UPWARD CAMBER IN INCHES

BRACE UP / BRACE DN — BRACE BAY NOTATION, SEE FRAMING CALLOUTS

PERIMETER STUD WALLS BALLOON FRAMING WITH METAL PANEL

0 S000 — DETAIL CALLOUT

S000 0 — BRACED BAY FRAMING ELEVATION CALLOUT

S000 0 — LIGHT GAUGE FRAMING ELEVATION CALLOUT

KEYED NOTES:

1. REFER TO STAIR FRAMING PLAN ON SHEET S201 FOR ADDITIONAL FRAMING NOT SHOWN FOR CLARITY
2. DECK DI, 3 1/2" CONCRETE OVER 3" COMPOSITE DECK REINFORCED w/ #4 BARS AT 12" O.C. EACH WAY, SEE DETAIL 2/S600
3. 6" BALLOON FRAMING BEYOND EDGE OF DECK, REFER TO LIGHT GAUGE FRAMING ELEVATIONS ON S302 AND S303, TYPICAL
4. 4" SEISMIC EXPANSION JOINT. SEE SPECIFICATIONS
5. PLACE STUDS IN (2) ROWS ALONG W18X40
6. 3 1/2" CONCRETE OVER 3" COMPOSITE DECK REINFORCED w/ #4 BARS AT 8" O.C. EACH WAY, BETWEEN GRID LINES 3-4 AND E-H, SEE SHEET S600 FOR ADDITIONAL REQUIREMENTS
7. HSS3X3X1/4 STAIR HANGERS SUPPLIED BY STAIR SUPPLIER, SEE DETAILS ON SHEET S201.
8. VERTICAL ELEVATOR CAB RAIL BRACE, SEE DETAIL 6/S602

PLAN NORTH

SECOND FLOOR AND LOW ROOF FRAMING PLAN

3/16" = 1'-0"

0 4' 8' 12'

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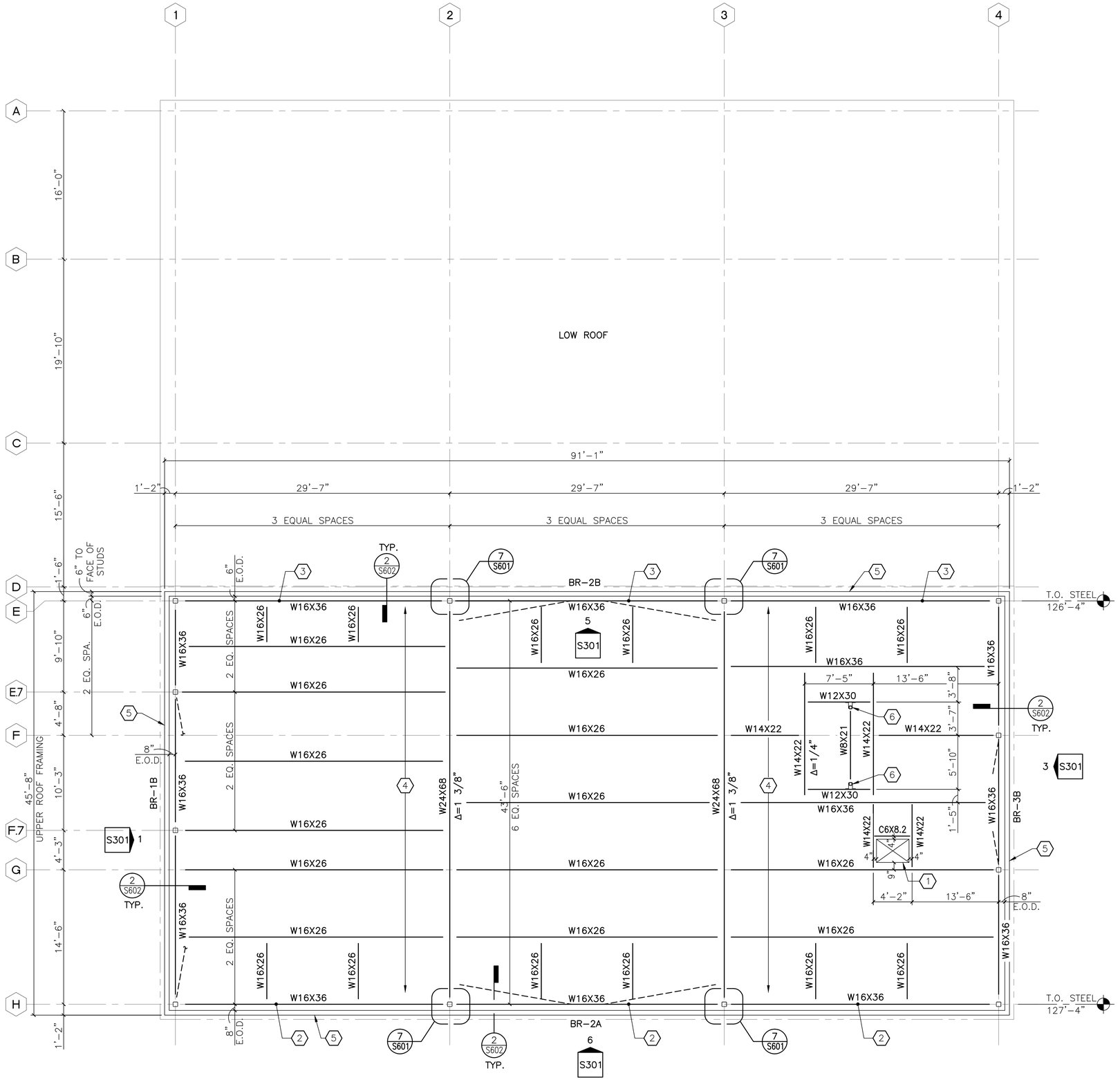
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
SECOND FLOOR AND LOW ROOF FRAMING PLAN

Sheet Number:
S103



GENERAL NOTES:

1. SEE SHEET S600 FOR TYPICAL STEEL AND DECK CONNECTION INFORMATION.
2. SEE SHEET S301 FOR BRACE ELEVATIONS.
3. SEE SHEET S302 & S303 FOR LIGHT GAGE FRAMING DETAILS.

LEGEND:

BEAM SIZE
Δ=1/2"

STEEL W-BEAM IDENTIFICATION

UPWARD CAMBER IN INCHES

BRACE DN

BRACE BAY NOTATION, SEE FRAMING CALLOUTS

PERIMETER STUD WALLS
BALLOON FRAMING WITH METAL PANEL

0 S000

DETAIL CALLOUT

S000 0

BRACED BAY FRAMING ELEVATION CALLOUT

KEYED NOTES:

1. 3'-0"x3'-6" CLEAR ROOF HATCH OPENING, COORDINATE CENTER OPENING ON CENTER OF LADDER LOCATION
2. TOP OF STEEL @ HIGH SIDE FRAMING ALONG GRID LINE "H" = 127'-4"
3. TOP OF STEEL @ LOW SIDE FRAMING ALONG GRID LINE "E" = 126'-4"
4. METAL ROOF DECK PLN3-32, 3" DEEP, 32" WIDE UNIT, 18 GA, SEE SHEET FOR ADDITIONAL REQUIREMENTS, TYPICAL
5. 6" BALLOON FRAMING BEYOND EDGE OF DECK, REFER TO LIGHT GAUGE FRAMING ELEVATIONS ON S302 AND S303, TYPICAL
6. VERTICAL ELEVATOR CAB RAIL BRACE, SEE DETAIL 6/S602

PLAN NORTH

1 **UPPER ROOF FRAMING PLAN**
3/16" = 1'-0"

0 4' 8' 12'

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Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
UPPER ROOF FRAMING PLAN

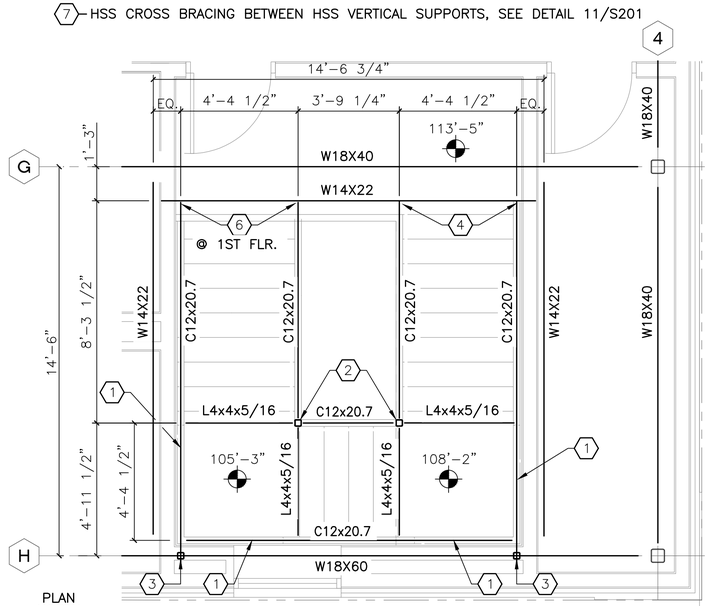
Sheet Number:
S104

GENERAL NOTES:

1. ALL STAIR FRAMING DIMENSIONS SHALL BE COORDINATED WITH STAIR FABRICATOR.
2. ALL STEEL STRINGERS, ANGLES, HSS SUPPORTS AND HANGERS, TREAD AND LANDING PANS, AND FASTENERS REQUIRED TO BE PROVIDED BY STAIR SYSTEM FABRICATOR.

KEYED NOTES:

1. LANDING DECK SUPPORT, SEE DETAIL 3/S201
2. HSS POST BELOW, SEE DETAIL 7/S201
3. HSS POST SUPPORT, SEE DETAIL 8/S201
4. CHANNEL AND TRIMMED CHANNEL CONNECTION AT W MEMBER, SEE DETAIL 9/S201
5. HSS 3x3x5/16 SUPPORTS WITH ANGLED 3/8" PLATE UNDER STRINGER, SIMILAR TO 7/S201
6. CHANNEL TO CONCRETE SLAB CONNECTION, SEE DETAIL 4/S201
7. HSS CROSS BRACING BETWEEN HSS VERTICAL SUPPORTS, SEE DETAIL 11/S201

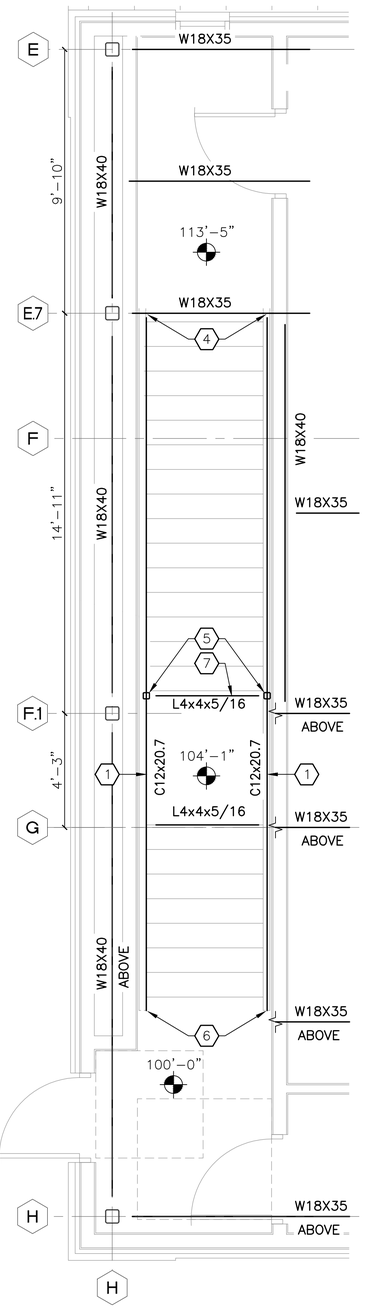


PLAN NORTH

2 ENLARGED STAIR 1 FRAMING PLAN - 2ND FLOOR TO 1ST FLOOR

3/8" = 1'-0"

0 2' 4' 6'

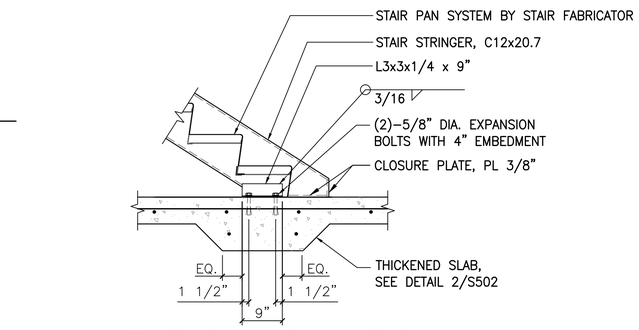


PLAN NORTH

1 ENLARGED STAIR 2 FRAMING PLAN 2ND FLOOR TO 1ST FLOOR

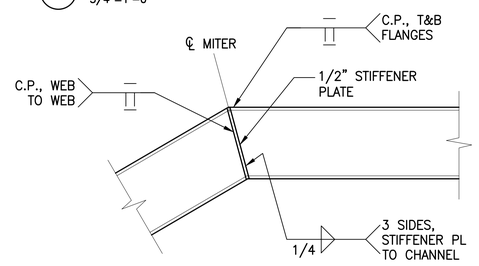
3/8" = 1'-0"

0 2' 4' 6'



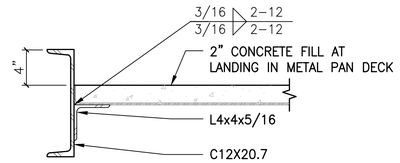
4 STAIR CHANNEL CONNECTION

3/4"=1'-0"



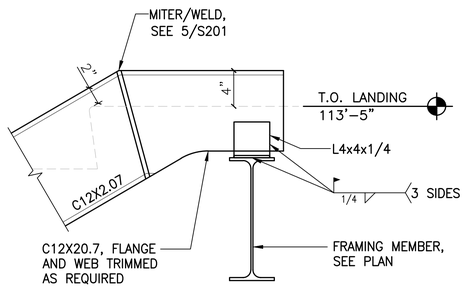
5 TYPICAL DETAIL - STAIR MITER

1" = 1'-0"



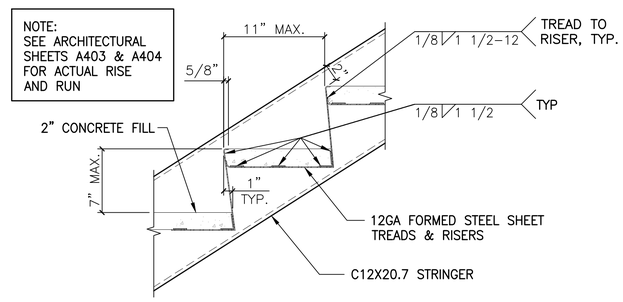
3 TYPICAL LANDING DETAIL

1 1/2" = 1'-0"



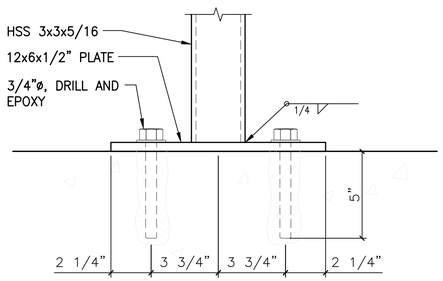
9 STAIR UPPER LANDING

1 1/2" = 1'-0"



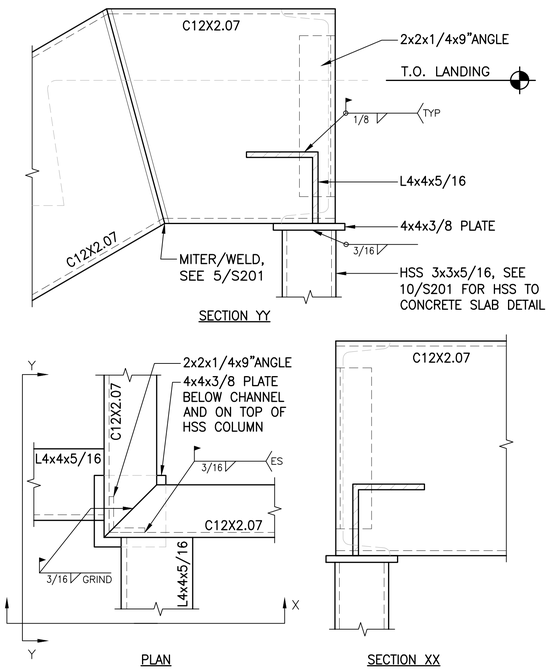
6 TYPICAL TREAD AND RISER

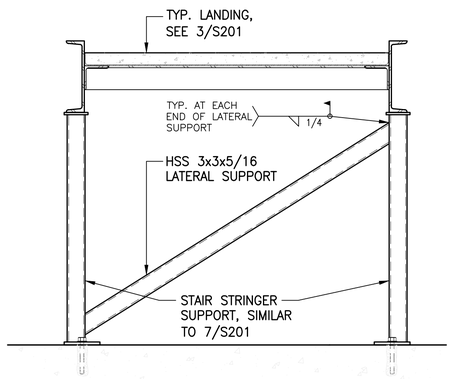
1 1/2" = 1'-0"



10 HSS CONNECTION TO SLAB

3" = 1'-0"



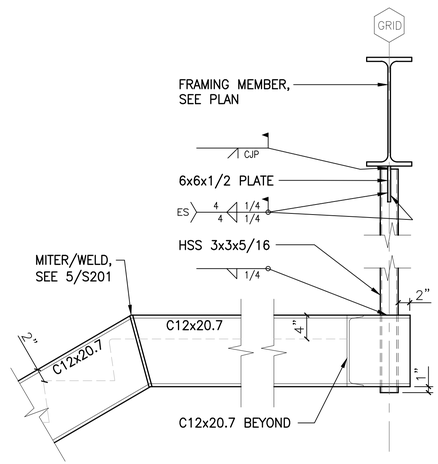


11 STAIR LANDING LATERAL SUPPORT

1" = 1'-0"

7 STAIR 2 MID LANDING LANDING SUPPORT

3" = 1'-0"



8 STAIR STRINGER SUPPORT

1" = 1'-0"

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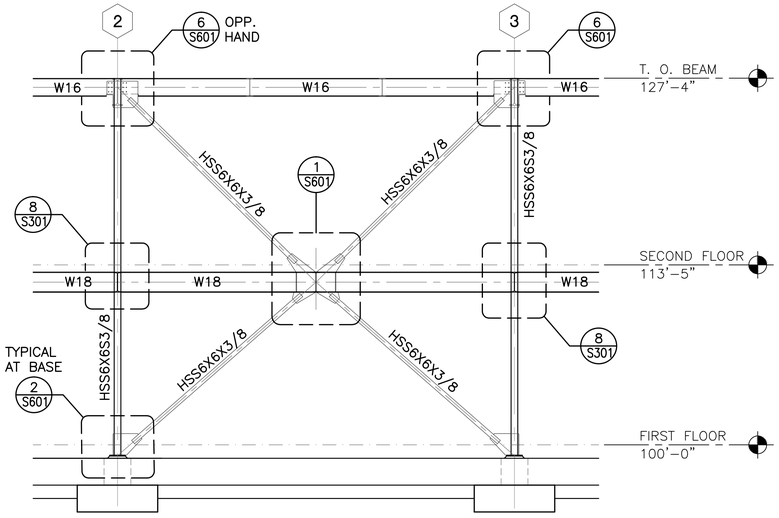
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

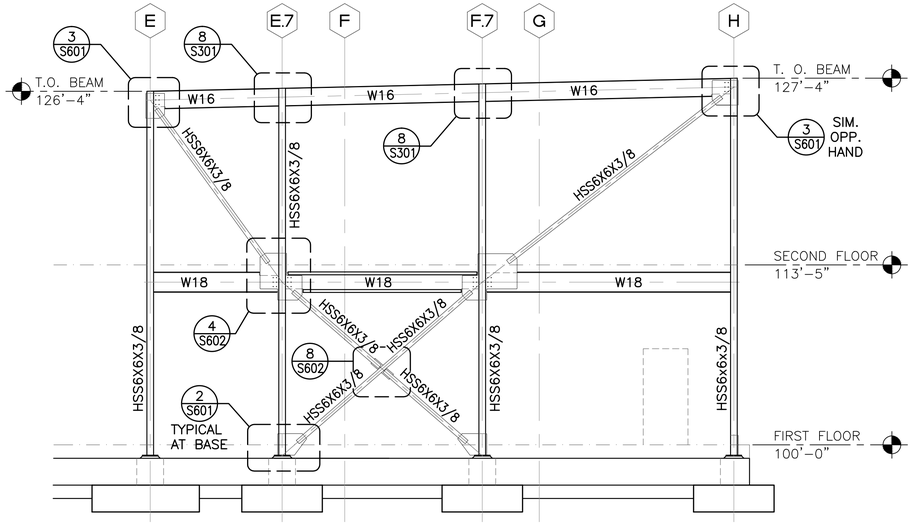
Sheet Title:
ENLARGED STAIR FRAMING PLANS AND DETAILS

Sheet Number:
S201



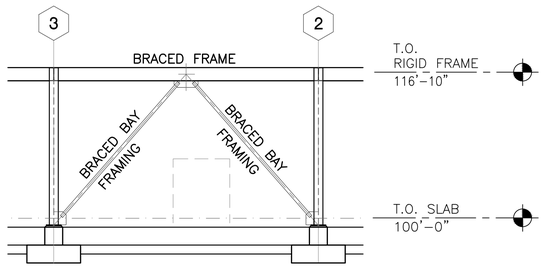
6 HIGH SIDE FRAMING BRACED BAY BR-2A: GRID LINE "H"

3/16" = 1'-0"



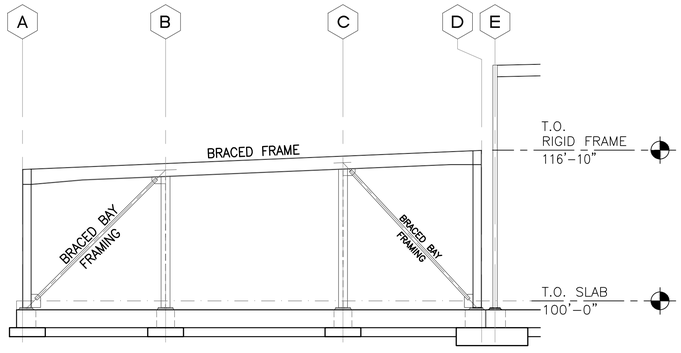
1 BRACED BAY BR-1A, BR-1B, BR-1C: GRID LINE "1"

3/16" = 1'-0"



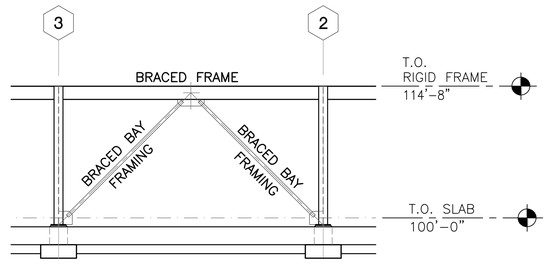
7 BRACED BAY: GRID LINE "D"

1/8" = 1'-0" ⊛ PRE-FAB METAL BUILDING



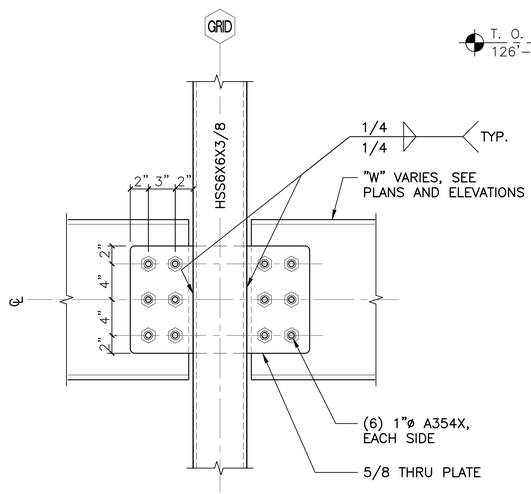
4 BRACED BAY: GRID LINES "1 AND 4"

1/8" = 1'-0" ⊛ PRE-FAB METAL BUILDING



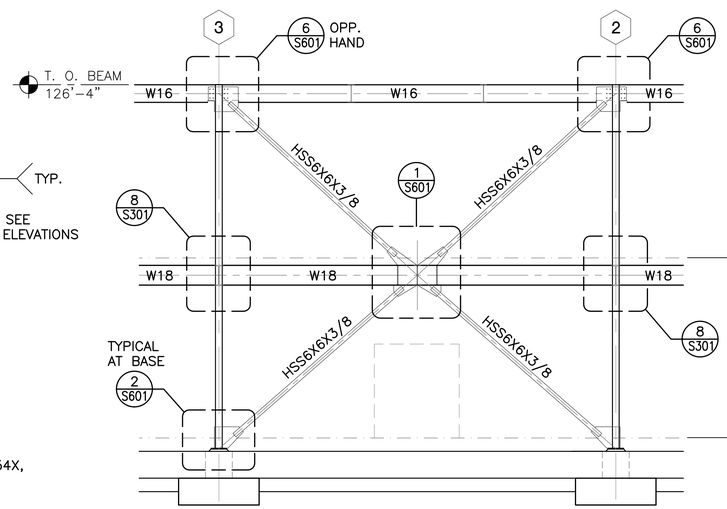
2 BRACED BAY: GRID LINE "A"

1/8" = 1'-0" ⊛ PRE-FAB METAL BUILDING



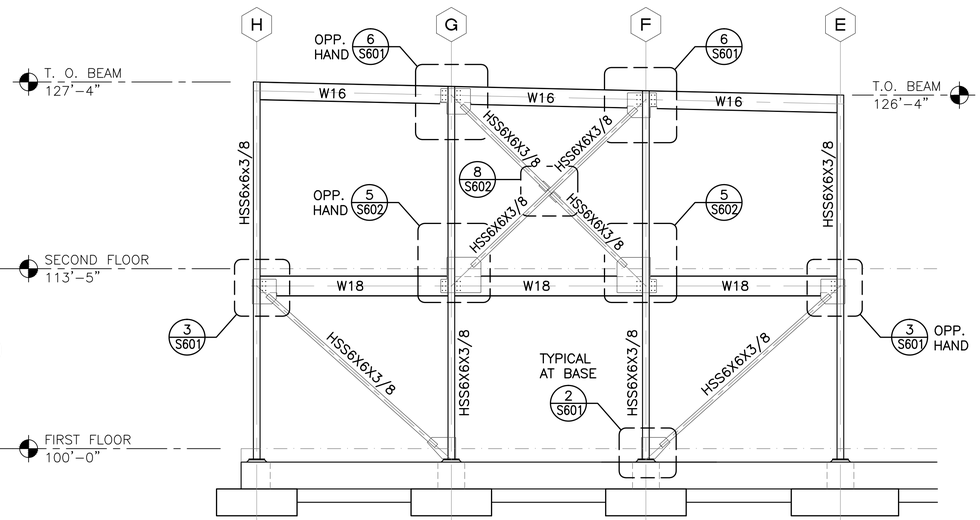
8 COLLECTOR CONNECTION

1 1/2" = 1'-0"



5 BRACED BAY BR-2B: GRID LINE "E"

3/16" = 1'-0" LOW SIDE FRAMING



3 BRACED BAY BR-3A, BR-3B, BR-3C: GRID LINE "4"

3/16" = 1'-0"

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Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
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Sheet Title:
BRACED BAY FRAME ELEVATIONS

Sheet Number:
S301

MINIMUM STUD, TRACK, AND HEADER PROPERTIES

MARK	SECTION	GAUGE	THICK IN	Fy KSI	A IN^2	Ix EFFECT IN^4	Iy IN^4	Sx EFFECT IN^3	DESIGNATION	REFERENCE
S		18	0.0451	33	0.492	2.680	0.268	0.873	600S200–43	TYPICAL STUDS
T		18	0.0451	33	0.406	1.890	0.073	0.474	600T150–43	SILL TRACK AND ROOF TRACK
TW		18	0.0451	33	0.451	2.080	0.163	0.565	600T250–43	WINDOW SILL TRACK
H1		18	AS ABOVE						600T200–43 (2) 800S200–43 600T200–43	HEADER UPPER LEVEL
H2		18	AS ABOVE						600T200–43 (3) 800S200–43 600T200–43	HEADER LOWER LEVEL
B		18	0.0451	33	0.4470	2.3200	0.1480	0.7670	600S162–43 600T150–33	BLOCKING
2S14		14	0.0713	50	0.8360	4.7200	0.6880	1.3900	(2) 600S250–68	TYP. @ JAMB
2S18		18	AS ABOVE						(2) 600S200–43	TYP. @ SUN SHADE SUPPORT

GENERAL NOTES:

1. REFER TO ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
2. REFER TO S304 FOR TYPICAL LIGHT GAUGE FRAMING DETAILS AND SECTIONS.
3. SEE MINIMUM STUD, TRACK, AND HEADER PROPERTIES TABLE ON SHEET S302.
4. SEE ARCH. FOR WINDOW DIMENSIONS AND ATTACHMENT.

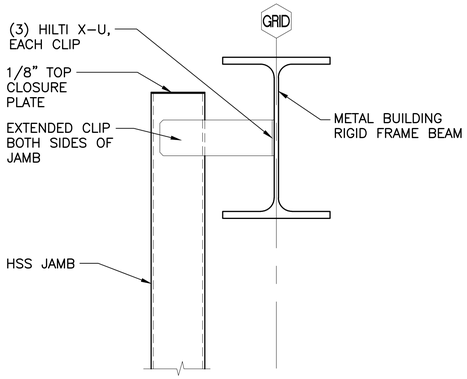
ABBREVIATION LEGEND:

SEE TABLE ON SHEET S302 FOR FULL DESCRIPTION AND MINIMUM PROPERTIES

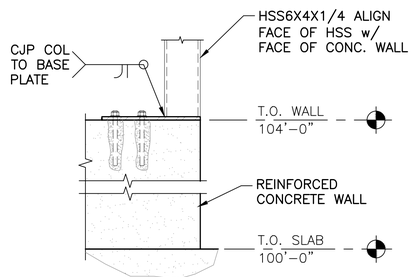
"S"	TYPICAL STUDS
"T"	SILL AND ROOF TRACK
"TW"	WINDOW SILL TRACK
"H1"	HEADER UPPER LEVEL
"H2"	HEADER LOWER LEVEL
"B"	BLOCKING
"2S14"	TYPICAL AT JAMB
"2S18"	TYPICAL AT SUN SHADE SUPPORT

KEYED NOTES:

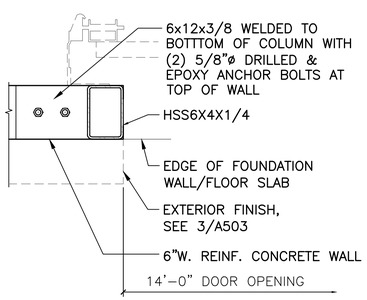
1. FULL DEPTH BLOCKING AND 20 GA. x 1–1/2" STRAP BRACING WITH #10 SCREWS AT 4" O.C. MIN. ALTERNATING TOP AND BOTTOM HOLES, EXTEND BLOCKING AND STRAP BRACING MINIMUM 32" BEYOND OPENINGS.
2. DOUBLE FULL DEPTH BLOCKING AND 20 GA. x 1–1/2" STRAP BRACING AT OPENINGS LARGER THAT 6'–0" OR AT OPENINGS WITHIN 4'–0" OF END OF WALL, ATTACH WITH #10 SCREWS AT 4" O.C. MIN. ALTERNATING TOP AND BOTTOM HOLES, EXTEND BLOCKING AND STRAP BRACING MINIMUM 32" BEYOND OPENINGS OR TO END OF WALL.
3. DOUBLE STUD AT EDGE OF VERTICAL MATERIAL TRANSITIONS FOR ARCHITECTURAL FINISH ATTACHMENT, SEE DETAILS 9,10/A502
4. DOUBLE FULL DEPTH BLOCKING BETWEEN STUDS AT EDGE OF HORIZONTAL MATERIAL TRANSITIONS FOR ARCHITECTURAL FINISH ATTACHMENT, SEE DETAILS 9,10/A502
5. HSS6X4X1/4 TUBE STEEL HEADER AND JAMB AT OVERHEAD DOOR
6. HSS BEAM TO HSS JAMB CONNECTION, SEE DETAIL 7/S602
7. HSS JAMB TO RIGID FRAME BEAM CONNECTION, SEE DETAIL 3/S602



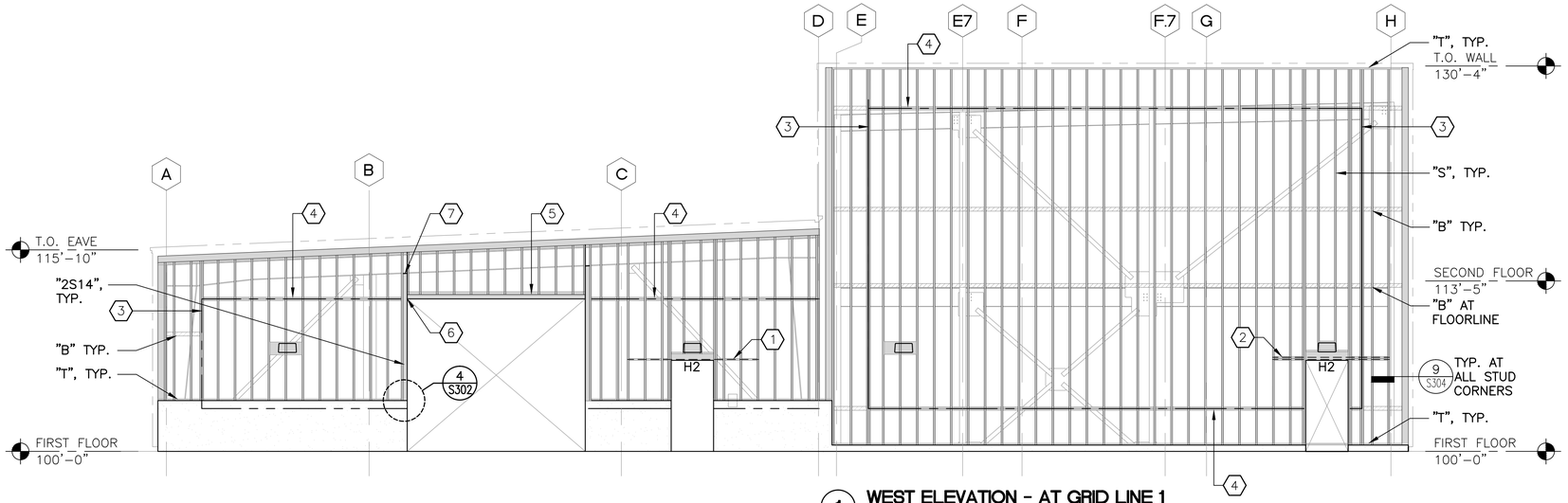
3 HSS TO BEAM CONNECTION
1 1/2" = 1'–0"



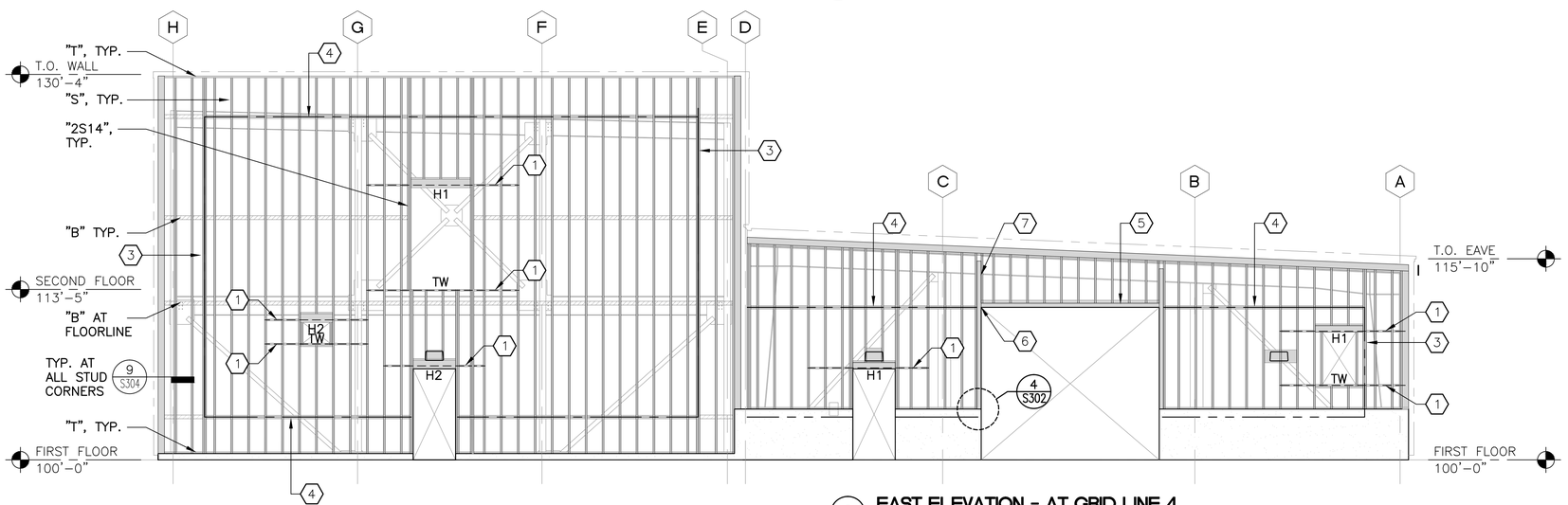
4 HSS CONNECTION • TOP OF WALL
1 1/2" = 1'–0"



5 HSS CONNECTION • TOP OF WALL
1 1/2" = 1'–0"



1 WEST ELEVATION – AT GRID LINE 1
3/16" = 1'–0"



2 EAST ELEVATION – AT GRID LINE 4
3/16" = 1'–0"

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BID SET

Client Project Number: P30J1
APN Number: 054-063-180
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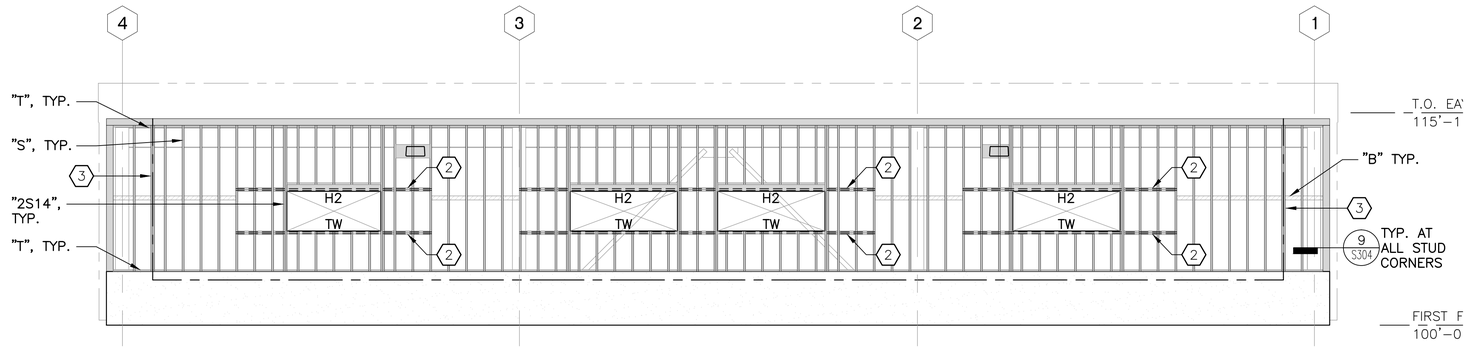
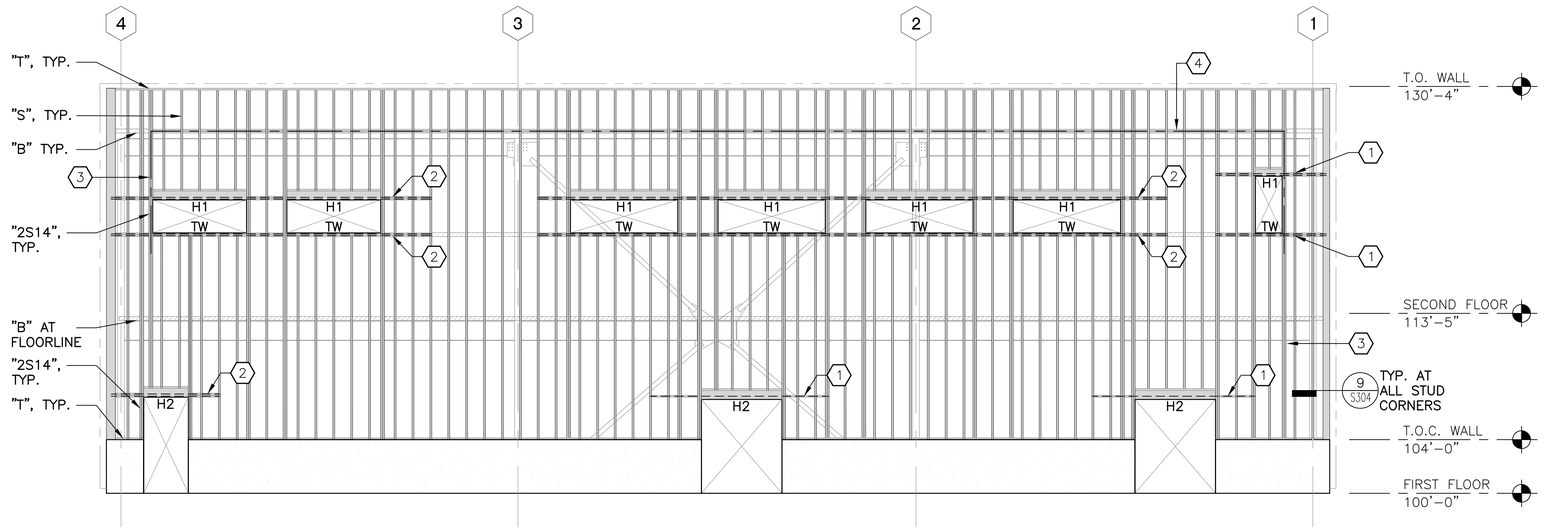
Sheet Title:
LIGHT GAUGE FRAMING ELEVATIONS

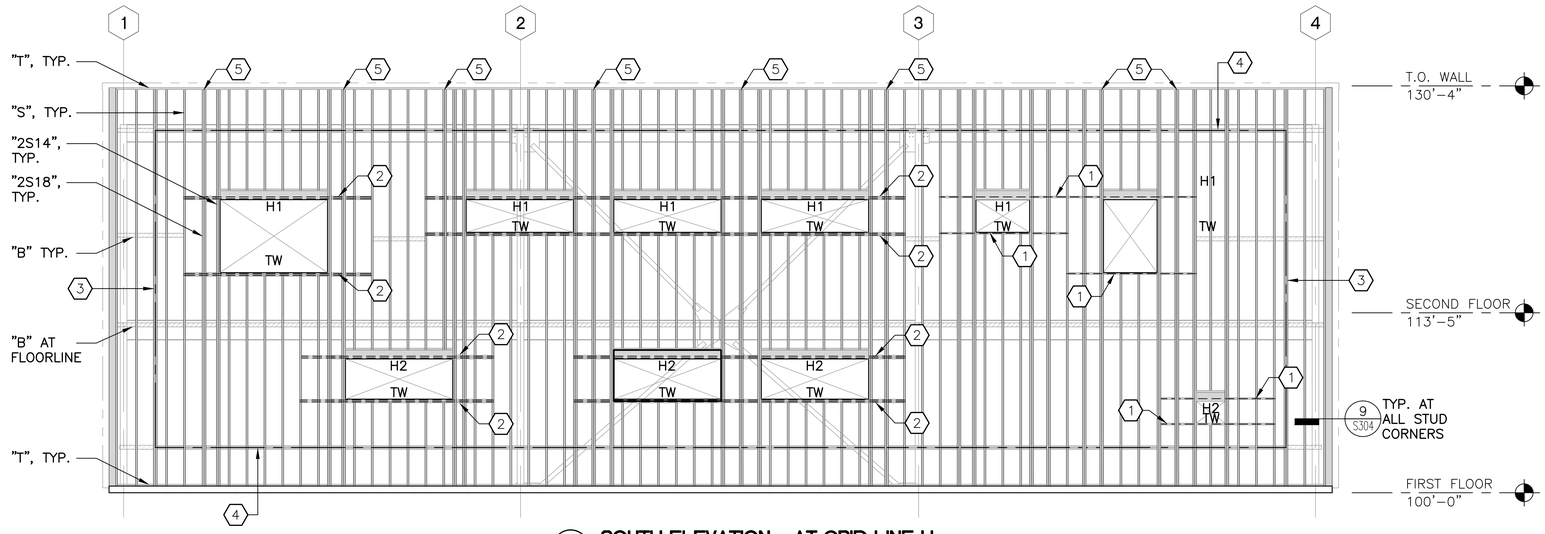
Sheet Number:
S302



1 **NORTH ELEVATION - AT GRID LINE A**
3/16" = 1'-0"



2 **NORTH ELEVATION - AT GRID LINE D**
3/16" = 1'-0"



3 **SOUTH ELEVATION - AT GRID LINE H**
3/16" = 1'-0"

GENERAL NOTES:

1. REFER TO ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
2. REFER TO S304 FOR TYPICAL LIGHT GAUGE FRAMING DETAILS AND SECTIONS.
3. SEE MINIMUM STUD, TRACK, AND HEADER PROPERTIES TABLE ON SHEET S302.
4. SEE ARCH. FOR WINDOW DIMENSIONS AND ATTACHMENT.

KEYED NOTES:

1. FULL DEPTH BLOCKING AND 20 GA. x 1-1/2" STRAP BRACING WITH SCREWS AT 4" O.C. MIN. ALTERNATING TOP AND BOTTOM HOLES, EXTEND BLOCKING AND STRAP BRACING MINIMUM 32" BEYOND OPENINGS.
2. DOUBLE FULL DEPTH BLOCKING AND 20 GA. x 1-1/2" STRAP BRACING AT OPENINGS LARGER THAT 6'-0" OR AT OPENINGS WITHIN 4'-0" OF END OF WALL, ATTACH WITH SCREWS AT 4" O.C. MIN. ALTERNATING TOP AND BOTTOM HOLES, EXTEND BLOCKING AND STRAP BRACING MINIMUM 32" BEYOND OPENINGS OR TO END OF WALL.
3. DOUBLE STUDS AT EDGE OF VERTICAL MATERIAL TRANSITIONS FOR ARCHITECTURAL FINISH ATTACHMENT, SEE DETAILS 9,10/A502
4. DOUBLE FULL DEPTH BLOCKING BETWEEN STUDS AT EDGE OF HORIZONTAL MATERIAL TRANSITIONS FOR ARCHITECTURAL FINISH ATTACHMENT, SEE DETAILS 9,10/A502
5. DOUBLE STUDS WITH SPACER PLATES AT SUN SHADE ATTACHMENT, SEE DETAIL 10/S304, COORDINATE LOCATION WITH ARCHITECTURAL

ABBREVIATION LEGEND:

SEE TABLE ON SHEET S302 FOR FULL DESCRIPTION AND MINIMUM PROPERTIES

"S"	TYPICAL STUDS
"T"	SILL AND ROOF TRACK
"TW"	WINDOW SILL TRACK
"H1"	HEADER UPPER LEVEL
"H2"	HEADER LOWER LEVEL
"B"	BLOCKING
"2S14"	TYPICAL AT JAMB
"2S18"	TYPICAL AT SUN SHADE SUPPORT

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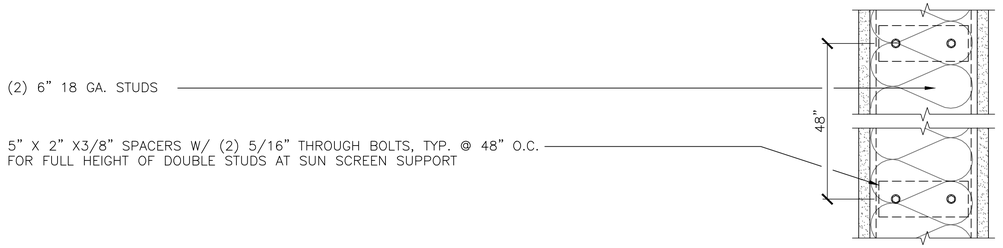
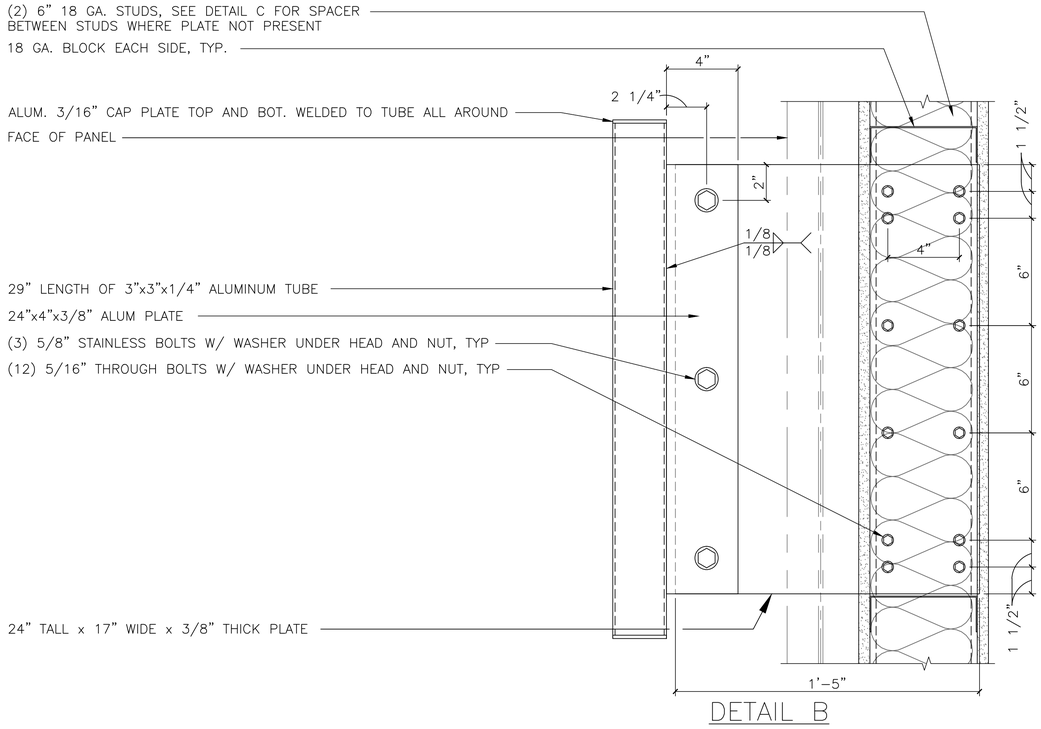
LIGHT GAUGE FRAMING ELEVATIONS

Sheet Number:

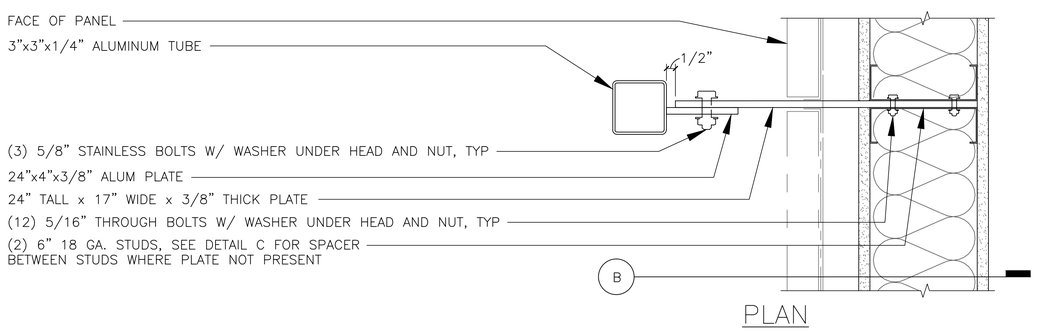
S303



DETAIL C



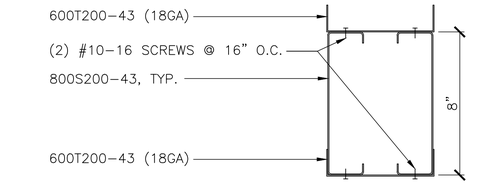
DETAIL B



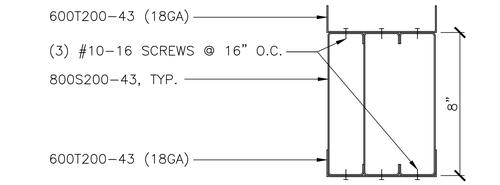
PLAN

NOTES:
1. ALL SUNSCREEN SUPPORT TUBES, CAPS, CONNECTING PLATES SHALL CONFORM TO ALUMINUM 6063 OR 3003–H14 WITH MINIMUM YIELD OF 17 KSI WITH THICKNESS AS SHOWN.
2. EXPOSED CONNECTING BOLTS SHALL BE STAINLESS STEEL CONFORMING TO ASTM FS93 GRADE 316. MINIMUM TENSILE STRENGTH 100 KSI.
3. EXPOSED NUTS SHALL BE STAINLESS STEEL CONFORMING TO ASTM F594.
4. EXPOSED WASHERS SHALL BE STAINLESS CONFORMING TO ASME B18.21.1, OUTSIDE DIAMETER = 1.31 INCHES, INSIDE DIAMETER = 0.0656 IN, AND THICKNESS = 0.095 INCHES.
5. ACCURATELY LOCATE AND INSTALL 3/8" ALUMINUM PLATE BETWEEN PAIRS OF 18 GA STUDS BY FIELD DRILLING THROUGH STUDS AND PLATE. HOLE DIAMETER = BOLT DIAMETER + 1/16".

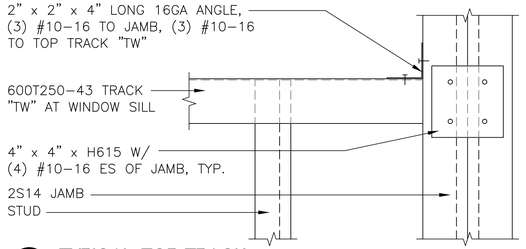
10 SUNSHADE CONNECTION DETAIL
3"= 1'–0"



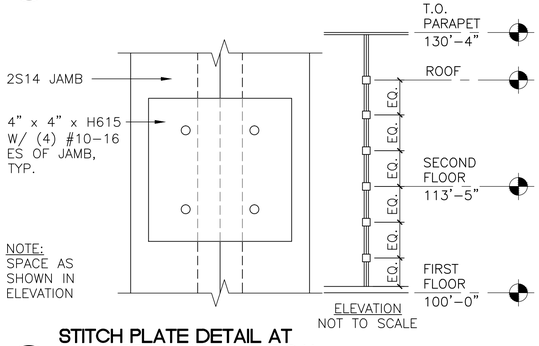
5 TYPICAL HEADER SECTION AT UPPER FLOOR WINDOWS U.N.O.
3" = 1'–0" NOTED ON ELEVATIONS AS H1



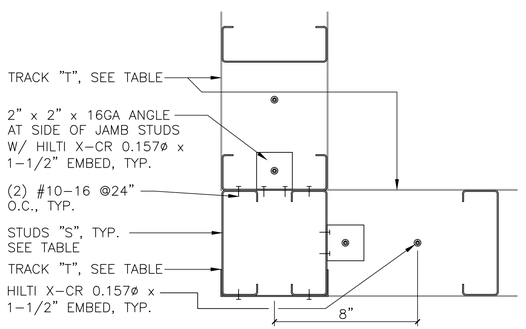
6 TYPICAL HEADER SECTION AT LOWER FLOOR WINDOWS AND DOORS U.N.O.
3" = 1'–0" NOTED ON ELEVATIONS AS H2



7 TYPICAL TOP TRACK
3" = 1'–0"

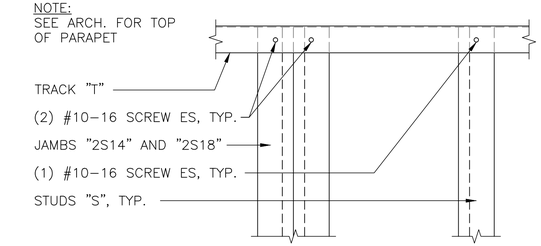


8 STITCH PLATE DETAIL AT ALL 2 STUD JAMBS, TYPICAL
6" = 1'–0" NOTED ON ELEVATIONS AS H1

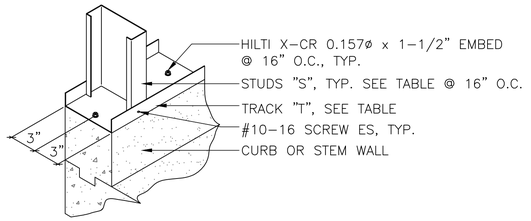


9 TYPICAL CORNER PLAN
3" = 1'–0"

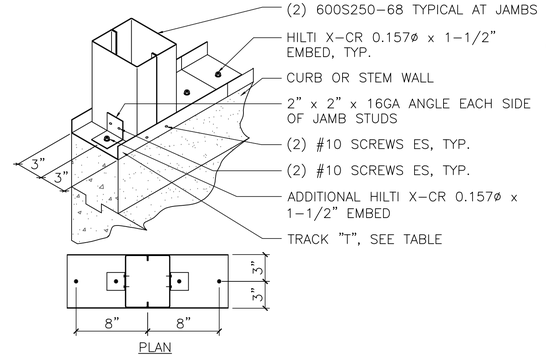
NOTE:
SEE ARCH. FOR TOP OF PARAPET



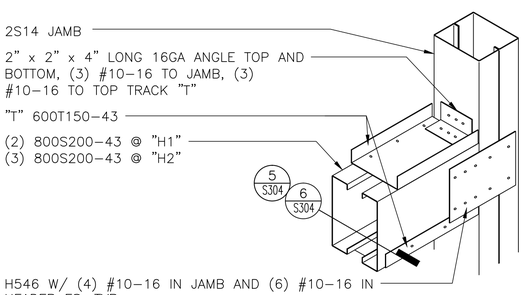
1 TYPICAL TOP TRACK
3" = 1'–0"



2 TYPICAL STUD TRACK CONNECTION TO CURB OR STEM WALL
1–1/2" = 1'–0"



3 TYPICAL JAMB BASE CONNECTION TO CURB OR STEM WALL
1–1/2" = 1'–0"



4 HEADERS H1 AND H2 CONNECTION TO 2S14 JAMB
1–1/2" = 1'–0"

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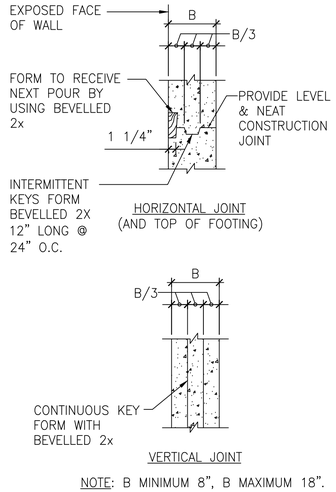
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

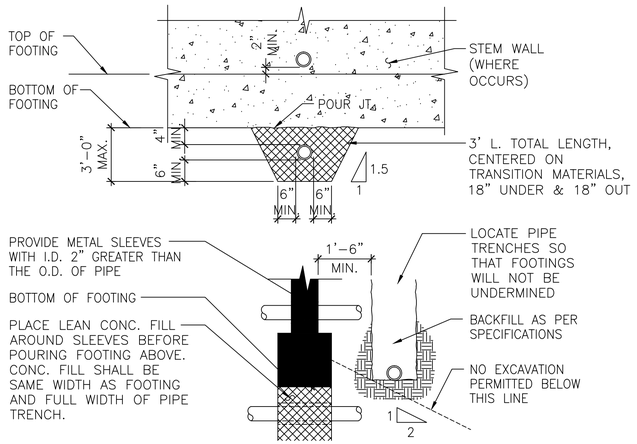
Sheet Title:
LIGHT GAUGE FRAMING DETAILS

Sheet Number:
S304

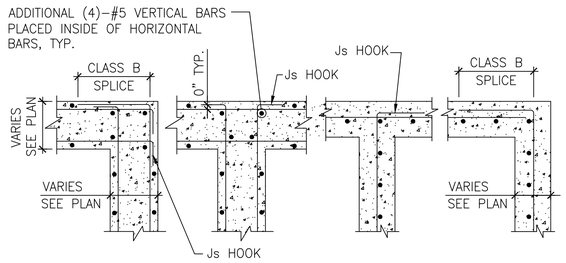


NOTE: B MINIMUM 8", B MAXIMUM 18".

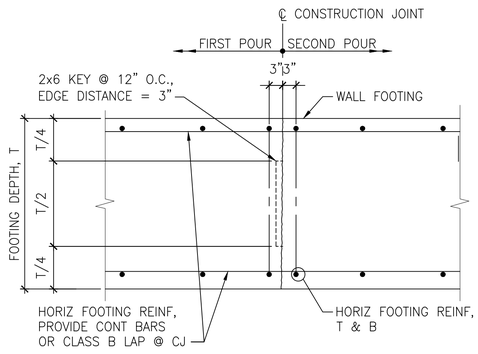
11 TYPICAL CONCRETE WALL CONSTRUCTION JOINTS
1/2"=1'-0"



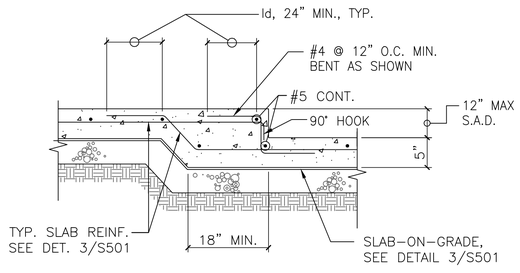
7 TYPICAL PIPE TRENCH DETAIL
NO SCALE



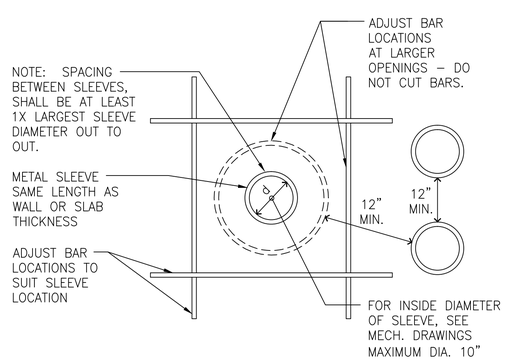
8 TYPICAL REINFORCING DETAILS AT WALL INTERSECTIONS
NO SCALE



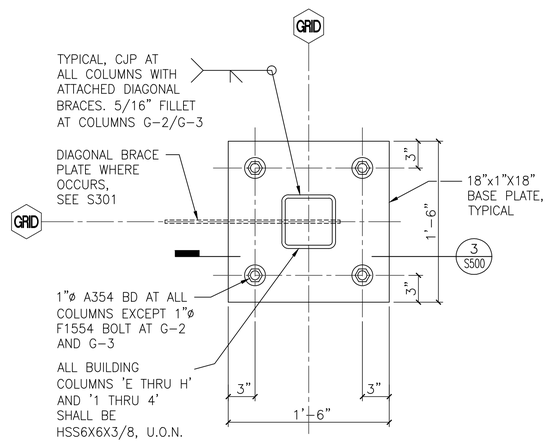
9 TYPICAL CONSTRUCTION JOINT
NO SCALE — IN WALL FOOTING



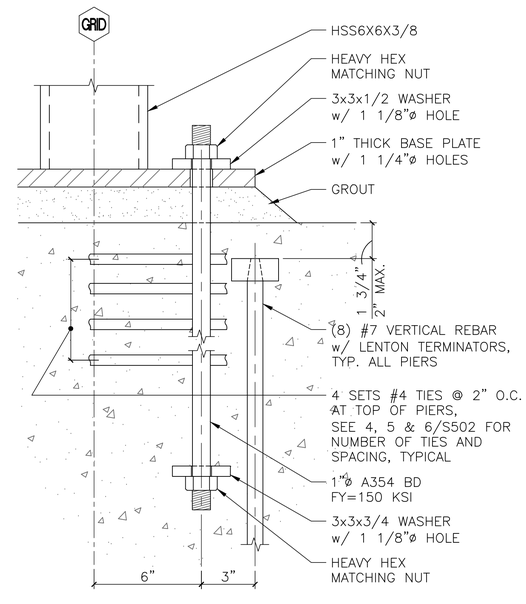
10 TYP. SLAB-ON-GRADE DEPRESSION
NO SCALE



4 TYPICAL CONCRETE WALL SLEEVE DETAIL
NO SCALE



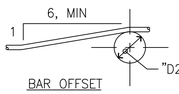
5 TYPICAL HSS COLUMN BASE PLATE
1 1/2"=1'-0"

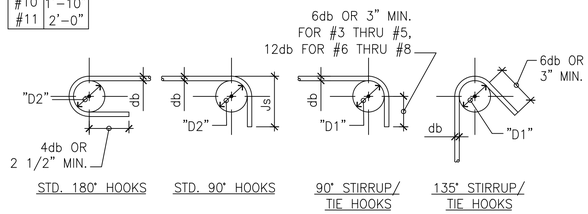


6 TYPICAL ANCHOR BOLT AT PIER
3"=1'-0"

HOOKS	
BAR SIZE	Js
#3	6"
#4	8"
#5	10"
#6	1'-0"
#7	1'-2"
#8	1'-4"
#9	1'-7"
#10	1'-10"
#11	2'-0"

MINIMUM DIAMETER OF BENDS		
"D1"	1 1/2"	FOR #3 BARS
	2"	FOR #4 BARS
	2 1/2"	FOR #5 BARS
	6db	FOR #6 THRU #8 BARS
"D2"	6db	FOR #3 THRU #8 BARS
	8db	FOR #9,#10 & #11 BARS
	10db	FOR #14 & #18 BARS



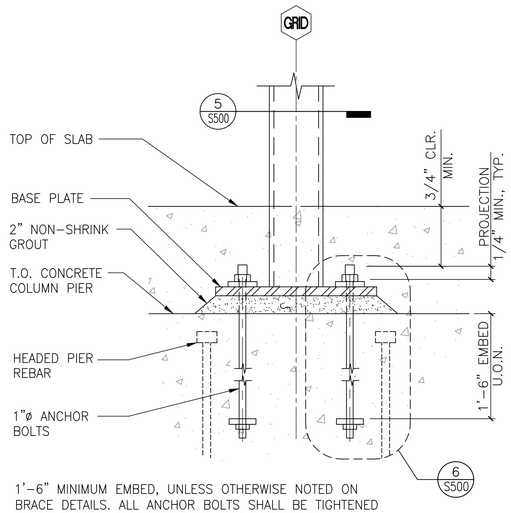


1 STANDARD CONCRETE REINF HOOKS
NO SCALE

BAR SIZE	CLASS B TOP BARS	CLASS B OTHER BARS	CLASS A TOP BARS	CLASS A OTHER BARS	ld TOP BARS	ld OTHER BARS
#3	2'-0"	1'-7"	1'-7"	1'-3"	1'-7"	1'-3"
#4	2'-8"	2'-1"	2'-1"	1'-7"	2'-1"	1'-7"
#5	3'-4"	2'-7"	2'-7"	2'-0"	2'-7"	2'-0"
#6	4'-0"	3'-1"	3'-1"	2'-5"	3'-1"	2'-5"
#7	5'-10"	4'-6"	4'-6"	3'-6"	4'-6"	3'-6"
#8	6'-8"	5'-2"	5'-2"	4'-0"	5'-2"	4'-0"
#9	7'-7"	5'-10"	5'-10"	4'-6"	5'-10"	4'-6"
#10	8'-6"	6'-7"	6'-7"	5'-1"	6'-7"	5'-1"
#11	9'-5"	7'-3"	7'-3"	5'-7"	7'-3"	5'-7"

NOTES:
1. SPLICE LENGTHS ARE TYPICAL UNLESS NOTED OTHERWISE.
2. USE CLASS A SPLICES ONLY WHERE SPECIFICALLY NOTED ON DRAWINGS. ALL CLASS A SPLICES SHALL BE STAGGERED SO THAT NO MORE THAN HALF OF THE TOTAL REINFORCEMENT IS SPLICED WITHIN THE REQUIRED LAP LENGTH.
3. USE CLASS B SPLICES AT ALL OTHER LOCATIONS, INCLUDING ALL BARS MARKED AS CONTINUOUS AND ALL COLUMN REINFORCING.
4. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF FRESH CONCRETE CAST BELOW THE BARS.

2 TYPICAL LAP SPLICE AT CONCRETE
NO SCALE



1'-6" MINIMUM EMBED, UNLESS OTHERWISE NOTED ON BRACE DETAILS. ALL ANCHOR BOLTS SHALL BE TIGHTENED TO DEVELOP A TENSION OF 10 KIPS PER BOLT.

3 TYPICAL HSS COLUMN ANCHOR BOLTS
1 1/2"=1'-0"

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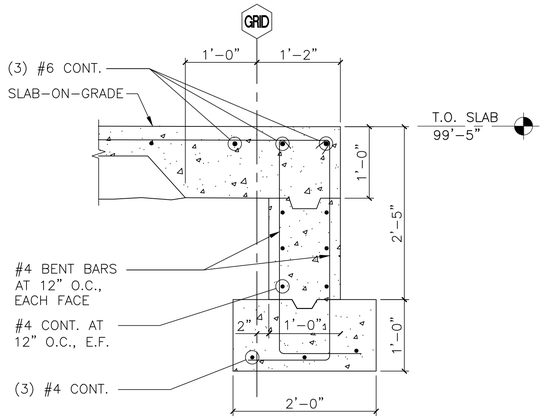
Revisions:
2 11-16-2020

BID SET

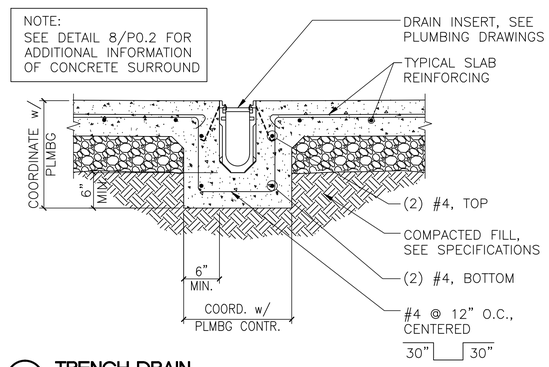
Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
TYPICAL FOUNDATION DETAILS

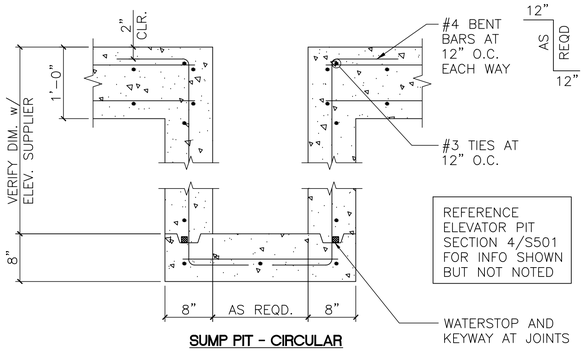
Sheet Number:
S500



7 FOUNDATION WALL AND FOOTING
1"=1'-0"

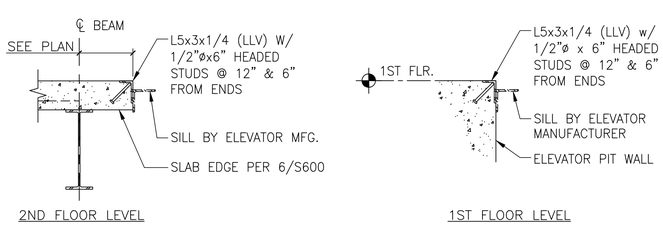


8 TRENCH DRAIN
N.T.S.

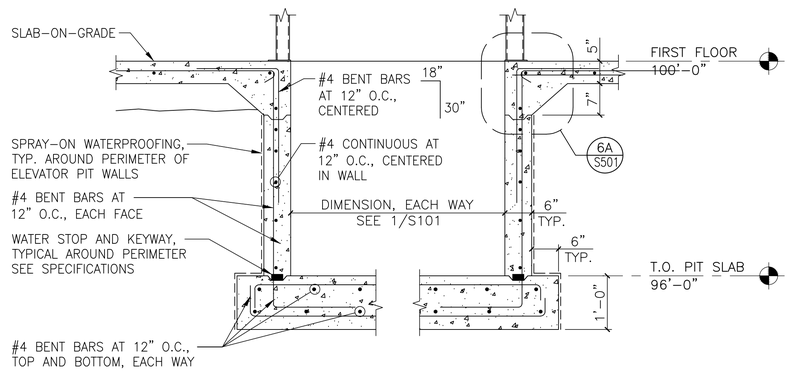


SUMP PIT - CIRCULAR

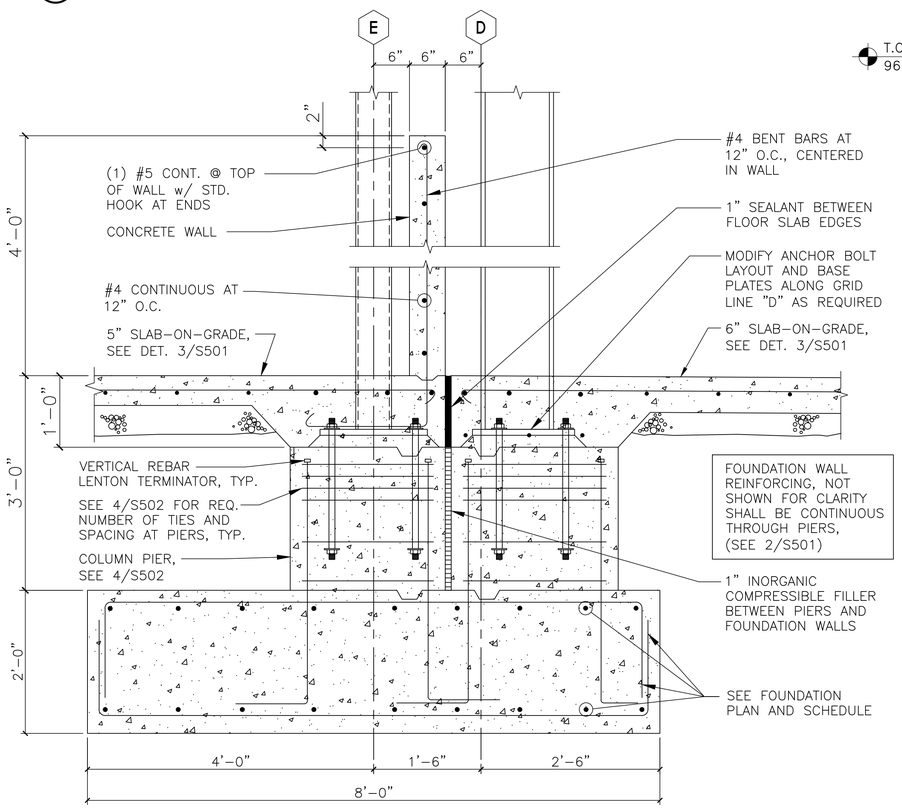
9 SUMP PIT DETAIL
1"=1'-0"



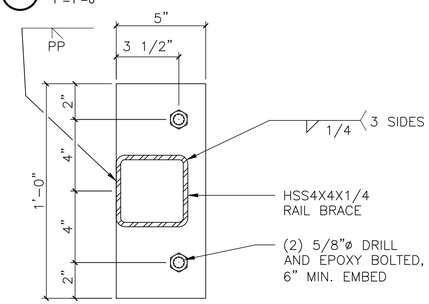
10 TYPICAL ELEVATOR SILL SUPPORT
N.T.S.



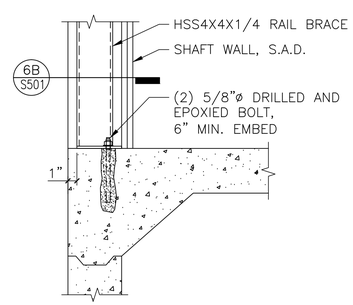
4 ELEVATOR PIT SECTION
3/4"=1'-0"



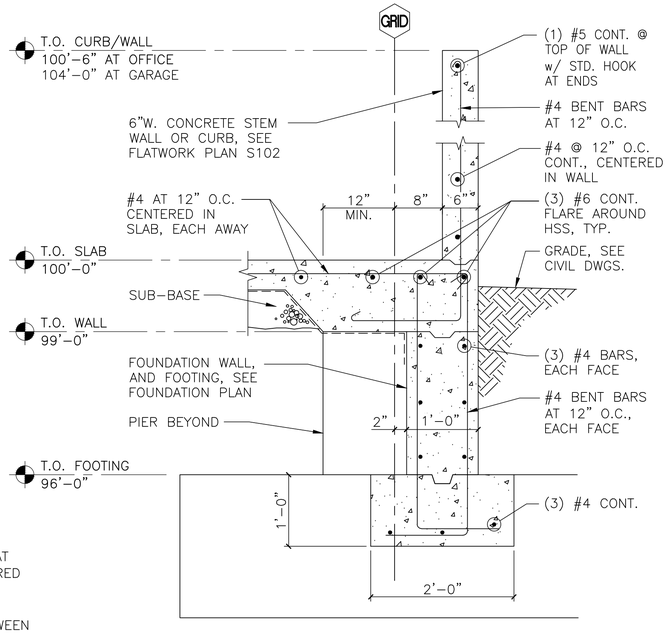
5 COLUMN FOOTING AT GRIDS D AND E
1"=1'-0"



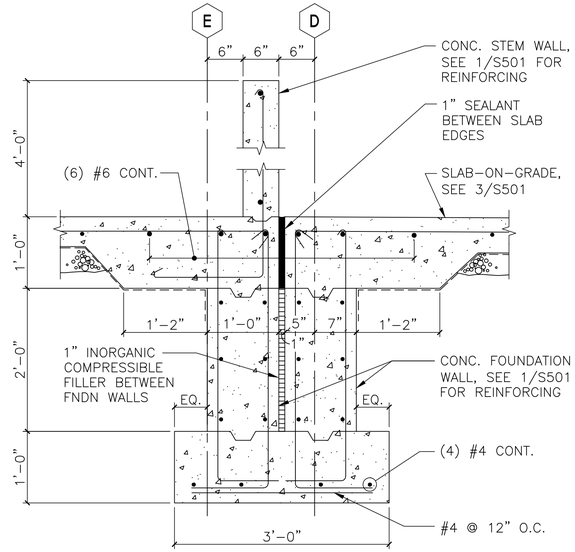
6B ELEVATOR RAIL BRACE - PLAN
N.T.S.



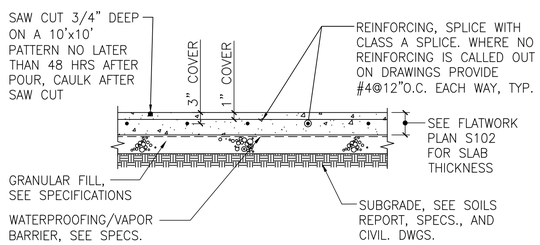
6A ELEVATOR RAIL BRACE
N.T.S.



1 FOUNDATION WALL AND FOOTING
1"=1'-0"



2 FOUNDATION WALL AND FOOTING
1"=1'-0"



3 TYPICAL SLAB-ON-GRADE
3/4"=1'-0"

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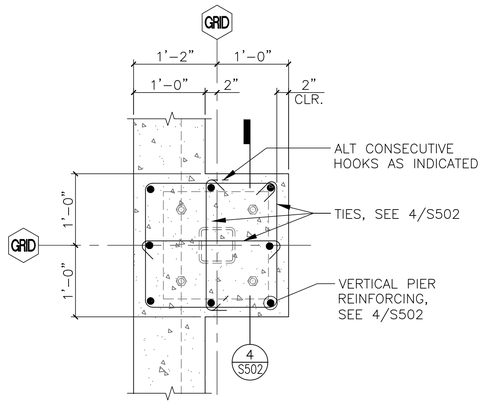
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
FOUNDATION DETAILS

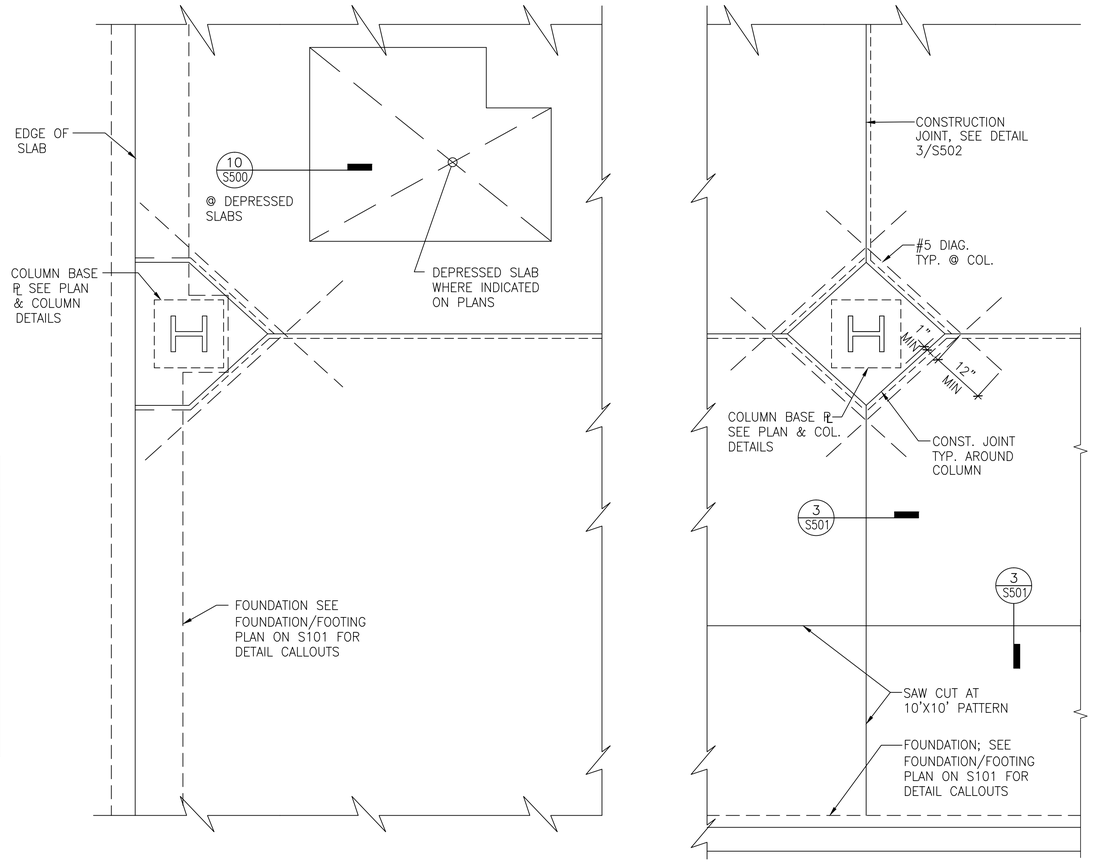
Sheet Number:
S501



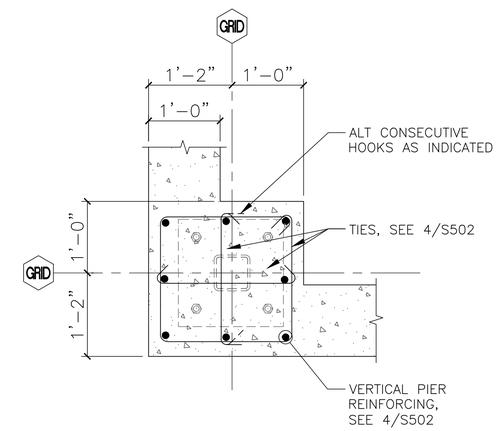
5 PIER DETAIL - P1 (SEE FOUNDATION PLAN)
1" = 1'-0"

PIER TYPE	PIER SIZE	VERT. REBAR	TIES	COLUMN GRID LOCATION:
P1	24x26	(8)-#7	#4 @ 8	ALL COLUMNS U.O.N.
P2	26x26	(8)-#7	#4 @ 8	COLUMN GRIDS: A1, A4, D1, D4, E1, E4, H1, H4

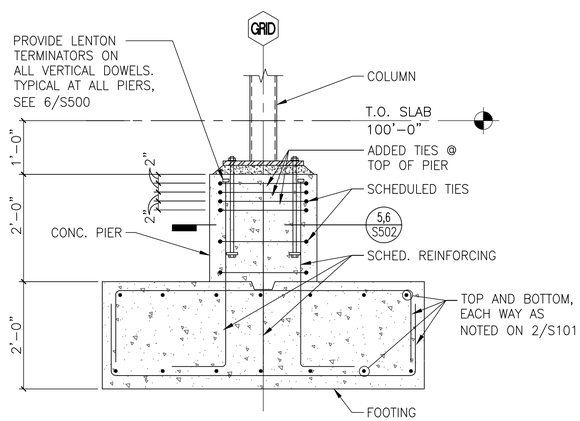
NOTES:
1. WALL REINFORCEMENT TO EXTEND THRU PIER AND IS NOT SHOWN FOR CLARITY.
2. CONTRACTOR MAY INCREASE PIER DIMENSIONS TO FACILITATE INSTALLATIONS AT NO ADDITIONAL COST TO OWNER.
3. SEE 4/S502 FOR ADDITIONAL TIES AND SPACING AT THE TOP OF THE PIERS.



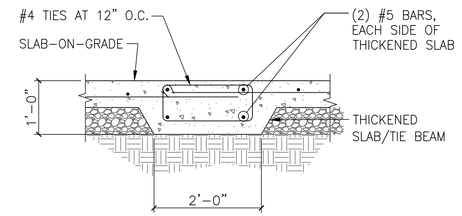
1 TYPICAL SLAB-ON-GRADE PLAN
1/2"=1'-0"



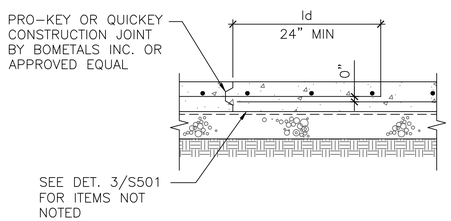
6 PIER DETAIL - P2 (CORNER COLUMN)
1" = 1'-0"



4 TYPICAL FOOTING/PIER DETAIL
3/4" = 1'-0" UNLESS OTHERWISE NOTED



2 TYPICAL THICKENED SLAB WHERE SHOWN
3/4"=1'-0"



3 CONSTRUCTION JOINT
1"=1'-0"

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Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

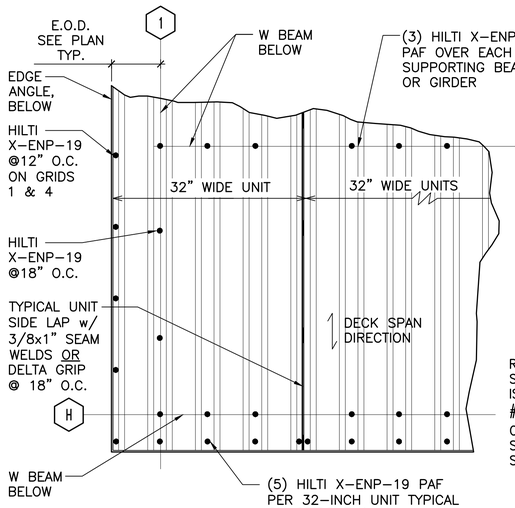
Sheet Title:
FOUNDATION DETAILS

Sheet Number:
S502

SLAB TYPE	DECK PROFILE	GAUGE	FILL		SLAB REINF.	ATTACHMENT TYPE (SEE 9/S600)					SHEAR STUD (DIAMETER x AFTER-WELD LENGTH)
			TYPE	"T", MIN THK ABOVE TOP FLUTE		TO PERIMETER SUPPORT		TO INTERMEDIATE SUPPORT		SIDE LAP	
						(PERPENDICULAR) TO DECK	(PARALLEL) TO DECK	(PERPENDICULAR) TO DECK	(PARALLEL) TO DECK		
D-1	VERCO W3 FORMLOK	18	REINF NW CONCRETE	3 1/2"	#4@12 EW U.O.N.	1/2"ø PUDDLE WELD ALL DOWN FLUTES	1/2"ø PUDDLE WELD @ 12"O.C.	1/2"ø PUDDLE WELD ALL DOWN FLUTES	1/2"ø PUDDLE WELD @ 12"O.C.	BUTTON PUNCH @ 24"O.C.	3/4"øx5 1/2"
D-2	CENTRIA STYLE RIB-20	18	–	–							
D-3	VERCO PLN3	18	–	–		5 HILTI/UNIT ALL DOWN FLUTES	HILTI @ 12"O.C.	3 HILTI/UNIT	HILTI @ 18"O.C.	PUNCHLOK II @ 18"O.C.	

NOTES:
1. WHEREVER POSSIBLE, DECK LAYOUTS SHALL PROVIDE SHEETS OF SUFFICIENT LENGTH TO SPAN CONTINUOUSLY ACROSS AT LEAST THREE SPANS. ENDS SHALL TERMINATE OVER A SUPPORT PERPENDICULAR TO THE DECK SPAN, EXCEPT AT OPENINGS OR BUILDING EDGES WHERE DECKS MAY BE CANTILEVERED.
2. WHEN DECK IS CONTINUOUS OVER THREE SPANS, DECK DOES NOT REQUIRE VERTICAL SHORING DURING CONCRETE FILL PLACEMENT. FOR OTHER LAYOUTS, SHORE DECK AS REQUIRED BY MANUFACTURER.
3. DECK SHALL HAVE A MINIMUM OF 2" BEARING AT ALL SUPPORTING MEMBERS PERPENDICULAR TO DECK SPAN AND 2" AT ALL MEMBERS PARALLEL TO DECK SPAN.
4. WHERE TWO ADJACENT DECK SHEETS ARE SUPPORTED BY ONE FRAMING MEMBER, EACH SHEET SHALL INDIVIDUALLY SATISFY THE REQUIREMENTS OF NOTE 3 AND OF THE ATTACHMENT SCHEDULE.
5. DO NOT SUSPEND PIPING, LIGHT FIXTURES, CONDUITS OR OTHER UTILITIES FROM METAL DECK ALONE, AND DO NOT PLACE PIPES IN CONCRETE FILL OVER DECK.
6. DIAMETER OF PUDDLE WELD SHOWN REPRESENTS EFFECTIVE FUSION AREA.
7. PUDDLE WELD SHOWN MAY BE REPLACED WITH SAME NUMBER OF SHEAR STUDS WELDED THROUGH DECK ON A ONE-TO-ONE BASIS.
8. REFERENCES TO HILTI ABOVE ARE TO HILTI X-ENP-19

11 METAL DECK SCHEDULE
NO SCALE

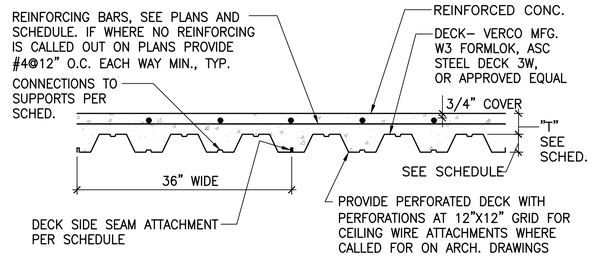


5 ROOF DECK ATTACHMENT DETAIL
1" = 1'-0"

BEAM/ GIRDER SIZE	PLATE "A" THICKNESS (IN.)	PLATE "B" THICKNESS (IN.)	WELD t (IN.)	NO. OF 7/8"ø A325X BOLTS	L MIN. (IN.)	NOTES
W8	5/16	1/2	1/4	2	6	SPACE BOLTS 3"
W10	5/16	1/2	1/4	2	8	SPACE BOLTS 5"
W12	3/8	1/2	1/4	3	9	
W14	3/8	1/2	1/4	3	9	
W16	3/8	1/2	1/4	4	12	
W18	3/8	1/2	1/4	4	12	
W21	1/2	1/2	5/16	5	15	
W24	1/2	1/2	5/16	6	18	

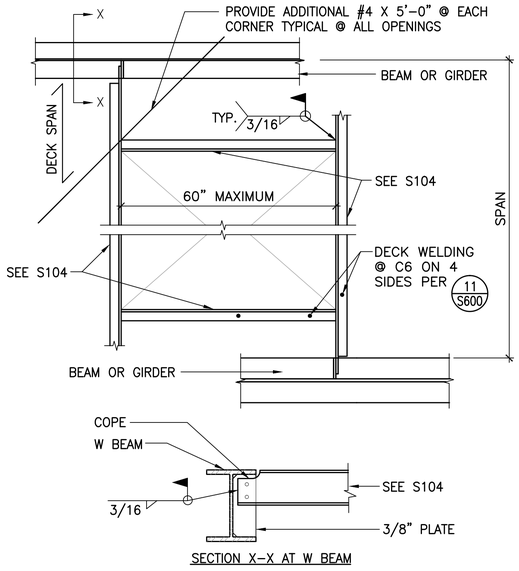
NOTE:
1. TIGHTEN ALL BOLTS, SEE SPECIFICATIONS AND "GENERAL NOTES."

1 CONNECTION SCHEDULE
NO SCALE

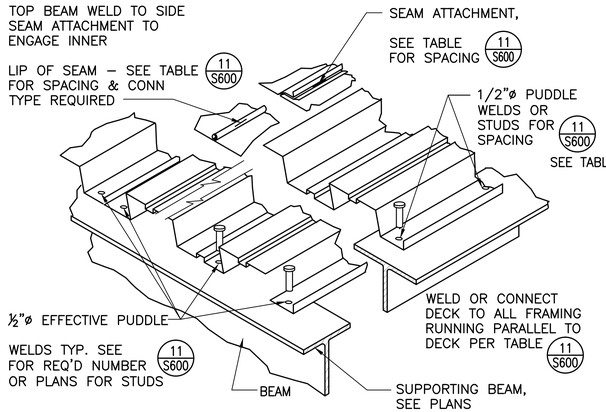


NOTE:
1. ALL DECKS, EDGE FORMS, CLOSURE PLATES, DECK SUPPORTS, AND RELATED ACCESSORIES SHALL BE GALVANIZED PER ASTM A525 G60.
2. CONNECT DECK TO EVERY STRUCTURAL MEMBER PER DESIGNATIONS ON THIS SHEET. WHERE NO CONNECTION IS CALLED OUT PROVIDE ONE HILTI X-ENP-19 L15, OR 1/2"ø PUDDLE WELD IN EACH FLUTE AND AT 12 INCHES ON CENTER AT SIDES.

2 TYPICAL COMPOSITE FLOOR DECK
1" = 1'-0"

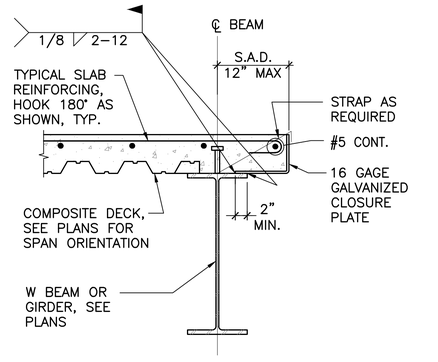


12 ADDITIONAL FRAMING AT DECK OPENING
NO SCALE



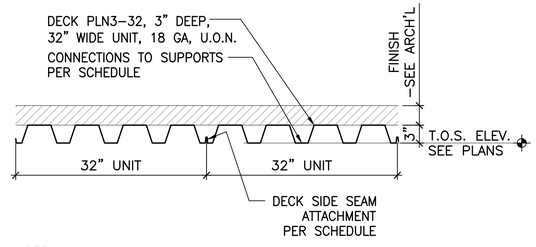
NOTE: WHERE SHEAR STUD COINCIDES W/ REQUIRED DECK WELD LOCATION, STUD WELDING MAY REPLACE THE DECK WELD AT LOCATION.

9 TYPICAL DECK WELDS AND SHEAR STUD CONNECTOR DETAILS
NO SCALE



6 TYPICAL EDGE OF FLOOR DECK ≤ 12"
1" = 1'-0"

3 TYPICAL CONNECTION @ HSS STEEL COLUMNS EXCEPT AT DIAGONAL BRACE CONNECTIONS, SEE S301
NO SCALE



NOTE:
1. ALL DECKS, EDGE FORMS, CLOSURE PLATES, DECK SUPPORTS, AND RELATED ACCESSORIES SHALL BE GALVANIZED PER ASTM A525 G90.
2. CONNECT DECK TO EVERY STRUCTURAL MEMBER PER DESIGNATIONS ON THIS SHEET. WHERE NO CONNECTION IS CALLED OUT PROVIDE ONE HILTI X-ENP-19 L15, OR 1/2"ø PUDDLE WELD IN EACH FLUTE AND AT 12 INCHES ON CENTER AT SIDES.

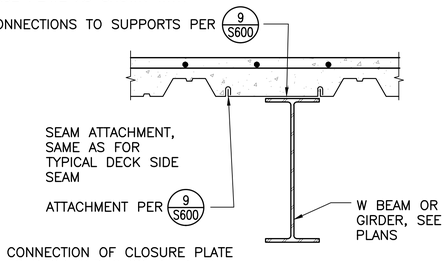
13 TYPICAL ROOF DECK PROFILE
NO SCALE

A. HOLES IN COMPOSITE DECKS:
1. SINGLE HOLES UP TO 8" IN DIAMETER MAY BE CORED IN CONCRETE OVER METAL DECK FLOORS PROVIDED CORED HOLE IS WITHIN 12" OF A FRAMING MEMBER OR AT LEAST 36" AWAY FROM ANY EDGE OF DECK OR OTHER OPENINGS.
2. FOR HOLES LARGER THAN 8" IN DIAMETER OR MULTIPLE 8"ø OR SMALLER HOLES WITH EDGES LESS THAN 12" APART, REINFORCE DECK PER SECTION "C". REINFORCING REQUIREMENTS AT HOLES."

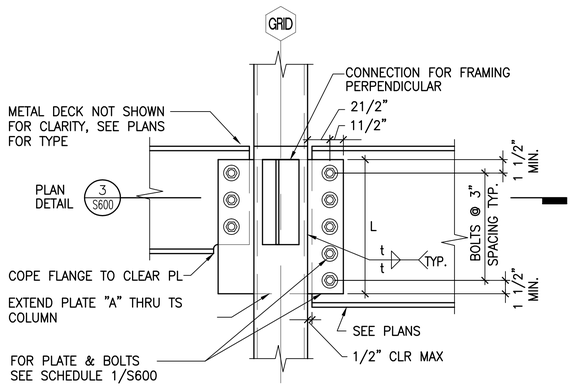
B. REINFORCING REQUIREMENTS AT HOLES:
1. WHERE MULTIPLE HOLES OCCUR WITH EDGES LESS THAN 12" FROM EACH OTHER REINFORCE DECK AS PER 12/S600 EXCEPT WHERE NOTED OTHERWISE.
2. FOR HOLES UP TO 12" IN DIAMETER WITH DISTANCE BETWEEN EDGES OF HOLES MORE THAN 12" APART REINFORCE DECK WITH 14 GAGE PLATE.
3. FOR HOLES LARGER THAN 12" IN DIAMETER REINFORCE DECK AS PER 12/S600 EXCEPT WHERE NOTED OTHERWISE.

10 REINFORCING OF HOLES IN CONCRETE OVER METAL DECK FLOORS NOTES
NO SCALE

WHERE DECK RIBS ARE NOT DIRECTLY ON SUPPORTS AT DECK ENDS OR AT SIDES PROVIDE 16 GAGE PLATE AS SHOWN WITH CONNECTIONS TO SUPPORTS PER 9/S600



7 DETAIL DECK CLOSURE
1" = 1'-0"



4 TYPICAL HSS COLUMN DETAIL EXCEPT AT BRACES
NO SCALE (SEE S301 @ BRACES)

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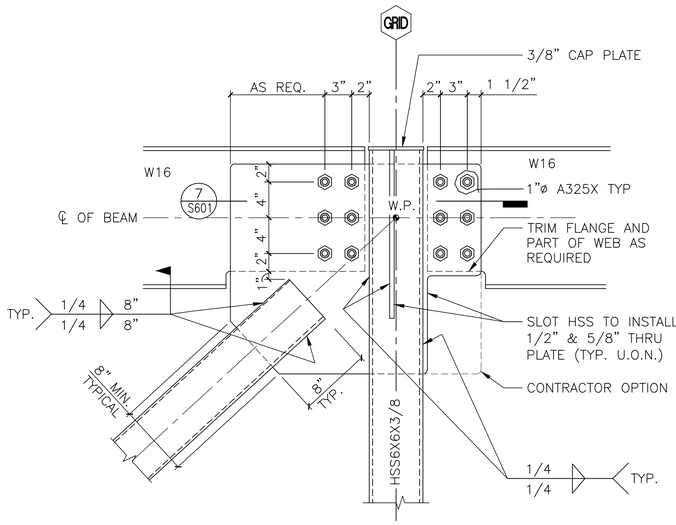
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
TYPICAL FRAMING DETAILS

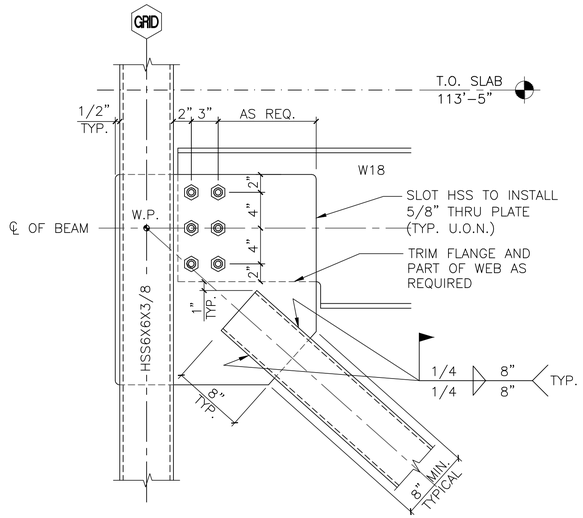
Sheet Number:
S600



6 FRAMING CONNECTION AT ROOF

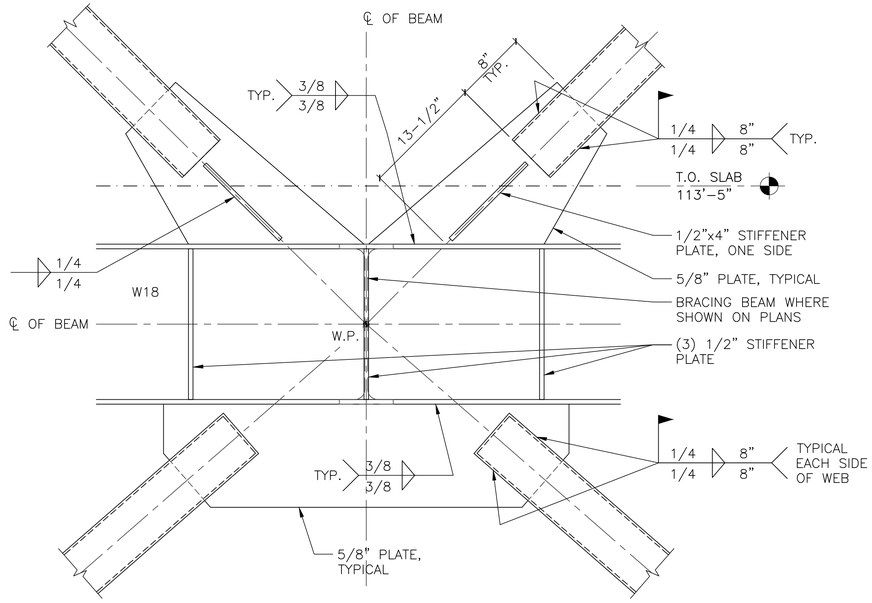
1 1/2" = 1'-0"

© GRIDS E2, E3, H2, H3



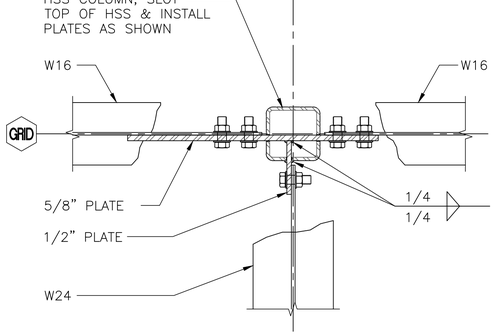
3 FRAMING CONNECTION

1 1/2" = 1'-0"



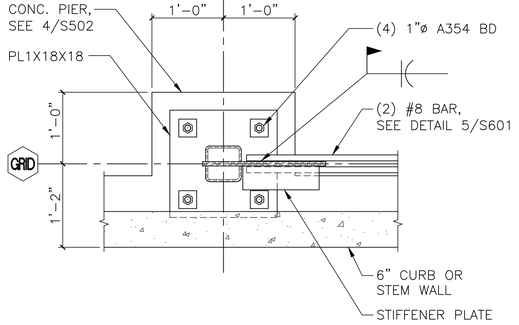
1 FRAMING CONNECTION

1 1/2" = 1'-0"



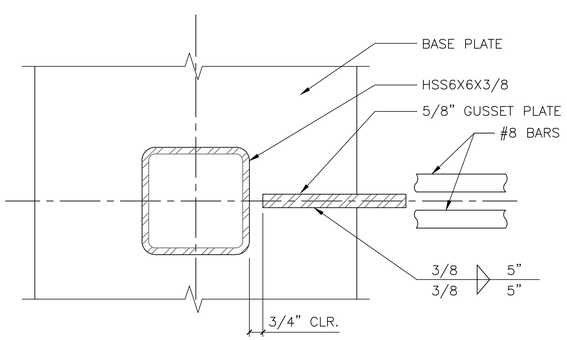
7 PLAN SECTION

1 1/2" = 1'-0"



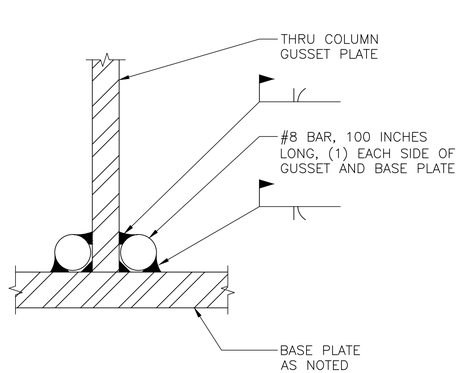
4 TYP. BASE PLATE AT BAY BRACES

1" = 1'-0"



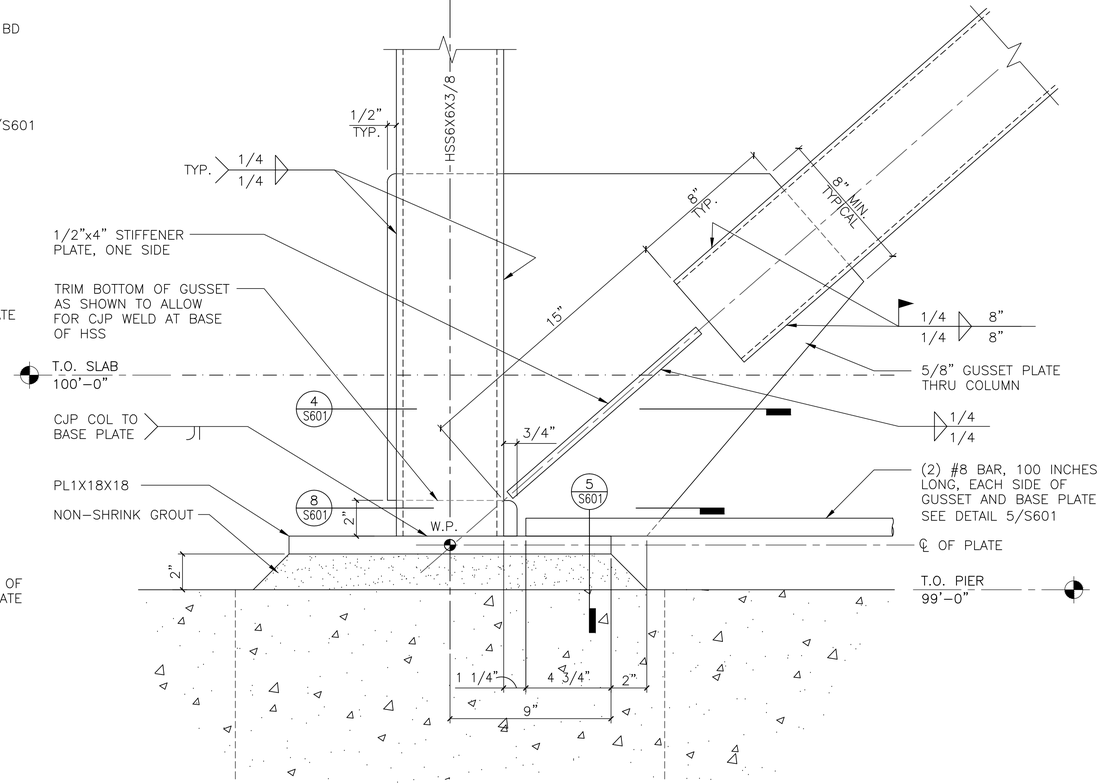
8 TYP. FRAMING CONNECTION SECTION AT BOTTOM BRACE CONNECTION

3" = 1'-0"



5 REBAR WELD DETAIL

6" = 1'-0"



2 TYPICAL FRAMING CONNECTION

3" = 1'-0"

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Revisions:
2 11-16-2020

BID SET

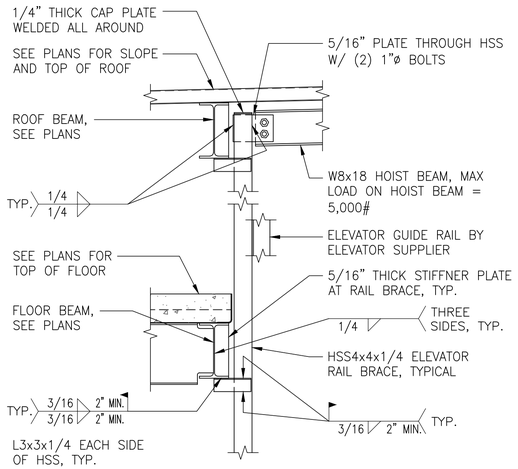
Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:

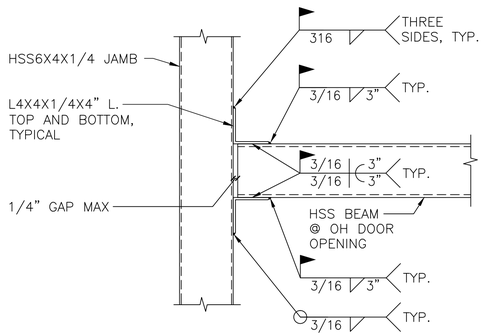
FRAMING CONNECTION DETAILS

Sheet Number:

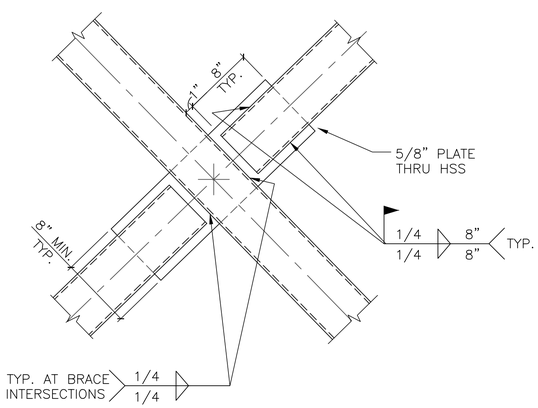
S601



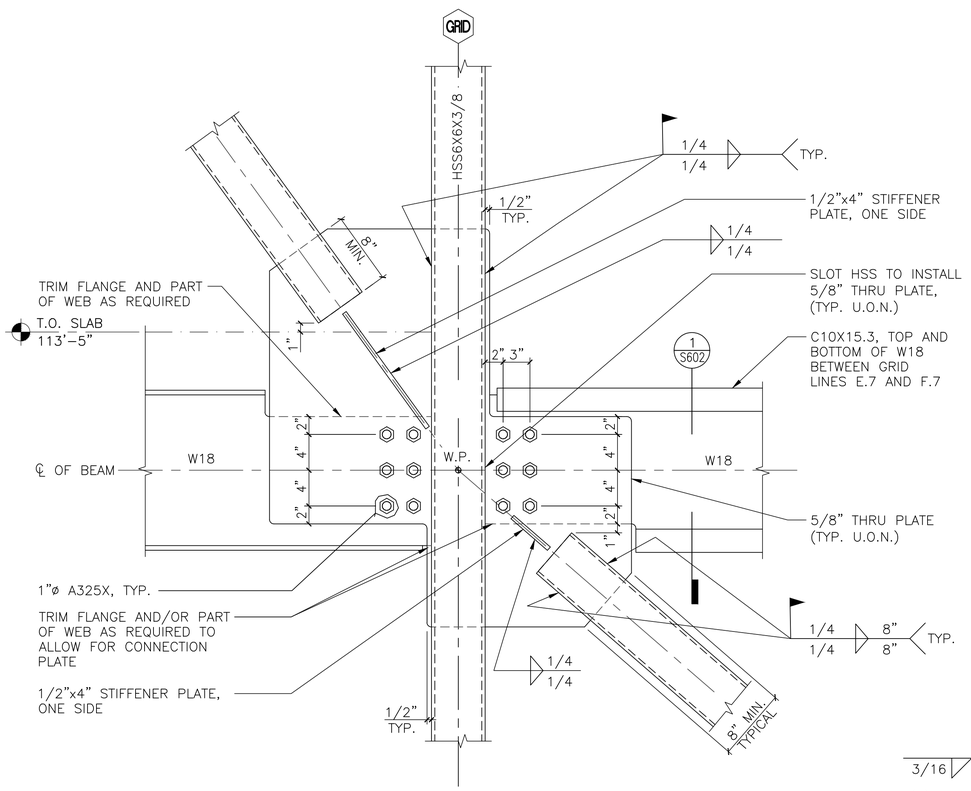
6 TYPICAL RAIL BRACE AND HOIST BEAM DETAIL
3/4" = 1'-0"



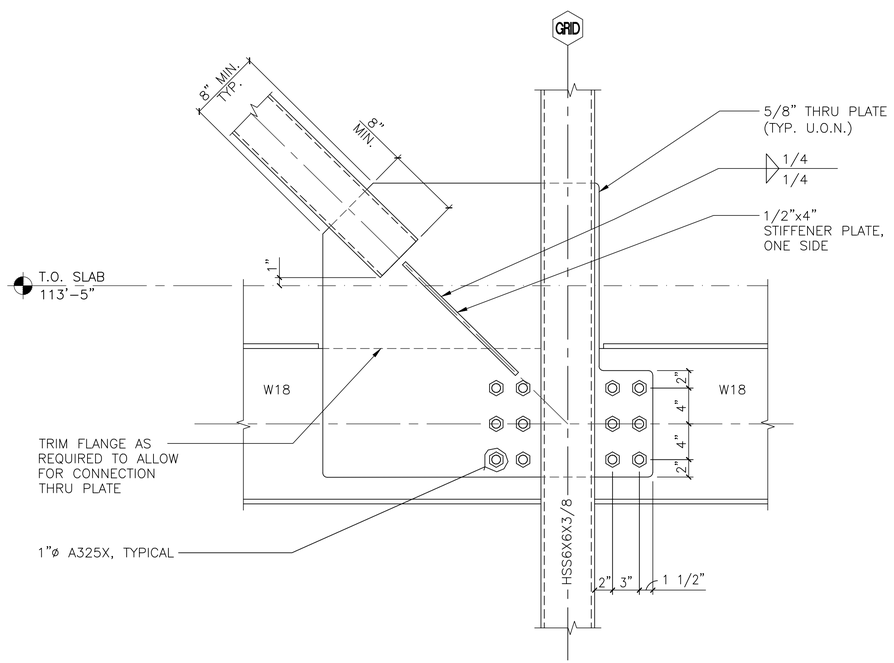
7 TYPICAL HSS CONNECTION
1 1/2" = 1'-0"



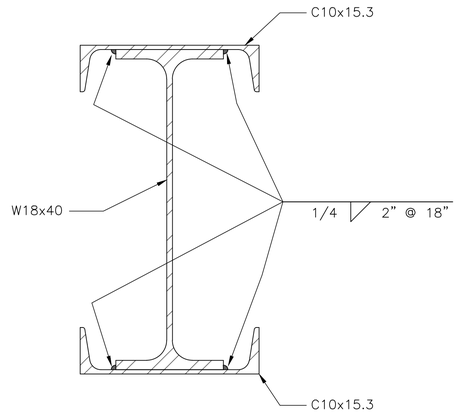
8 FRAMING CONNECTION
1 1/2" = 1'-0"



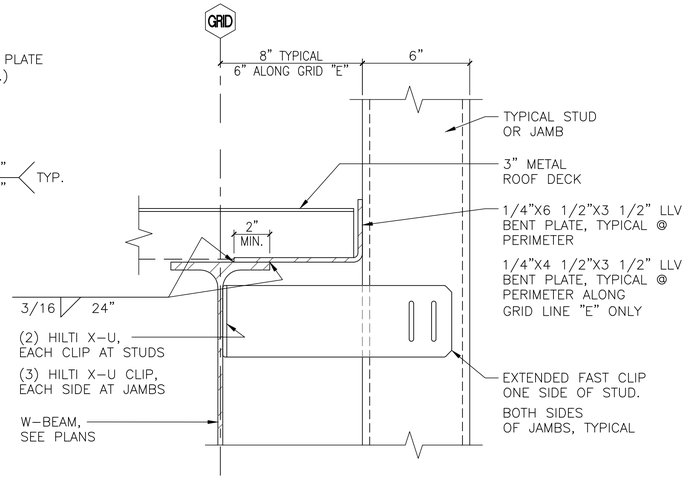
4 FRAMING CONNECTION AT SECOND FLOOR
1 1/2" = 1'-0"



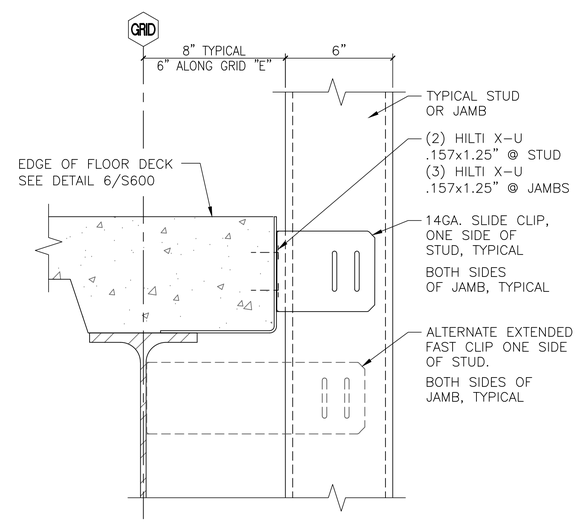
5 FRAMING CONNECTION AT SECOND FLOOR
1 1/2" = 1'-0"



1 REINFORCED BEAM
N.T.S. ALONG GRID LINE 1 BETWEEN GRIDS E.7 & F.7



2 TYPICAL STUD/JAMB ATTACHMENT AT ROOF
3" = 1'-0"



3 TYPICAL STUD/JAMB ATTACHMENT AT FLOOR
3" = 1'-0"

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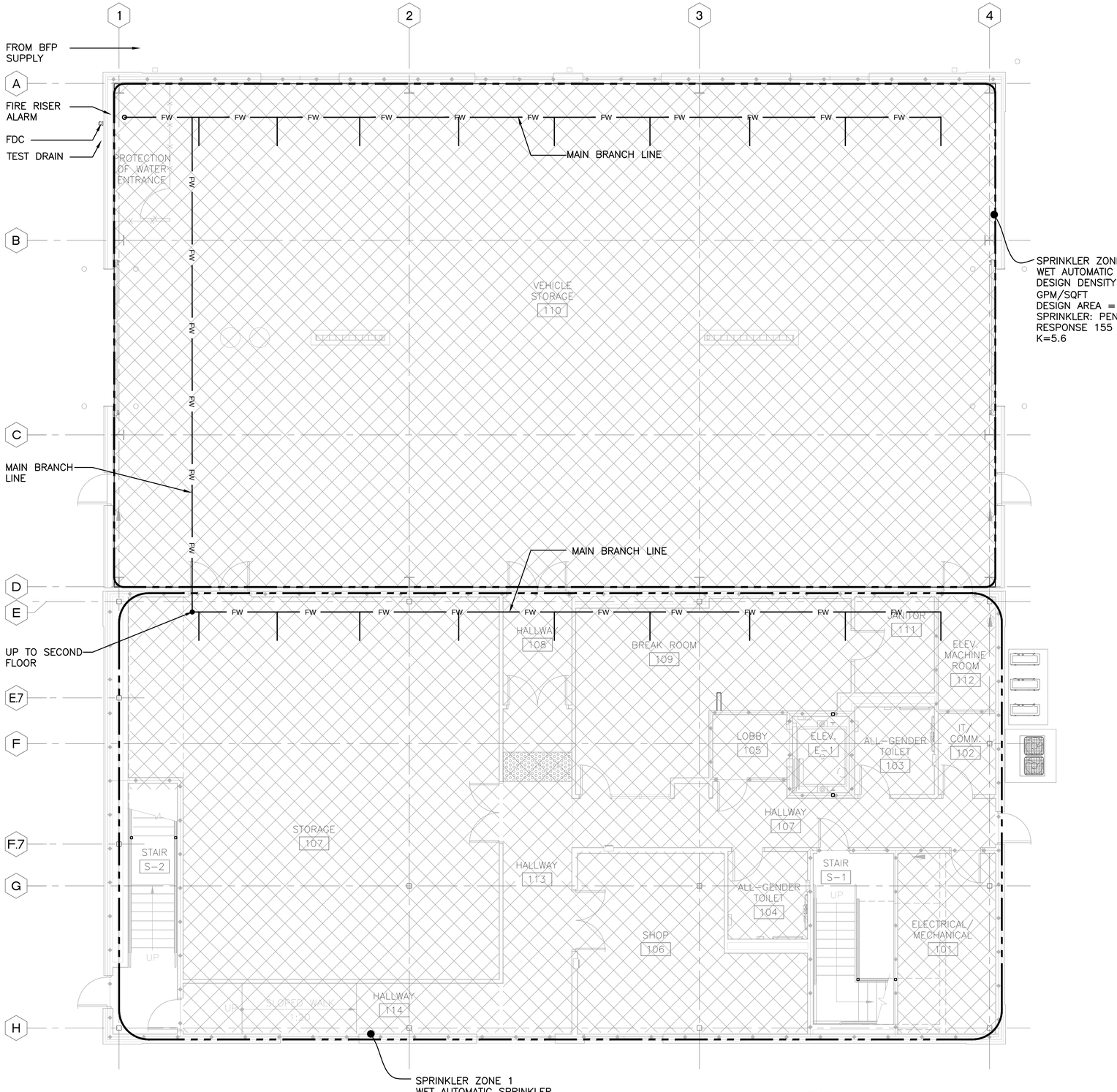
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
FRAMING CONNECTION DETAILS

Sheet Number:
S602



PLAN NORTH

FIRE PROTECTION - FIRST FLOOR
3/16" = 1'-0"

0 4' 8' 12'

GENERAL NOTES:

1. NEW WET PIPE FIRE SPRINKLER SYSTEM ZONE 1. PROVIDE CONTROL VALVE.
2. OCCUPANCY AND CONSTRUCTION TYPE PER G003
3. PROVIDE COMPLETE PLANS, CALCULATIONS AND OTHER SUBMITTALS REQUIRED BY PROJECT SPECIFICATION FOR NEW WORK.
4. PROVIDE A COMPLETE AUTOMATIC WET FIRE SPRINKLER SYSTEM FOR THE ENTIRE BUILDING. THE AUTOMATIC SPRINKLER SYSTEM SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
   - NFPA 13, 2019 EDITION: STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS.
   - NFPA 24, 2019 EDITION: STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTANCES.
   - CALIFORNIA FIRE CODE, 2019 EDITION.
5. INSTALLATION OF THE SPRINKLER SYSTEMS SHALL NOT BE STARTED UNTIL COMPLETE PLANS AND CALCULATIONS (INCLUDING WATER SUPPLY INFORMATION) HAVE BEEN APPROVED BY THE FIRE MARSHAL. AT VARIOUS STAGES AND UPON COMPLETION, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF FIRE MARSHALL REPRESENTATIVE.
6. ALL FIRE SPRINKLER WORK SHALL BE PERFORMED BY A LICENSED FIRE PROTECTION CONTRACTOR WITH A CURRENT STATE OF CALIFORNIA C-16 LICENSE.
7. PROVIDE SPRINKLERS BELOW ALL EXPOSED DUCTS, OBSTRUCTIONS AND OPEN GRATINGS GREATER THAN FOUR FEET WIDE.
8. PAINT AND INSULATE SPRINKLER RISER AND PROVIDE METAL PROTECTIVE COVERING.
9. ALL FIRE SPRINKLER PIPING SHALL BE CONCEALED WHERE POSSIBLE.
10. FURNISH AND INSTALL ANY INCIDENTAL WORK NOT SHOWN OR SPECIFIED WHICH ARE NECESSARY TO PROVIDE A COMPLETE AND WORKABLE SYSTEM.
11. KEEP FIRE SPRINKLER AS HIGH AS POSSIBLE TO STRUCTURE ABOVE AND OFFSET PIPING AS REQUIRED.
12. SEE REFLECTED CEILING PLANS FOR CENTERING SPRINKLER HEADS IN GRIDS AND LOCATIONS OF LIGHT, DIFFUSERS, ETC.
13. LOCATIONS OF PIPE PENETRATIONS THROUGH BEAMS, CONCRETE WALLS AND FLOORS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER.
14. PROVIDE STEEL PIPE SLEEVES WHERE PIPES PASS THROUGH NEW CONCRETE WALLS. REFER TO STRUCTURAL DRAWINGS AND STRUCTURAL DETAILS FOR PIPE SLEEVE REQUIREMENTS. REFER TO STRUCTURAL DRAWINGS FOR CLEARANCE REQUIREMENTS BETWEEN SLEEVES AND PIPES.
15. PROVIDE FLEXIBLE HEAD DROPS FOR ALL CEILING MOUNTED SPRINKLER HEADS THROUGHOUT TO COMPLY WITH CBC 2019 AND NFPA 13 REQUIREMENTS FOR (1") ONE INCH CLEARANCE BETWEEN THE SPRINKLER HEAD AND THE CEILING. THE USE OF OVERSIZED CEILING ESCUTCHEONS ARE NOT ACCEPTABLE.
16. PROVIDE SYSTEM BACKFLOW PREVENTER PER UTILITY REQUIREMENTS.
17. PROVIDE MULTI-ZONE FIRE PROTECTION SYSTEM HEADER WITH EACH ZONE: SHUT-OFF VALVE, FLOW SWITCH, PRESSURE GAUGE, PRESSURE RELIEF VALVE, DRAIN AND INSPECTION TEST VALVE, SIGHT GLASS AND OTHER SYSTEMS REQUIRED BY CODE.
18. PROVIDE 4" FIRE DEPARTMENT CONNECTION AT FRONT OF BUILDING.
19. FIRE PROTECTION TEST PIPE SHALL DISCHARGE INTO LANDSCAPE BED.
20. NO SPRINKLER LINES SHALL BE LOCATED ABOVE ELECTRICAL EQUIPMENT.
21. CONTRACTOR TO PROVIDE A NEW FLOW TEST.
22. TRACTION ELEVATOR HOISTWAYS AND ASSOCIATED ELEVATOR MACHINE ROOM SHALL NOT BE SPRINKLERED UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL PROVIDE PRINKLERS AT THE TOP AND BOTTOM OF THE HOISTWAY AND ELEVATOR MACHINE ROOM ALONG WITH REQUIRED SHUNT TRIPS ON ASSOCIATED BREAKERS.
23. PROVIDE UPRIGHT SPRINKLERS IN AREAS WITHOUT CEILINGS.

LEGEND:

ZONE 1 – WET PIPE SPRINKLERED
ORDINARY HAZARD GROUP 1
0.15 GPM/SQFT OVER 1,500 SQFT

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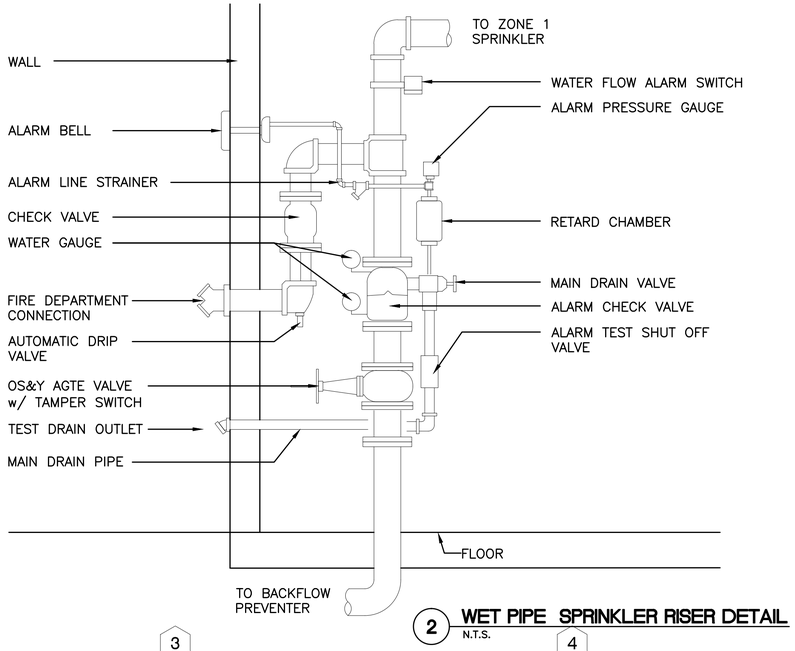
Revisions:
2 11-16-2020

BID SET

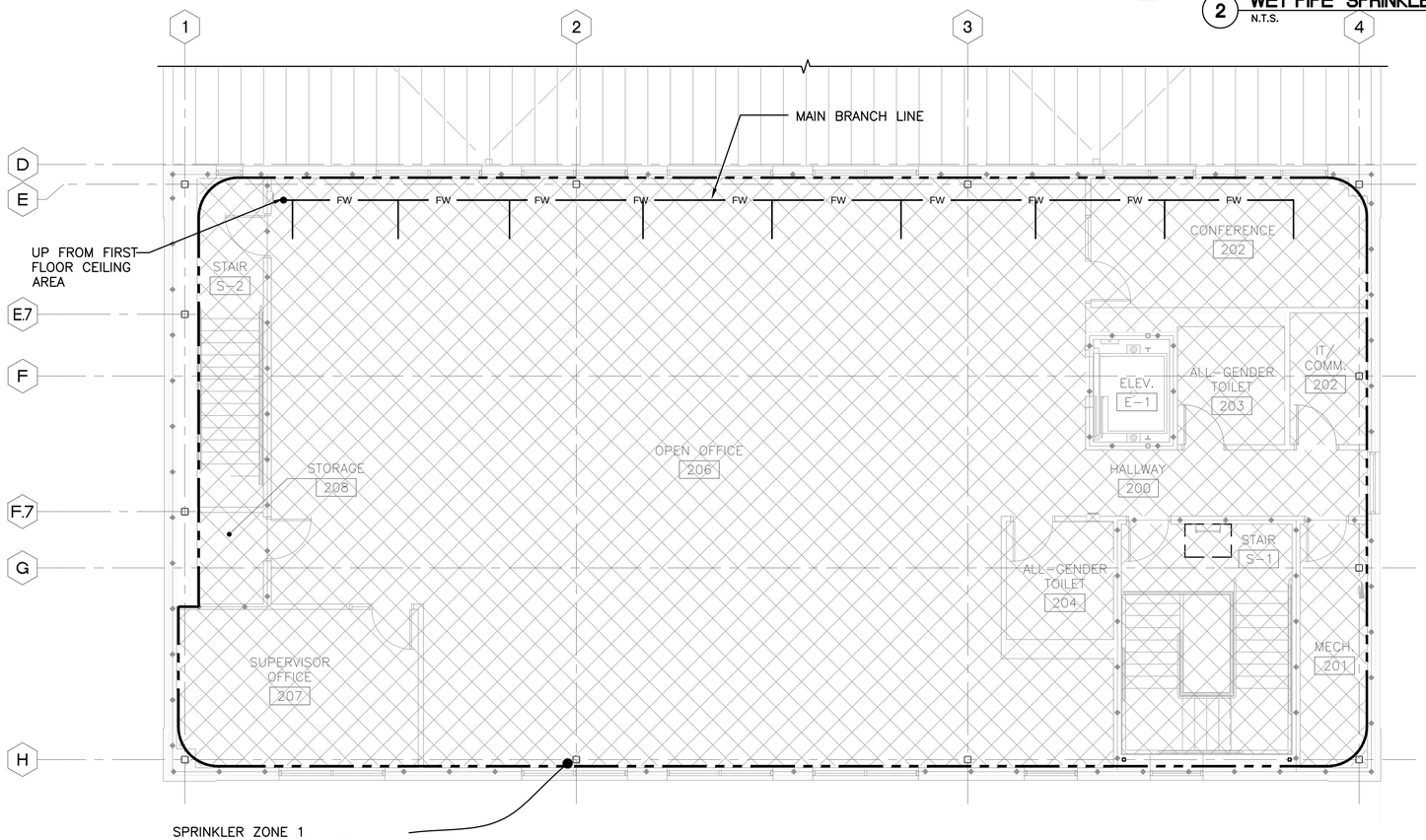
Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
FIRST FLOOR FIRE PROTECTION PLAN

Sheet Number:
FP101



2 **WET PIPE SPRINKLER RISER DETAIL**
N.T.S.



PLAN NORTH

1 **FIRE PROTECTION - SECOND FLOOR**
3/16" = 1'-0"

0 4' 8' 12'

GENERAL NOTES:

1. NEW WET PIPE FIRE SPRINKLER SYSTEM ZONE 1. PROVIDE CONTROL VALVE.
2. OCCUPANCY AND CONSTRUCTION TYPE PER G003
3. PROVIDE COMPLETE PLANS, CALCULATIONS AND OTHER SUBMITTALS REQUIRED BY PROJECT SPECIFICATION FOR NEW WORK.
4. PROVIDE A COMPLETE AUTOMATIC WET FIRE SPRINKLER SYSTEM FOR THE ENTIRE BUILDING. THE AUTOMATIC SPRINKLER SYSTEM SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
   - NFPA 13, 2019 EDITION: STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS.
   - NFPA 24, 2019 EDITION: STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTANCES.
   - CALIFORNIA FIRE CODE, 2019 EDITION.
5. INSTALLATION OF THE SPRINKLER SYSTEMS SHALL NOT BE STARTED UNTIL COMPLETE PLANS AND CALCULATIONS (INCLUDING WATER SUPPLY INFORMATION) HAVE BEEN APPROVED BY THE FIRE MARSHAL. AT VARIOUS STAGES AND UPON COMPLETION, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF FIRE MARSHALL REPRESENTATIVE.
6. ALL FIRE SPRINKLER WORK SHALL BE PERFORMED BY A LICENSED FIRE PROTECTION CONTRACTOR WITH A CURRENT STATE OF CALIFORNIA C-16 LICENSE.
7. PROVIDE SPRINKLERS BELOW ALL EXPOSED DUCTS, OBSTRUCTIONS AND OPEN GRATINGS GREATER THAN FOUR FEET WIDE.
8. PAINT AND INSULATE SPRINKLER RISER AND PROVIDE METAL PROTECTIVE COVERING.
9. ALL FIRE SPRINKLER PIPING SHALL BE CONCEALED WHERE POSSIBLE.
10. FURNISH AND INSTALL ANY INCIDENTAL WORK NOT SHOWN OR SPECIFIED WHICH ARE NECESSARY TO PROVIDE A COMPLETE AND WORKABLE SYSTEM.
11. KEEP FIRE SPRINKLER AS HIGH AS POSSIBLE TO STRUCTURE ABOVE AND OFFSET PIPING AS REQUIRED.
12. SEE REFLECTED CEILING PLANS FOR CENTERING SPRINKLER HEADS IN GRIDS AND LOCATIONS OF LIGHT, DIFFUSERS, ETC.
13. LOCATIONS OF PIPE PENETRATIONS THROUGH BEAMS, CONCRETE WALLS AND FLOORS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER.
14. PROVIDE STEEL PIPE SLEEVES WHERE PIPES PASS THROUGH NEW CONCRETE WALLS. REFER TO STRUCTURAL DRAWINGS AND STRUCTURAL DETAILS FOR PIPE SLEEVE REQUIREMENTS. REFER TO STRUCTURAL DRAWINGS FOR CLEARANCE REQUIREMENTS BETWEEN SLEEVES AND PIPES.
15. PROVIDE FLEXIBLE HEAD DROPS FOR ALL CEILING MOUNTED SPRINKLER HEADS THROUGHOUT TO COMPLY WITH CBC 2019 AND NFPA 13 REQUIREMENTS FOR (1") ONE INCH CLEARANCE BETWEEN THE SPRINKLER HEAD AND THE CEILING. THE USE OF OVERSIZED CEILING ESCUTCHEONS ARE NOT ACCEPTABLE.
16. PROVIDE SYSTEM BACKFLOW PREVENTER PER UTILITY REQUIREMENTS.
17. PROVIDE MULTI-ZONE FIRE PROTECTION SYSTEM HEADER WITH EACH ZONE: SHUT-OFF VALVE, FLOW SWITCH, PRESSURE GAUGE, PRESSURE RELIEF VALVE, DRAIN AND INSPECTION TEST VALVE, SIGHT GLASS AND OTHER SYSTEMS REQUIRED BY CODE.
18. PROVIDE 4" FIRE DEPARTMENT CONNECTION AT FRONT OF BUILDING.
19. FIRE PROTECTION TEST PIPE SHALL DISCHARGE INTO LANDSCAPE BED.
20. NO SPRINKLER LINES SHALL BE LOCATED ABOVE ELECTRICAL EQUIPMENT.
21. CONTRACTOR TO PROVIDE A NEW FLOW TEST.
22. TRACTION ELEVATOR HOISTWAYS AND ASSOCIATED ELEVATOR MACHINE ROOM SHALL NOT BE SPRINKLERED UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL PROVIDE PRINKLERS AT THE TOP AND BOTTOM OF THE HOISTWAY AND ELEVATOR MACHINE ROOM ALONG WITH REQUIRED SHUNT TRIPS ON ASSOCIATED BREAKERS.
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FP102

AIR SOURCE HEAT RECOVERY UNIT - VARIABLE REFRIGERANT FLOW SCHEDULE

MARK	MANUFACTURER	MODEL #	NOMINAL COOLING CAPACITY (TONS)	REQUIRED COOLING CAPACITY (MBH)	REQUIRED HEATING CAPACITY (MBH)	CONNECTED CAPACITY RATIO	EER (UNDUCTED)	COP 47°F (UNDUCTED)	COP 17°F (UNDUCTED)	OUTDOOR DESIGN CONDITIONS		REFRIGERANT	UNIT PHYSICAL DATA				ELECTRICAL			ADDITIONAL DETAILS
										WINTER °F (DB)	SUMMER °F (DB)	TYPE	HEIGHT (IN.)	WIDTH (IN.)	DEPTH (IN.)	WEIGHT (LBS.)	POWER SUPPLY	MCA	MOP	
HP-1	DAIKIN	REYQ144XATJU	12	130.6	58.1	122.8	11.9	3.75	2.16	34.0	94.0	R410A	66.7	48.9	30.2	727	208V-60-3	58.3	70.0	SEE BELOW

ACCESSORIES:
1. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY ACCESSORIES FOR A FULLY FUNCTIONING SYSTEM.
2. PROVIDE SHUT-OFF AND SCHRADER VALVE BETWEEN SHUT-OFF AND UNIT FOR ALL PIPES CONNECTING TO UNIT.
3. PROVIDE ALL REFNET FITTINGS AS REQUIRED IN PIPING NETWORK.
4. FILTER/DRYER.
5. HIGH/LOW PRESSURE SWITCH.

NOTES:
1. REFER TO VRF REFRIGERANT PIPING SCHEMATIC FOR REFRIGERANT LINE SIZES AND ROUTING DETAILS.
2. FOLLOW MANUFACTURER'S INSTALLATION MANUAL PRECISELY TO ENSURE PROPER OPERATION.
3. FINAL UNIT SELECTIONS NEED TO BE VERIFIED BY MANUFACTURER PRIOR TO ORDERING EQUIPMENT.

CONTROLS:
1. PROVIDE I-TOUCH CONTROLLER WITH BACNET INTERFACE.
2. REFER TO M0.4 FOR MORE CONTROLS INFORMATION.

VARIABLE REFRIGERANT FLOW FAN COIL AND BRANCH SELECTOR BOX SCHEDULE

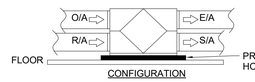
SYSTEM	MARK	MASTER THERMOSTAT LOCATION	MANF.	MODEL NUMBER	TYPE	SOUND (dBA)	CFM	EVAPORATOR COIL						UNIT PHYSICAL DATA				ELECTRICAL			CONDENSATE PUMP	REMARKS	ASSOCIATED BRANCH SELECTOR						
								REQUIRED TOTAL COOL (BTU/H)	REQUIRED SENS. COOL (BTU/H)	AVAILABLE TOT. COOL (BTU/H)	AVAILABLE SENS. COOL (BTU/H)	REQUIRED HEAT (BTU/H)	AVAILABLE HEAT (BTU/H)	WIDTH (IN)	HEIGHT (IN)	DEPTH (IN)	WEIGHT (LBS)	POWER SUPPLY	MCA	MOP			MARK	MODEL	DIMENSIONS (WxHxD)	ELECTRICAL POWER SUPPLY	MCA	MOP	WEIGHT (LBS)
HP-1	FC-101	107 - STORAGE	DAIKIN	FXSQ24TAVJU	DUCTED, CEILING-CONCEALED, THIN LINE	29-36	740	15,300	12,000	22,950	14,240	12,300	27,980	39.4	9.7	31.5	82.0	208V-60-1	1.8	15	YES	SEE BELOW	BS-1	BS4Q54TVJ	14.6 x 11.7 x 18.9	208V-60-1	0.4	15	48.5
	FC-102	106 - SHOP	DAIKIN	FXSQ18TAVJU	DUCTED, CEILING-CONCEALED, THIN LINE	29-34	600	10,800	10,000	17,170	11,100	5,600	20,800	39.4	9.7	31.5	77.0	208V-60-1	1.6	15	YES	SEE BELOW	BS-1	BS4Q54TVJ	14.6 x 11.7 x 18.9	208V-60-1	0.4	15	48.5
	FC-103	100 - HALLWAY	DAIKIN	FXSQ05TAVJU	DUCTED, CEILING-CONCEALED, THIN LINE	28-33	280	2,000	1,300	5,630	3,830	2,200	6,790	21.7	9.7	31.5	55.0	208V-60-1	0.8	15	YES	SEE BELOW	BS-1	BS4Q54TVJ	14.6 x 11.7 x 18.9	208V-60-1	0.4	15	48.5
	FC-104	109 - BREAK ROOM	DAIKIN	FXZQ15TAVJU	CEILING CASSETTE	28-37	400	14,100	8,600	14,320	8,860	2,000	17,740	22.6	10.2	22.6	36.4	208V-60-1	0.4	15	YES	SEE BELOW	BS-1	BS4Q54TVJ	14.6 x 11.7 x 18.9	208V-60-1	0.4	15	48.5
	FC-201	207 - SUPERVISOR OFFICE	DAIKIN	FXZQ15TAVJU	CEILING CASSETTE	28-37	400	8,100	7,000	14,320	8,860	4,000	17,740	22.6	10.2	22.6	36.4	208V-60-1	0.4	15	YES	SEE BELOW	BS-2	BS4Q54TVJ	14.6 x 11.7 x 18.9	208V-60-1	0.4	15	48.5
	FC-202a	206 - OPEN OFFICE	DAIKIN	FXZQ18TAVJU	CEILING CASSETTE	33-43	400	10,000	9,070	17,000	10,670	6,000	20,800	22.6	10.2	22.6	41.9	208V-60-1	0.6	15	YES	SEE BELOW	BS-2	BS4Q54TVJ	14.6 x 11.7 x 18.9	208V-60-1	0.4	15	48.5
	FC-202b	206 - OPEN OFFICE	DAIKIN	FXZQ18TAVJU	CEILING CASSETTE	33-43	500	10,000	9,070	17,000	10,670	6,000	20,800	22.6	10.2	22.6	41.9	208V-60-1	0.6	15	YES	SEE BELOW	BS-2	BS4Q54TVJ	14.6 x 11.7 x 18.9	208V-60-1	0.4	15	48.5
	FC-202c	206 - OPEN OFFICE	DAIKIN	FXZQ18TAVJU	CEILING CASSETTE	33-43	500	10,000	9,060	17,000	10,670	6,100	20,800	22.6	10.2	22.6	41.9	208V-60-1	0.6	15	YES	SEE BELOW	BS-2	BS4Q54TVJ	14.6 x 11.7 x 18.9	208V-60-1	0.4	15	48.5
	FC-202d	206 - OPEN OFFICE	DAIKIN	FXZQ15TAVJU	CEILING CASSETTE	28-37	500	10,000	7,250	14,320	8,860	4,000	17,740	22.6	10.2	22.6	36.4	208V-60-1	0.4	15	YES	SEE BELOW	BS-2	BS4Q54TVJ	14.6 x 11.7 x 18.9	208V-60-1	0.4	15	48.5
	FC-202e	206 - OPEN OFFICE	DAIKIN	FXZQ15TAVJU	CEILING CASSETTE	28-37	400	10,000	7,250	14,320	8,860	4,000	17,740	22.6	10.2	22.6	36.4	208V-60-1	0.4	15	YES	SEE BELOW	BS-2	BS4Q54TVJ	14.6 x 11.7 x 18.9	208V-60-1	0.4	15	48.5
	FC-203	205 - CONFERENCE ROOM	DAIKIN	FXZQ15TAVJU	CEILING CASSETTE	28-37	400	10,700	8,000	14,320	8,860	5,900	17,740	22.6	10.2	22.6	36.4	208V-60-1	0.4	15	YES	SEE BELOW	BS-2	BS4Q54TVJ	14.6 x 11.7 x 18.9	208V-60-1	0.4	15	48.5

REMARKS:
1. PROVIDE AN INTEGRAL FACTORY-INSTALLED CONDENSATE PUMP SUPPLIED IN ALL FAN COIL UNITS.
2. PROVIDE MOUNTING AS NECESSARY
3. PROVIDE VIBRATION ISOLATION FOR ALL CEILING CASSETTES

HEAT RECOVERY VENTILATOR UNIT SCHEDULE

MARK	MFR	MODEL NUMBER	SUPPLY AIR			EXHAUST AIR			PRE-HEATER			DESIGN CONDITIONS												CONFIGURATION	UNIT DIMENSIONS				ADDITIONAL DETAILS
												WINTER DESIGN CONDITIONS						SUMMER DESIGN CONDITIONS											
			MAX CFM	E.S.P.	DRIVE	MAX CFM	E.S.P.	DRIVE	TYPE	SIZE	LAT (°F DB)	OUTDOOR AIR db	OUTDOOR AIR wb	INDOOR AIR db	INDOOR AIR % rh	DAT	WINTER EFFECT %	OUTDOOR AIR db	OUTDOOR AIR wb	INDOOR AIR db	INDOOR AIR % rh	DAT	SUMMER EFFECT %		LENGTH	WIDTH	HEIGHT	WEIGHT	
ERV-1	RENEWAIRE	HE1.5H	1250	0.65	DIRECT	1250	0.65	DIRECT	-	-	-	34.0	31.1	70	30	58.4	68.0	94.0	71.8	75	30	81.4	68.0	STATIC PLATE	48"	34"	53"	400	SEE BELOW

ACCESSORIES/REMARKS:
1. PROVIDE 2" MERV-13 FILTERS IN EACH AIR STREAM.
2. FLEXIBLE DUCTWORK CONNECTION ON ALL FOUR CONNECTIONS.
3. DRAIN CONDENSATE TO NEAREST FLOOR DRAIN. SEE PLUMBING PLAN.
4. SINGLE SPEED ECM MOTORS
5. MOTORIZED POSITIVE CLOSURE DAMPERS ON BOTH AIR STREAMS.
6. SINGLE POINT ELECTRICAL CONNECTION
7. DOUBLE WALL CABINET - 22 GAUGE GALVANIZED STEEL INTERIOR AND EXTERIOR WITH 18 GAUGE GALVANIZED STEEL DRAIN PAN.
8. ACCESS PANEL TO CONTROL PANEL WITH FUSED DISCONNECT (NEMA-4)



CONFIGURATION

CONTROL:
SEE SHEET M0.4 FOR ALL CONTROL INFORMATION.

ELECTRICAL DATA:
SEE MEP COORDINATION SCHEDULE FOR STARTER/DISCONNECT AND ALL OTHER ELEC. DATA.

DUCTLESS MINI-SPLIT SYSTEM SCHEDULE

MFR	SERIES	AREA SERVED	NOMINAL COOLING CAPACITY	INDOOR COOLING UNIT						OUTDOOR CONDENSING UNIT				ELECTRICAL DATA		ADDITIONAL DETAILS
				MARK	MODEL NUMBER	TYPE	MIN OPERATING TEMP.	OUTSIDE AIRFLOW	WEIGHT (LBS)	MARK	MODEL NUMBER	TYPE	WEIGHT (LBS)	VOLT-PHASE	MCA / MFA	
DAIKIN	FTK SERIES	102 - IT/ COMM	18,000 BTU/HR (1.5 TONS)	MS-102	FTK18NMVJU	WALL-MOUNTED	-4°F	0	27	MS-102	RK18NMVJU	COOLING ONLY	97	208-1	18.3 / 20	SEE BELOW
DAIKIN	FTK SERIES	112 - ELEV MACH RM	18,000 BTU/HR (1.5 TONS)	MS-112	FTK18NMVJU	WALL-MOUNTED	-4°F	0	27	MS-112	RK18NMVJU	COOLING ONLY	97	208-1	18.3 / 20	SEE BELOW
DAIKIN	FTK SERIES	202 - IT/ COMM	18,000 BTU/HR (1.5 TONS)	MS-202	FTK18NMVJU	WALL-MOUNTED	-4°F	0	27	MS-202	RK18NMVJU	COOLING ONLY	97	208-1	18.3 / 20	SEE BELOW

ACCESSORIES:
1. ALL STANDARD ACCESSORIES
2. FILTER KIT
3. LOW AMBIENT KIT, COOLING OPERATING LIMIT -4F TO 115°F
4. PROVIDE BIG FOOT FIX-IT FOOT SUPPORT FOR OUTDOOR UNIT. PROVIDE 2" HOUSEKEEPING PAD FOR OUTDOOR UNITS. BOLT SUPPORT TO HOUSEKEEPING PAD.
5. PROVIDE INTERNAL CONDENSATE PUMP FOR WALL-MOUNTED INDOOR UNIT.

CONTROLS:
1. FACTORY PROVIDED CONTROLS
3. COOLING TO BE ENABLED WHEN SPACE TEMPERATURE RISES ABOVE TEMPERATURE SETPOINT (ADJ.)

GRILLE, REGISTER AND DIFFUSER SCHEDULE

MARK	MFR	MODEL	DESCRIPTION	NECK SIZE	FUNCTION	MAX CFM	PERFORMANCE DATA AT MAX CFM				MOUNTING & FINISH			ADDITIONAL DETAILS
							N.C.	PRESSURE DROP (IN. W.C.)	THROW AT 50 FPM (FT)	VELOCITY (FPM)	MOUNTING	MATERIAL	FINISH	
S-1	PRICE	SCD	SQUARE CONE DIFFUSER 24" X 24"	Ø8"	SUPPLY	180	20	0.10	10	637	CEILING	STEEL	ARCH. SELECT	SEE BELOW
S-2	PRICE	510	12"x6" ADJ. DEFLECTION DIFFUSER	12"x6"	SUPPLY	230	-	0.10	22	733	SIDEWALL / DUCT	STEEL	ARCH. SELECT	SEE BELOW
E-1	PRICE	PDR	PERFORATED DIFFUSER 24" X 24"	Ø8"	EXHAUST	280	-	0.10	- -	300	CEILING	ALUMINUM	ARCH. SELECT	SEE BELOW
E-2	PRICE	530	12"x6" SIDEWALL RETURN GRILLE	12"x6"	EXHAUST	200	21	0.10	- -	500	SIDEWALL / DUCT	ALUMINUM	ARCH. SELECT	SEE BELOW

REMARKS:
1. PROVIDE MANUAL BALANCING DAMPER AT LOCATIONS WHERE A SPECIFIED AIR VOLUME IS SHOWN.

REMARKS FOR ALL:
1. SUBMITTAL DATA SHALL INCLUDE N.C., THROW, VELOCITY, AND PRESSURE DROP AS WELL AS ALL PHYSICAL AND INSTALLATION DATA.
2. COORDINATE FRAME AND MOUNTING TYPE WITH CEILING TYPES. SEE ARCHITECTURAL FOR CEILING TYPES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL FITTINGS AND ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION.
4. N.C. VALUES IN SCHEDULE ARE VALID FOR SCHEDULE AIRFLOW ONLY AND REPRESENT A MAXIMUM ACCEPTABLE N.C. VALUE. SUBSTITUTE EQUIPMENT SHALL HAVE N.C. VALUE EQUAL TO OR BELOW N.C. IN SCHEDULE AT AIRFLOW LISTED ON PLAN.

DUCT MATERIAL SCHEDULE

DESCRIPTION	INSULATION		
	TYPE	THICKNESS	R-VALUE
SUPPLY AIR (SA)	EXTERIOR WRAP W/ FSK JACKET	2"	R-8
RETURN AIR (RA)	NONE	- -	- -
EXHAUST AIR (EA)	SEE BELOW	- -	- -
OUTSIDE AIR (OA)	EXTERIOR WRAP W/ FSK JACKET	3"	R-8
EA FROM BACKDRAFT DAMPER TO TERMINATION	EXTERIOR WRAP W/ FSK JACKET	3"	R-8
ALL FLEXIBLE DUCT - 5' LENGTH MAX	INTEGRAL	2"	R-8
ALL EXTERIOR DUCTWORK	EXTERIOR ALUMINUM JACKET	3"	R-8

GENERAL NOTES:
1. ALL RECTANGULAR DUCTWORK TO BE GALVANIZED SHEET METAL
2. ALL ROUND DUCTWORK >12" TO BE GALVANIZED SPIRAL SHEET METAL, ROUND DUCTWORK ≤12" PERMITTED TO BE SNAPPY DUCT IN CONCEALED LOCATIONS.
3. PROVIDE SEISMIC BRACING OF ALL DUCTWORK AS REQUIRED BY LOCAL CODES.
4. ALL SHEET METAL DUCTWORK SHALL BE A MINIMUM OF 26 GAGE SHEET METAL.
5. ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED AS PER SMACNA GUIDELINES.
6. ALL DUCTWORK SHALL BE SEALED IN ACCORDANCE WITH SMACNA AND THE CURRENT EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE.
7. ALL DUCT INSULATION MUST HAVE FLAME SPREAD LESS THAN 25 AND SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E84 OR UL 723.
8. ALL OUTSIDE AIR DUCTWORK INSULATION SHALL HAVE INTEGRAL VAPOR BARRIER IN INSULATION JACKET AND SHALL BE SEALED VAPOR TIGHT.
9. ALL EXHAUST DUCTWORK SHALL BE INSULATED BETWEEN THE ISOLATION DAMPER AND THE BUILDING EXTERIOR PENETRATION WITH R-8 INSULATION AND VAPOR BARRIER.

JACKET:
1. FACTORY APPLIED ALL SERVICE JACKETS (ASJ) SHALL BE FOIL SCRIM KRAFT (FSK), SEAL AT ALL EXPOSED SEAMS/ EDGES/ CORNERS WITH FSK ADHESIVE TAPE, REFER TO "DUCT INSULATION" SPECIFICATIONS FOR MORE INFORMATION
2. FIELD APPLIED EXTERIOR ALUMINUM JACKET SHALL BE RATED FOR OUTDOOR USE. (POLYGUARD, ALUMAGUARD 60 OR APPROVED EQUAL).

HVAC LEGEND

18"x12"	RECTANGULAR DUCTWORK		MOTORIZED DAMPER
16"ø	ROUND DUCTWORK		ZONE DAMPER
	INTERIOR DUCT LINING		BYPASS DAMPER
# CFM	AIR DEVICE NUMBER AND CFM	R	DUCT RISE (IN DIRECTION OF AIRFLOW)
	CEILING SUPPLY DIFFUSER	D	DUCT DROP (IN DIRECTION OF AIRFLOW)
	CEILING RETURN GRILLE	T	THERMOSTAT
	CEILING EXHAUST GRILLE	S	TEMPERATURE SENSOR
	TURNING VANE	S	WALL SWITCH
	SIDEWALL SUPPLY GRILLE	A	ADJUSTABLE TEMP SENSOR
	SIDEWALL RETURN GRILLE	P	BUILDING PRESSURE SENSOR
	MANUAL VOLUME DAMPER	C	CO2 SENSOR

PIPE MATERIAL SCHEDULE

SYSTEM	LINETYPE	ABBREV	PIPE MATERIAL	INSUL
REFRIGERANT		REF	'ACR' COPPER	1/2"

NOTE:
1. INSULATION THICKNESS IS BASED ON A CONDUCTIVITY NOT EXCEEDING 0.27 BTU • INCH / (HR • FT² • °F)
2. PROVIDE FIBERGLASS WITH ALL SERVICE JACKET
5. ALL SERVICE INSULATION JACKET IS TO BE SEALED AT ALL SEAMS, EDGES, ETC.
8. ANY CONNECTIONS THAT ARE DISSIMILAR METALS SHALL REQUIRE DIELECTRIC NIPPLE.
9. EXTERIOR ASJ SHALL BE ALUMINUM JACKET RATED FOR OUTDOOR USE WITH UV PROTECTIVE COATING (POLYGUARD, UMAGUARD 60 OR APPROVED EQUAL).

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HVAC NOTES & SCHEDULES

SheetNumber:
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HVAC GENERAL NOTES

A. ALL NEW PIPING, DUCTWORK AND EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE 2019 CALIFORNIA MECHANICAL CODE AND THE 2019 CALIFORNIA BUILDING CODE REQUIREMENTS.

B. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND DO NOT NECESSARILY SHOW EXACT LOCATIONS AND SIZES OF ALL EXISTING DUCTWORK, PIPING, SYSTEM AND EQUIPMENT UNLESS SPECIFICALLY DIMENSIONED. IT IS NOT THE INTENT OF THESE DRAWINGS TO GRAPHICALLY REPRESENT ALL OF THE WORK REQUIRED FOR A COMPLETE INSTALLATION IN EVERY RESPECT. THE PURPOSE OF THESE PLANS IS TO INDICATE THE INTENDED SIZES, APPROXIMATE LOCATION AND ROUTING OF MAJOR COMPONENTS. ADJUST TO FIELD CONDITIONS. ACTUAL CONDITIONS AND LOCATIONS SHALL BE FIELD VERIFIED.

C. EXAMINE AND REFER TO ALL ARCHITECTURAL, STRUCTURAL, ELECTRICAL, MECHANICAL, FIRE PROTECTION AND SITE CIVIL DRAWINGS FOR CONSTRUCTION CONDITIONS WHICH MAY AFFECT THE CONTRACTORS WORK. INSPECT THE EXISTING FACILITIES (IF EXIST) FOR VERIFICATION OF EXISTING CONDITIONS AND SYSTEMS WHICH MAY HAVE AN EFFECT ON HIS/HER WORK PROR TO SUBMISSION OF BID.

D. IT IS NECESSARY FOR ALL TRADES INVOLVED TO COORDINATE WITH EACH OTHER AND VERIFY THAT THERE ARE NO CONFLICTS IN LOCATION OF DUCTS, CONDUITS, DIFFUSERS, BOXES AND OTHER ITEMS THROUGHOUT THIS PROJECT BEFORE FINAL PLACEMENT OF MATERIALS. REFER TO ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND FIRE PROTECTION SHOP DRAWINGS FOR ADDITIONAL DETAILS NECESSARY FOR COORDINATION.

E. THE CONTRACTOR IS TO PROVIDE MATERIALS, LABOR, TRANSPORTATION, TOOLS, PERMITS, FEES, INSPECTIONS, UTILITIES AND INCIDENTALS NECESSARY FOR THE COMPLETE INSTALLATION OF THE WORK INDICATED AND DESCRIBED IN THESE CONTRACT DOCUMENTS.

F. LOCATIONS AND DIMENSIONS OF EXISTING FACILITIES IDENTIFIED ON THIS DRAWING ARE APPROXIMATE AND REPRESENT THE BEST AVAILABLE INFORMATION BASED ON A COMBINATION OF FIELD INVESTIGATIONS AND VARIOUS DESIGN AND RECORD DRAWINGS AVAILABLE AT THE TIME OF DESIGN. FIELD VERIFY LOCATIONS AND DIMENSIONS PRIOR TO ORDERING EQUIPMENT AND DURING PERFORMANCE OF THE WORK. PROVIDE ALL DEMOLITION WORK, NECESSARY FITTINGS, TRANSITIONS, AND OTHER COMPONENTS AS REQUIRED FOR A COMPLETE AND FUNCTIONAL INSTALLATION OF NEW SYSTEMS AT NO ADDITIONAL COST TO THE OWNER.

G. THE CONTRACTOR IS TO BE RESPONSIBLE FOR ANY ADDITIONAL DETAILS OR SPECIAL CONSTRUCTION REQUIRED IN ORDER TO COMPLETE THE INSTALLATION, WHETHER MENTIONED OR NOT. THE CONTRACTOR IS TO PROVIDE ALL MATERIALS AND EQUIPMENT THAT ARE TO BE FURNISHED FOR THE PROPER INSTALLATION OF THE TYPE OF EQUIPMENT AND SYSTEMS INDICATED.

H. ALL EQUIPMENT SHALL BE INSTALLED LEVEL, PLUMB, AND FIRMLY ANCHORED IN LOCATIONS INDICATED. OBSERVE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOGNIZED INDUSTRY PRACTICES TO INSURE THAT PRODUCTS SERVE THEIR INTENDED FUNCTION.

I. FOLLOW MANUFACTURES WRITTEN INSTALLATION INSTRUCTION FOR RUNNING THE COMBUSTION AIR AND VENT PIPING AS WELL AS THE TERMINATION THROUGH THE ROOF. FOLLOW ALL SAFETY INSTRUCTIONS.

J. PROVIDE SEISMIC BRACING OF ALL EQUIPMENT, PIPING, AND DUCTWORK AS REQUIRED BY LOCAL CODES.

K. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL FIRE BARRIERS, FIRE PARTITIONS, FIRE WALLS OR ANY OTHER FIRE AND/OR SMOKE SEPARATION WITHIN THE BUILDING AS DEFINED BY THE ARCHITECTURAL CODE PLAN WITH A UL LISTED FIRE AND/OR SMOKE STOP SYSTEM.

L. ALL MATERIAL IN A PLENUM RATED SPACE SHALL HAVE A SPREAD NOT EXCEEDING 25 AND A SMOKE DEVELOPMENT RATING NOT EXCEEDING 50.

M. PROVIDE ACCESS DOORS TO ALLOW SERVICE AND INSPECTION OF EQUIPMENT, VALVES, DAMPERS, DEVICES INSTALLED ABOVE NON-REMOVABLE CEILINGS.

N. ALL ELEMENTS PENETRATING BUILDING COMPONENTS (ROOF ASSEMBLIES, WALL ASSEMBLIES, ETC.) SHALL BE SEALED WEATHER AND WATER TIGHT.

O. ALL NEW PIPING SHALL BE IDENTIFIED WITH SETON SETMARK PIPE MARKERS, LETTERED TO MATCH EXISTING AND MARKED AT A MAXIMUM OF EVERY 25 FT. ALSO, ALL NEW VALVES SHALL BE IDENTIFIED WITH BRASS OR ALUMINUM VALVE TAGS.

P. PROVIDE PIPE GUIDES, EXPANSION JOINTS, AND HANGERS PER MANUFACTURER'S RECOMMENDATIONS.

Q. ALL PIPING WALL PENETRATIONS SHALL HAVE A CHROME ESCUTCHEON PLATE. ALL SOLDER TO BE LEAD-FREE TYPE. AT THE CONTRACTORS OPTION MECHANICAL COMPRESSION TYPE FITTING (I.E. PRO-PRESS) MAY BE USED.

R. VERIFY THE LOCATION OF ALL THERMOSTATS AND SENSORS WITH THE ENGINEER AND ARCHITECT PRIOR TO INSTALLATION. INSTALL THERMOSTATS 60" ABOVE FINISHED FLOOR PER ADA REQUIREMENTS.

S. ALL DUCT WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF SMACNA DUCT WORK CONSTRUCTION MANUALS, MINIMUM GAUGE OF 24, GALVANIZED STEEL. DUCTWORK SHALL BE AIRTIGHT (5% LEAKAGE). ALL TRANSVERSE JOINTS AND LONGITUDINAL SEAMS SHALL BE SEALED. FABRICATE ELBOWS WITH CENTERLINE RADIUS EQUAL TO 1.5 TIMES THE DUCT WIDTH IN THE PLANE OF THE TURN; AND FABRICATE TO INCLUDE FACTORY MANUFACTURED TURNING VANES IN ELBOWS WHERE SHORTER RADIUS IS NECESSARY.

T. PROVIDE FLEX CONNECTIONS FROM ALL DUCT WORK TO EQUIPMENT CONNECTIONS ON THIS PROJECT.

U. FLEXIBLE DUCT SHALL NOT BE USED IN PLACE OF ELBOWS.

V. A COMPLETE AIR AND WATER SYSTEM TEST AND BALANCE (T&B) SHALL BE PERFORMED BY A NEBB OR AABC CERTIFIED T&B CONTRACTOR FOR ALL NEW AND MODIFIED DEVICES. MECHANICAL CONTRACTOR SHALL MODIFY EQUIPMENT AS DIRECTED BY BALANCING CONTRACTOR, IF REQUIRED, TO ACHIEVE DESIGN PARAMETERS WITH NO EXTRA COST TO THE OWNER. T&B REPORT SHALL BE PREPARED AND SUBMITTED TO ENGINEER. REPORT SHALL INCLUDE ALL AIR AND WATER FLOW READINGS, ALL TEMPERATURE AND PRESSURE SETPOINTS AND ALL ELECTRICAL CONDITIONS FOR ALL DEVICES. REPORT SHALL ALSO VERIFY PROPER OPERATION OF ENTIRE CONTROL SYSTEM. WHERE REQUIRED FOR AIR BALANCING, INSTALL ADDITIONAL MANUAL VOLUME DAMPERS.

W. THE MECHANICAL CONTRACTOR SHALL PROVIDE THE OWNER REPRESENTATIVE WITH UP TO 4 HOURS OF TRAINING TO ENSURE PROPER OPERATION AND MAINTENANCE OF THE SYSTEMS.

X. ALL DUCTWORK SHALL BE SEALED AND INSULATED IN ACCORDANCE WITH THE CALIFORNIA MECHANICAL CODE (CMC) SECTIONS 601, 602, 603, 604, 605, AND ANSI/SMACNA-006-2006.

UNIT HEATER SCHEDULE

MARK	AREA SERVED	MFR	MODEL NUMBER	HEATING TYPE	GAS CONN.	INPUT/OUTPUT (MBH)	COMB. AIR	VENT	CFM	IGNITION	H.P.	WEIGHT	ADDITIONAL DETAILS
UH-1	110	MODINE	HD30	NATURAL GAS	1/2"	30 / 24.6	ATMOSPHERIC	3"	500	SPARK	1/15	60 #	SEE BELOW
UH-2	110	MODINE	HD30	NATURAL GAS	1/2"	30 / 24.6	ATMOSPHERIC	3"	500	SPARK	1/15	60 #	SEE BELOW

ACCESSORIES:
1. PROVIDE FACTORY MOUNTED DISCONNECT
2. TOTALLY ENCLOSED FAN MOTOR
3. THERMOSTAT, RELAY KIT AND STEP DOWN TRANSFORMER
4. FOUR-POINT SUSPENSION/MOUNTING ISOLATION KIT
5. MANUAL SHUT-OFF AND UNION
6. TWO-STAGE NATURAL GAS VALVE
7. PROVIDE FACTORY VENT KIT THROUGH SIDEWALL
8. ALL STANDARD ACCESSORIES

CONTROLS:
1. PROVIDE INDEPENDENT THERMOSTAT.

ELECTRICAL DATA:
SEE MEP COORDINATION SCHEDULE FOR STARTER/DISCONNECT AND ALL OTHER ELEC. DATA.

EXHAUST FAN SCHEDULE

MARK	SERVING	MANF.	MODEL NUMBER	AIRFLOW (CFM)	SONES	E.S.P. (IN.WC)	DRIVE	TYPE	VOLT-PHASE	MOTOR (HP)	CONTROL	ADDITIONAL DETAILS
EF-1	110 - GENERAL EXHAUST FAN, 1 OF 2	COOK	ACE-D 120C15D	750	6.2	0.50	DIRECT	ROOF	120-1	0.25	GAS DETECTION SYSTEM, GDS-1	SEE BELOW
EF-2	110 - GENERAL EXHAUST FAN, 2 OF 2	COOK	ACE-D 150C17D	3000	23	0.75	DIRECT	ROOF	208-3	1.50	GAS DETECTION SYSTEM, GDS-1	SEE BELOW

ACCESSORIES:
1. STANDARD DISCONNECT PREWIRED.
2. FAN SPEED CONTROLLER.
3. STANDARD FINISH.
4. ALUMINUM BIRD SCREEN.
4. VIBRATION ISOLATORS.

CONTROLS:
1. TO BE CONTROLLED BY GAS DETECTION SYSTEM.

GAS DETECTION SYSTEM SCHEDULE

MARK	MANF.	MODEL NUMBER	DETECTED GASES	CONTROL STAGES	ADDITIONAL DETAILS
GDS-1	HONEYWELL	301C	CO / NO2	2	SEE BELOW

NOTES AND ACCESSORIES:
1. INSTALL CONTROLLER AND ROOM SENSORS PER MANUFACTURERS WRITTEN INSTRUCTION
2. PROVIDE FACTORY STARTUP, CALIBRATION AND COMMISSIONING.
3. PROVIDE DEMONSTRATION AND TRAINING TO OWNER.
4. PROVIDE ALL SENSORS, ADDITIONAL CONTROLLERS, WIRING HARDWARE ETC. FOR A COMPLETELY OPERATIONAL AND FULLY FUNCTIONAL SYSTEM.
5. GAS DETECTION SYSTEM SHALL BE SUPERVISED BY FIRE ALARM SYSTEM. COORDINATE WITH FIRE ALARM CONTRACTOR.

CONTROL:
SEE SHEET M0.4 FOR ALL CONTROL INFORMATION.

ALARMS:
ENABLE AUDIBLE AND VISUAL ALARMS THROUGHOUT SPACE. AUDIBLE ALARMS TO BE HEARD FROM ANY LOCATION IN THE SPACE. VISUAL ALARMS TO BE SEEN IN ANY LOCATION OF THE SPACE WITHOUT OBJECT OBSTRUCTION.

LOUVER SCHEDULE

MARK	MFR	MODEL NUMBER	SIZE (W"xH")	TYPE	MATERIAL	FUNCTION	AIRFLOW (CFM)	PRESSURE DROP (in WC)	AIR VELOCITY (FPM)	ADDITIONAL DETAILS
L-1	RUSKIN	ELF6375DX	24" x 18"	STATIONARY	ALUMINUM	INTAKE	920	0.09	719	SEE BELOW
L-2	RUSKIN	ELF6375DX	24" x 18"	STATIONARY	ALUMINUM	EXHAUST	920	0.07	719	SEE BELOW
L-3	RUSKIN	ELF6375DX	30" x 48"	STATIONARY	ALUMINUM	INTAKE	3700	0.09	720	SEE BELOW

NOTES:
1. VERIFY ROUGH OPENING DIMENSIONS WITH CONSTRUCTION MANAGER PRIOR TO ORDERING.
2. DRAINABLE LOUVER WITH BIRDSCREEN.
3. ARCHITECTURAL FIELD REPRESENTATIVE TO SELECT FINAL COLOR.

CONTROL DAMPER SCHEDULE

MARK	MFR	MODEL NUMBER	PHYSICAL DIMENSIONS (IN.)			FUNCTION	MAX CFM	MOUNTING	ADDITIONAL DETAILS
			WIDTH	HEIGHT	DEPTH				
MD-1	RUSKIN	CD40X2	30"	12"	4"	INTAKE	750	DUCT	SEE BELOW
MD-2	RUSKIN	CD40X2	30"	36"	4"	INTAKE	3000	DUCT	SEE BELOW

NOTES:
1. PROVIDE 2 POSITION (LOW VOLTAGE) MOTOR ACTUATOR(S) TO BE CONTROLLED BY GAS DETECTION SYSTEM.
2. MOTORIZED CONTROL DAMPER AND ACTUATOR SHALL BE PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR.
3. PROVIDE EXTRUDED TPR BLADE EDGE SEALS AND FLEXIBLE METAL COMPRESSION TYPE JAM SEALS.

ELECTRIC HEATER SCHEDULE (WALL-MOUNTED)

MARK	AREA SERVED	MFR	MODEL NUMBER	VOLT-PHASE	WATTS	DIMENSION			FINISH	MOUNTING	ADDITIONAL DETAILS
						LENGTH	WIDTH	HEIGHT			
EWH-1	STAIR S-1	KING	LPWA2045	208V-1	2,750	11-1/2"	3-3/4"	23"	SILVER	12" AFF	SEE BELOW
EWH-2	STAIR S-2	KING	LPWA2045	208V-1	3,500	11-1/2"	3-3/4"	23"	SILVER	12" AFF	SEE BELOW
EWH-3	HALL 100	KING	LPWA2045	208V-1	3,500	11-1/2"	3-3/4"	23"	SILVER	12" AFF	SEE BELOW
EWH-4	ELEC / MECH 101	KING	LPWA2045	208V-1	3,500	11-1/2"	3-3/4"	23"	SILVER	12" AFF	SEE BELOW
EWH-5	UTILITY 111	KING	LPWA2045	208V-1	3,500	11-1/2"	3-3/4"	23"	SILVER	12" AFF	SEE BELOW

ACCESSORIES:
1. UNIT MOUNTED (INTEGRAL) T-STAT
2. INTEGRAL DISCONNECTING MEANS AND OVERLOADS
3. INTEGRAL FAN

VENTILATION CALCULATIONS

ROOM #	ROOM NAME	SPACE TYPE	AREA (SF)	OCCUPANCY (# OF PEOPLE)	REQUIRED VENTILATION (CFM)	PROVIDED VENTILATION (CFM)	REQUIRED EXHAUST (CFM)	PROVIDED EXHAUST (CFM)
100	HALLWAY	CORRIDOR	250	0	37.5	40	-	-
103	RESTROOM	RESTROOM (PUBLIC)	80	0	-	-	70	70
104	RESTROOM	RESTROOM (PUBLIC)	80	0	-	-	70	70
105	LOBBY	CORRIDOR	60	2	30	40	-	-
106	SHOP	LIGHT ASSEMBLY	520	5	75	80	-	-
107	STORAGE	DRY STORAGE	1510	0	226.5	230	-	-
108	HALLWAY	CORRIDOR	140	0	21	30	-	-
109	BREAK ROOM	BREAK ROOM	350	10	175	180	105	140
110	VEHICLE STORAGE	GARAGE	4815	0	-	-	722	750
111	UTILITY	JANITOR	80	0	-	-	80	80
200	HALLWAY	CORRIDOR	100	0	15	30	-	-
203	RESTROOM	RESTROOM (PUBLIC)	80	0	-	-	70	70
204	RESTROOM	RESTROOM (PUBLIC)	80	0	-	-	70	70
205	CONFERENCE	CONFERENCE	240	12	180	180	-	-
206	OPEN OFFICE	OFFICE	2660	20	399	400	-	-
207	SUPERVISOR OFFICE	OFFICE	230	2	34.5	40	-	-

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Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
HVAC NOTES & SCHEDULES

SheetNumber:
M0.2

MECHANICAL SPECIFICATIONS

GENERAL

1. THE MECHANICAL CONTRACTOR SHALL INCLUDE ALL ITEMS, ARTICLES, MATERIALS, OPERATIONS AND METHODS LISTED, MENTIONED, OR SCHEDULED IN THESE SPECIFICATIONS AND THE ACCOMPANYING DRAWINGS. ALL MATERIAL, EQUIPMENT, AND LABOR SHALL BE FURNISHED TOGETHER WITH ALL INCIDENTAL ITEMS REQUIRED BY GOOD PRACTICE TO PROVIDE THE COMPLETE SYSTEMS DESCRIBED.
2. EXAMINE AND REFER TO ALL ARCHITECTURAL, CIVIL, STRUCTURAL, ELECTRICAL, UTILITY, LANDSCAPE AND MECHANICAL DRAWINGS AND SPECIFICATIONS FOR CONSTRUCTION CONDITIONS WHICH MAY AFFECT THE MECHANICAL WORK. INSPECT THE BUILDING SITE AND EXISTING FACILITIES FOR VERIFICATION OF PRESENT CONDITIONS. MAKE PROPER PROVISIONS FOR THESE CONDITIONS IN PERFORMANCE OF THE WORK AND COST THEREOF.
3. ALL WORK ON THE PROJECT SHALL CONFORM TO ALL LOCAL CITY, STATE AND NATIONAL CODES AND REGULATIONS, INCLUDING BUT NOT LIMITED TO THE N.F.P.A., N.E.C., i.B.C., I.E.C.C., I.M.C., U.P.C., THE LOCAL UTILITY SERVING COMPANIES AND THE AUTHORITY HAVING JURDISCTION.
4. THE MECHANICAL AND ELECTRICAL CONTRACTORS SHALL BE RESPONSIBLE FOR AND PAY FOR ALL FEES AND PERMITS REQUIRED FOR WORK UNDER THEIR CONTRACT AND UNDER THEIR SUPERVISION BY SUBCONTRACT.
5. ALL USAGE CONTRACTS BETWEEN THE OWNER AND THE SERVING UTILITIES COMPANY, SUCH AS MEMBERSHIP AND USAGE CHARGES OR FEES, ETC., FOR THE PURPOSE OF OBTAINING THE SERVICES FOR THE UTILITY COMPANY SHALL BE APPLIED FOR AND PAID FOR BY THE OWNER.
6. SMOKING SHALL NOT BE PERMITTED ANYWHERE IN THIS FACILITY.

MATERIALS AND EQUIPMENT

1. MANUFACTURER'S TRADE NAMES AND CATALOG NUMBERS ARE LISTED TO INDICATE SPECIAL CONDITIONS AND QUALITY OF MATERIALS OR EQUIPMENT TO BE SUPPLIED AND INSTALLED. ALTERNATIVE EQUIPMENT OR MATERIALS MAY BE SUBMITTED FOR REVIEW FOR APPROVAL PRIOR TO ANY BIDDING. NO SUBSTITUTIONS SHALL BE ALLOWED AFTER BIDDING.
2. WRITTEN PRIOR APPROVAL FOR SUBSTITUTIONS MUST BE SUBMITTED TO AND RECEIVED BY THE ARCHITECT/ENGINEER TEN (10) DAYS PRIOR TO BID OPENING. REQUESTS FOR SUBSTITUTION ARE TO BE SUBMITTED SUFFICIENTLY AHEAD OF THE DEADLINE TO GIVE AMPLE TIME FOR EXAMINATION. PRIOR APPROVAL REQUEST FOR SUBSTITUTION MUST INDICATE THE SPECIFIC ITEM OR ITEMS TO BE FURNISHED IN LIEU OF THOSE SCHEDULED, TOGETHER WITH COMPLETE TECHNICAL AND COMPARATIVE DATA ON SCHEDULED ITEMS AND ITEMS PROPOSED FOR SUBSTITUTION.
3. HIGH ALTITUDE OPERATION: CAPACITY OF ALL EQUIPMENT IS TO BE SIZED AND MANUFACTURED TO PERFORM AT THE ELEVATION OF THE PROJECT SITE. IF NOT SPECIFICALLY INDICATED IN THE EQUIPMENT SCHEDULE OR IN THE SPECIFICATIONS PROVIDE ALL REQUIRED ACCESSORIES AND EQUIPMENT FOR PROPER OPERATION AT ELEVATION OF THE PROJECT SITE.
4. STORE MATERIALS AND EQUIPMENT INDOORS AT THE JOB SITE OR, IF THIS IS NOT POSSIBLE, STORE ON RAISED PLATFORMS AND PROTECT FROM THE WEATHER BY MEANS OF WATERPROOF COVERS. COVERINGS SHALL PERMIT CIRCULATION OF AIR AROUND THE MATERIALS TO PREVENT CONDENSATION OF MOISTURE. SCREEN OR CAP OPENINGS IN EQUIPMENT TO PREVENT THE ENTRY OF VERMIN.
5. ALL PIPING INSULATION SHALL HAVE A SPREAD NOT EXCEEDING 25 AND A SMOKE DEVELOPMENT RATING NOT EXCEEDING 50. REFRIGERANT PIPING SHALL BE 1/2" THICK CLOSED CELL ELASTOMERIC - ARMACELL BY ARMAFLEX OR EQUAL.
6. ALL NEW PIPING SHALL BE IDENTIFIED WITH SETON SET MARK PIPE MARKERS, LETTERED TO MATCH EXISTING AND MARKED AT A MAXIMUM OF EVERY 25 FT. ALSO, ALL NEW VALVES SHALL BE IDENTIFIED WITH BRASS OR ALUMINUM VALVE TAGS.
7. SEE THE MECHANCIAL PIPING SCHEDULE AND THE DOMESTIC PIPING SCHEDULE ON THE DRAWINGS FOR MATERIAL AND INSULATION REQUIREMENTS.
8. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIRE-CAULKING ALL FIRE-RATED OR SMOKE-RATED WALL PENETRATIONS OF PIPING, DUCT WORK, ETC.

INTENT OF DRAWINGS

1. THE DRAWINGS ARE PARTLY DIAGRAMMATIC AND DO NOT NECESSARILY SHOW EXACT LOCATION OF PIPING AND DUCTWORK UNLESS SPECIFICALLY DIMENSIONED. RISER AND OTHER DIAGRAMS ARE SCHEMATIC AND DO NOT NECESSARILY SHOW THE PHYSICAL ARRANGEMENT OF THE EQUIPMENT. THEY SHALL NOT BE USED FOR OBTAINING LINEAL RUNS OF PIPING OR DUCTWORK, NOR SHALL THEY BE USED FOR SHOP DRAWINGS FOR PIPING AND DUCTWORK FABRICATION OR ORDERING. DISCREPANCIES SHOWN ON DIFFERENT PLANS, OR BETWEEN PLANS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR RESOLUTION.

RESPONSIBILITY

1. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF A SATISFACTORY AND COMPLETE SYSTEM IN ACCORDANCE WITH THE INTENT OF THE DRAWING AND SPECIFICATIONS. PROVIDE, AT NO EXTRA COST, ALL INCIDENTAL ITEMS, MATERIALS, ACCESSORIES AND LABOR REQUIRED FOR COMPLETION OF THE WORK EVEN THOUGH THEY ARE NOT SPECIFICALLY MENTIONED OR INDICATED ON THE DRAWINGS OR IN THE SPECIFICATIONS.
2. THE DRAWINGS DO NOT ATTEMPT TO SHOW COMPLETE DETAILS OF THE BUILDING CONSTRUCTION WHICH AFFECT THE MECHANICAL INSTALLATION; AND REFERENCE IS THEREFORE REQUIRED TO THE ARCHITECTURAL, CIVIL, STRUCTURAL, LANDSCAPE AND ELECTRICAL DRAWINGS AND SPECIFICATIONS AND TO SHOP DRAWINGS OF ALL TRADES FOR ADDITIONAL DETAILS WHICH AFFECT THE INSTALLATION OF THE WORK COVERED UNDER THIS DIVISION OF THE CONTRACT.
3. LOCATION OF MECHANICAL SYSTEM COMPONENTS SHALL BE CHECKED FOR CONFLICTS WITH OPENINGS, STRUCTURAL MEMBERS AND COMPONENTS OF OTHER SYSTEMS HAVING FIXED LOCATIONS. IN THE EVENT OF ANY CONFLICTS, THE ARCHITECT/ENGINEER SHALL BE CONSULTED AND HIS DECISION SHALL GOVERN. NECESSARY CHANGES SHALL BE MADE AT THE CONTRACTOR'S EXPENSE.
4. TAKE EXTREME CAUTION NOT TO INSTALL WORK THAT CONNECTS TO EQUIPMENT UNTIL SUCH TIME AS COMPLETE SHOP DRAWINGS OF SUCH EQUIPMENT HAVE BEEN APPROVED BY THE ARCHITECT/ENGINEER. ANY WORK INSTALLED BY THE CONTRACTOR, PRIOR TO APPROVAL OF SHOP DRAWINGS, WILL BE AT THE CONTRACTOR'S RISK.
5. ALL MODIFICATIONS AND CHANGES REQUIRED DUE TO INSTALLATION OF EQUIPMENT OTHER THAN THE EQUIPMENT SCHEDULES AND SPECIFIED SHALL BE MADE AT THE CONTRACTOR'S EXPENSE, THIS INCUDEDS WORK BY OTHER TRADES. IF THE INSTALLTION OF EQUIPMENT OTHER THAN THE SCHEDULED AND SPECIFIED EQUIPMENT REQUIRES MODIFICATIONS TO STRUCTURE, ELECTRICAL SYSTEMS, PLUMBING SYSTEMS, FIRE PROTECTION OR FIRE ALARM SYSTEMS, ANY AND ALL CHANGES SHALL BE MADE AT THE MECHANICAL CONTRACTORS EXPENSE.
6. ALL WORK TO BE PERFORMED SHALL FIRST BE SCHEDULED AND SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR ACCEPTANCE.
7. THE CONTRACTOR SHALL BE CAREFUL NOT TO BLOCK ANY PATHS OF EGRESS WHILE PERFORMING THE WORK SPECIFIED.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP OF ALL MATERIALS RESULTING FROM HIS/HER WORK. CLEANUP SHALL BE PERFORMED TO THE LEVEL OF ACCEPTANCE OF THE OWNER'S REPRESENTATIVE & THE ENGINEER.
9. THE CONTRACTOR SHALL AND HEREBY DOES WARRANT AND GUARANTEE THAT ALL WORK EXECUTED UNDER HIS/HER CONTRACT SHALL BE FREE OF DEFECTS OF MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE(1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.

REVIEW & SITE INSPECTIONS

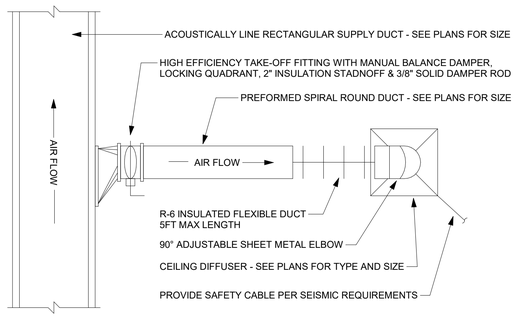
1. ALL WORK AND MATERIAL IS SUBJECT TO REVIEW AT ANY TIME BY THE ARCHITECT/ENGINEER OR HIS REPRESENTATIVE. IF THE ARCHITECT/ENGINEER OR HIS REPRESENTATIVE FINDS MATERIAL THAT DOES NOT CONFORM TO THESE SPECIFICATIONS OR THAT IS NOT PROPERLY INSTALLED OR FINISHED, CORRECT THE DEFICIENCIES IN A MANNER SATISFACTORY TO THE ARCHITECT/ENGINEER AT THE CONTRACTOR'S EXPENSE.

SHOP DRAWINGS AND SUBMITTALS

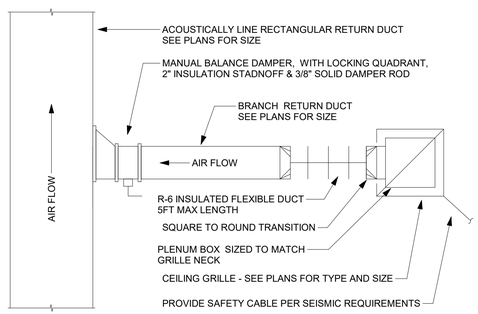
1. WITHIN 30 DAYS AFTER AWARDING OF THE MECHANICAL CONTRACT, THE MECHANICAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND SUBMITTALS FOR THE FOLLOWING PRODUCTS:
   a. VRF SYSTEM COMPONENTS - HEAT PUMPS, FANCOIL UNITS, BRANCH SELECTOR BOXES, CONTROLS AND REFRIGERANT PIPING, FITTINGS AND ACCESSORIES
   b. REGISTER GRILLES & DIFFUSERS
   c. PLUMBING FIXTURES AND TRIM
   d. DOMESTIC WATER HEATERS AND ASSOCIATED ACCESSORIES
   e. DOMESTIC WATER PIPING, SANITARY WASTE AND VENT PIPING
2. ALL SHOP DRAWINGS AND SUBMITTALS SHALL BE IN THE FORM OF ELECTRONICALLY TRANSMITTED PDFS. SHOP DRAWINGS AND SUBMITTALS SHALL INCLUDE SHOP DRAWINGS AND LITERATURE SHOWING ITEM TO BE USED, SIZE, DIMENSIONS, CAPACITY, ROUGH IN, ETC., AS REQUIRED FOR COMPLETE CHECK AND INSTALLATION. MANUFACTURER'S LITERATURE SHOWING MORE THAN ONE ITEM SHALL BE CLEARLY MARKED AS TO WHICH ITEM IS BEING FURNISHED OR IT WILL BE REJECTED AND RETURNED WITHOUT REVIEW.
3. EACH ITEM SUBMITTED MUST BE CLEARLY MARKED AS FOLLOWS FOR PURPOSES OF IDENTIFICATION AND RECORD. SUBMITTALS NOT MARKED (TYPEWRITTEN ONLY) AS DESCRIBED BELOW WILL BE REJECTED AND RETURNED WITHOUT REVIEW.
   DATE, NAME OF PROJECT, BRANCH OF WORK, SUBMITTED BY, SPECIFICATION OR PLAN REFERENCE:
4. PRIOR TO THEIR SUBMISSION, EACH SUBMITTAL SHALL BE THOROUGHLY CHECKED BY THE CONTRACTOR FOR COMPLIANCE WITH THE CONTRACT DOCUMENT REQUIREMENTS. EACH SUBMITTAL SHALL THEN BEAR A STAMP EVIDENCING SUCH CHECKING AND SHALL SHOW CORRECTIONS MADE, IF ANY. SUBMITTALS REQUIRING EXTENSIVE CORRECTIONS SHALL BE REVISED BEFORE SUBMISSION TO THE ENGINEER. EACH SUBMITTAL NOT STAMPED AND SIGNED BY THE CONTRACTOR EVIDENCING SUCH CHECKING WILL BE REJECTED AND RETURNED WITHOUT REVIEW.
5. REVIEW OF THE SHOP DRAWINGS AND LITERATURE BY THE ENGINEER SHALL NOT RELIEVE THE CONTRACTOR FOR RESPONSIBILITY FOR DEVIATIONS FOR THE DRAWINGS OR SPECIFICATIONS, NOR SHALL IT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS IN THE SHOP DRAWINGS OR LITERATURE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE MATERIALS AND EQUIPMENT WHICH MEET THE SPECIFICATIONS AND JOB REQUIREMENTS.

STARTUP, TESTING AND OWNER TRAINING

1. ENGAGE A FACTORY AUTHORIZED REPRESENTATIVE TO CONDUCT AN INSPECTION OF THE INSTALLATION OF THEIR COMPANIES EQUIPMENT PRIOR TO START-UP OF ANY EQUIPMENT. THE REPRESENTATIVE SHALL SUBMIT A REPORT IDENTIFYING AND DEFICIENCIES TO THE ARCHITECT, ENGINEER AND CONSTRUCTION MANAGER. ANY DEFICIENCIES IDENTIFIED SHALL BE ADDRESSED PRIOR TO START-UP. START-UP SHALL BE CONDUCTED BY A FACTORY AUTHORIZED REPRESENTATIVE. STARTUP REPORTS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER ONCE COMPLETED.
2. ENTIRE NEW AIR AND WATER SYSTEMS SHALL BE COMPLETELY BALANCED TO THE SATISFACTION OF THE ENGINEER IN ACCORDANCE WITH THE STANDARDS OF NEBB. APPROVED TEST AND BALANCE CONTRACTORS ARE: AIR COMMANDER, TEST COMM, RGO INC.
3. THE MECHANICAL CONTRACTOR SHALL PROVIDE 2 DAYS (16 HRS) OF TRAINING TO THE OWNER TO ENSURE THE OWNER KNOWS HOW TO OPERATE THE SYSTEMS INSTALLED UNDER THE MECHANICAL CONTRACT. PROVIDE AN ADDITIONAL 2 DAYS (16 HRS) OF ADDITIONAL SERVICE THROUGH THE FIRST YEAR OF OPERATION TO ADDRESS QUESTIONS THAT MAY ARISE.



2 CEILING SUPPLY DIFFUSER DETAIL
N.T.S.



3 CEILING RETURN AIR GRILLE DETAIL
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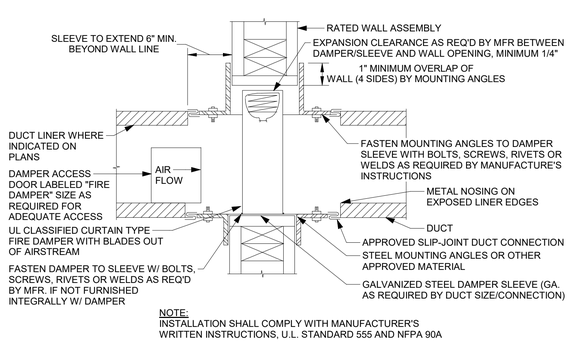
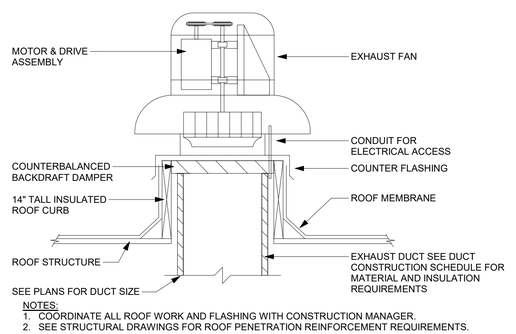


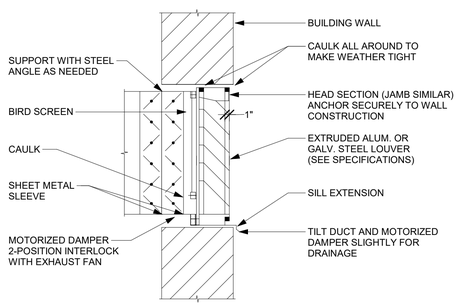
NOTE:
INSTALLATION SHALL COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, U.L. STANDARD 555 AND NFPA 90A

4 FIRE DAMPER AT WALL DETAIL
N.T.S.

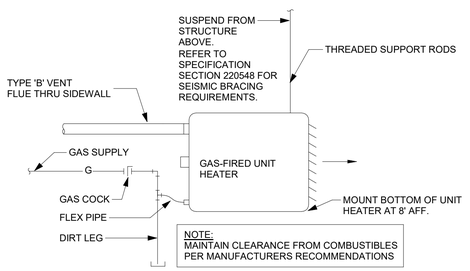


NOTES:
1. COORDINATE ALL ROOF WORK AND FLASHING WITH CONSTRUCTION MANAGER.
2. SEE STRUCTURAL DRAWINGS FOR ROOF PENETRATION REINFORCEMENT REQUIREMENTS.

5 ROOF EXHAUST FAN DETAIL
N.T.S.

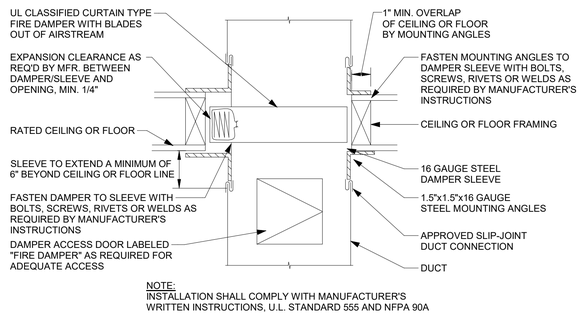


6 LOUVER WITH CONTROL DAMPER DETAIL
N.T.S.



NOTE:
MAINTAIN CLEARANCE FROM COMBUSTIBLES PER MANUFACTURERS RECOMMENDATIONS

7 UNIT HEATER DETAIL
N.T.S.



NOTE:
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8 FIRE DAMPER AT FLOOR DETAIL
N.T.S.

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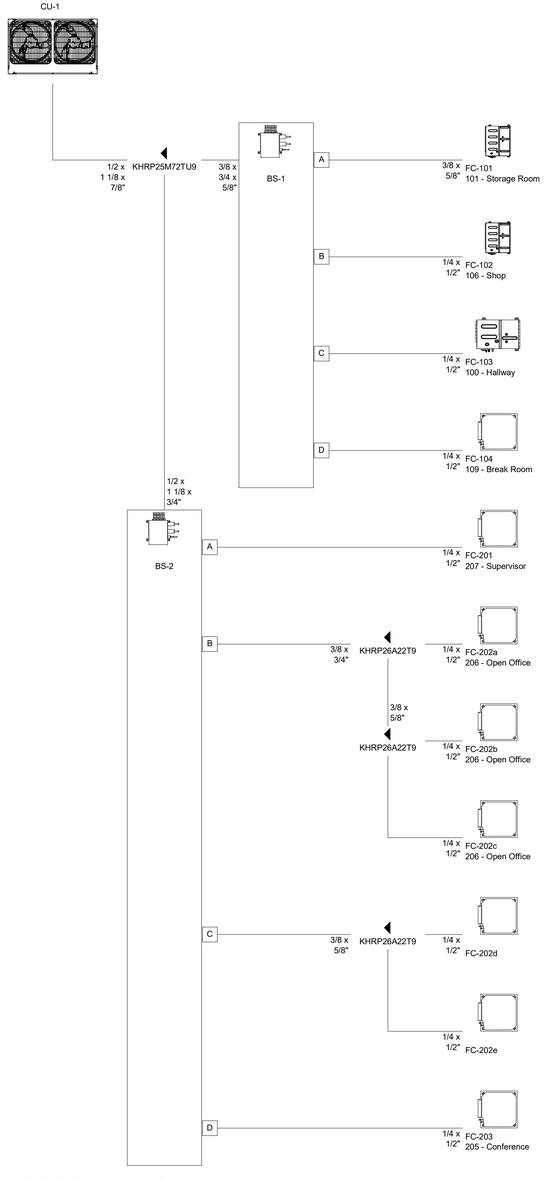
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
MECHANICAL SPECIFICATIONS & DETAILS

SheetNumber:
M0.3



1 VRF PIPING DIAGRAM
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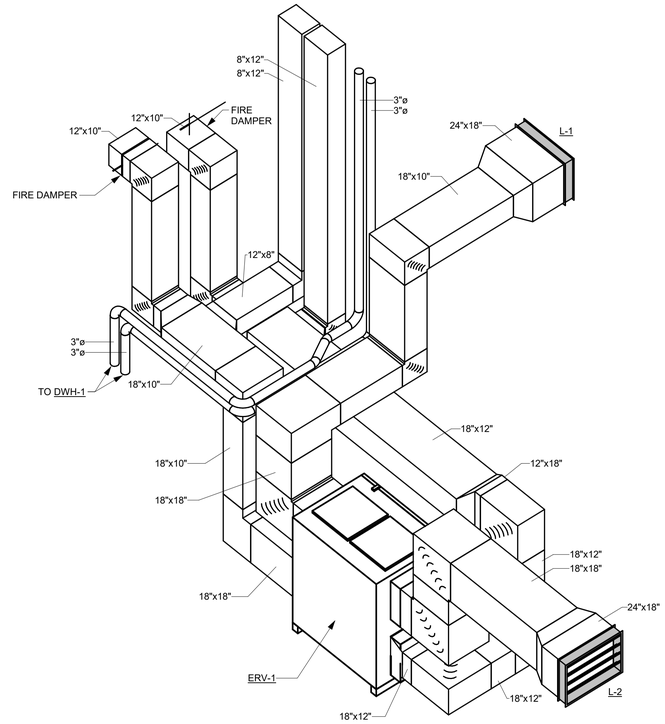
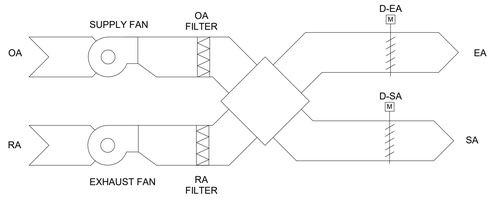


2 DUCTWORK IN MECHANICAL ROOM
N.T.S.



3 CONTROL - ERV
N.T.S.

SEQUENCE OF OPERATIONS

GENERAL

ERV-1 IS AN ENERGY RECOVERY VENTILATION UNIT. THE UNIT SUPPLIES TEMPERED FRESH AIR TO THE BUILDING WHILE EXHAUSTING AN EQUAL AMOUNT OF AIR TO MAINTAIN NEUTRAL BUILDING PRESSURE. THE UNIT USES A HEAT TRANSFER CORE TO TRANSFER ENERGY FROM THE EXHAUST AIR TO THE OUTSIDE AIR.

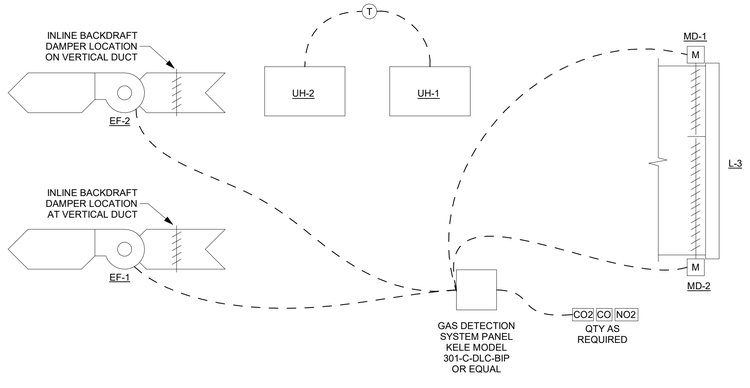
THE ERV IS EQUIPPED WITH INTEGRAL CONTROLS. THE INTEGRAL CONTROLS SHALL BE PROVIDED WITH AN INTERNAL TIME CLOCK. THE TIME CLOCK SHALL INDEX THE OCCUPIED AND UN-OCCUPIED MODES. OCCUPIED MODE SHALL BEGIN AT 7:00 AM (ADJUSTABLE) AND UN-OCCUPIED MODE SHALL BEGIN AT 7:00 PM (ADJUSTABLE)

OCCUPIED MODE

THE ERV'S INTEGRAL OUTSIDE AIR AND EXHAUST AIR DAMPERS SHALL OPEN AND THE EXHAUST AND SUPPLY FANS SHALL RUN.

UN-OCCUPIED MODE

THE UNIT OUTSIDE AIR AND EXHAUST AIR DAMPERS SHALL BE CLOSED AND THE SUPPLY AND EXHAUST FANS SHALL BE OFF.



4 CONTROL - VEHICLE STORAGE
N.T.S.

SEQUENCE OF OPERATIONS

GENERAL:

A MULTI-DAMPERED LOUVER PROVIDES MAKE-UP OUTSIDE AIR AND VENTILATION TO THE VEHICLE STORAGE AREA. THE (2) MOTORIZED DAMPERS AT THE LOUVER SHALL BE CONTROLLED BY THE GAS DETECTION SYSTEM PANEL.

(2) GAS-FIRED UNIT HEATERS PROVIDE HEATING TO THE VEHIVLE STORAGE AREA. UNIT HEATERS SHALL BE PROVIDED WITH A SINGLE THERMOSTAT, AND THE TEMPERATURE SETPOINT SHALL BE 60°F (ADJUSTABLE).

EXHAUST FANS EF-1 AND EF-2 EXHAUST AIR FROM THE VEHICLE STORAGE AREA DURING GENERAL AND EMERGENCY EXHAUST SITUATIONS. THE EXHAUST FANS SHALL BE CONTROLLED BY THE GAS DETECTION SYSTEM PANEL. THE FOLLOWING SEQUENCE OF OPERATION SHALL APPLY TO EF-1 AND EF-2.

TIME CONTROL:

PROVIDE AN ELECTRONIC TIMECLOCK TO INDEX OCCUPIED AND UNOCCUPIED MODES. OCCUPIED MODE SHALL BEGIN AT 7:00 AM (ADJUSTABLE) AND UNOCCUPIED MODE SHALL BEGIN AT 7:00 PM (ADJUSTABLE).

OCCUPIED MODE:

GENERAL CONDITION: EF-1 SHALL RUN CONTINUOUSLY AND MD-1 SHALL BE FULLY OPEN. MD-2 SHALL BE FULLY CLOSED, AND EF-2 SHALL BE OFF.

EMERGENCY CONDITION: UPON A DETECTION OF RAISED GAS AND CONTAMINANT LEVELS, MD-2 SHALL FULLY OPEN AND EF-2 SHALL RUN CONTINUOUSLY UNTIL GAS AND CONTAMINANT LEVELS ARE BELOW SETPOINT. DURING OPERATION OF EF-2, MD-1 SHALL BE FULLY OPEN, MD-2 SHALL BE FULLY OPEN, AND EF-1 SHALL BE OPERATING AS IN THE GENERAL CONDITION.

ONCE GAS AND CONTAMINANT LEVELS ARE BELOW SETPOINT, EF-2 SHALL TURN OFF AND MD-2 SHALL CLOSE.

UNOCCUPIED MODE:

EF-1 AND EF-2 SHALL BE OFF. MD-1 AND MD-2 SHALL BE CLOSED. UPON DETECTION OF RAISED GAS AND CONTAMINANT LEVELS, MD-1 AND MD-2 SHALL OPEN, AND EF-1 AND EF-2 SHALL RUN CONTINUOUSLY UNTIL GAS AND CONTAMINANT LEVELS ARE BELOW SETPOINT, THEN SHUT OFF, AND MD-1 AND MD-2 SHALL CLOSE.

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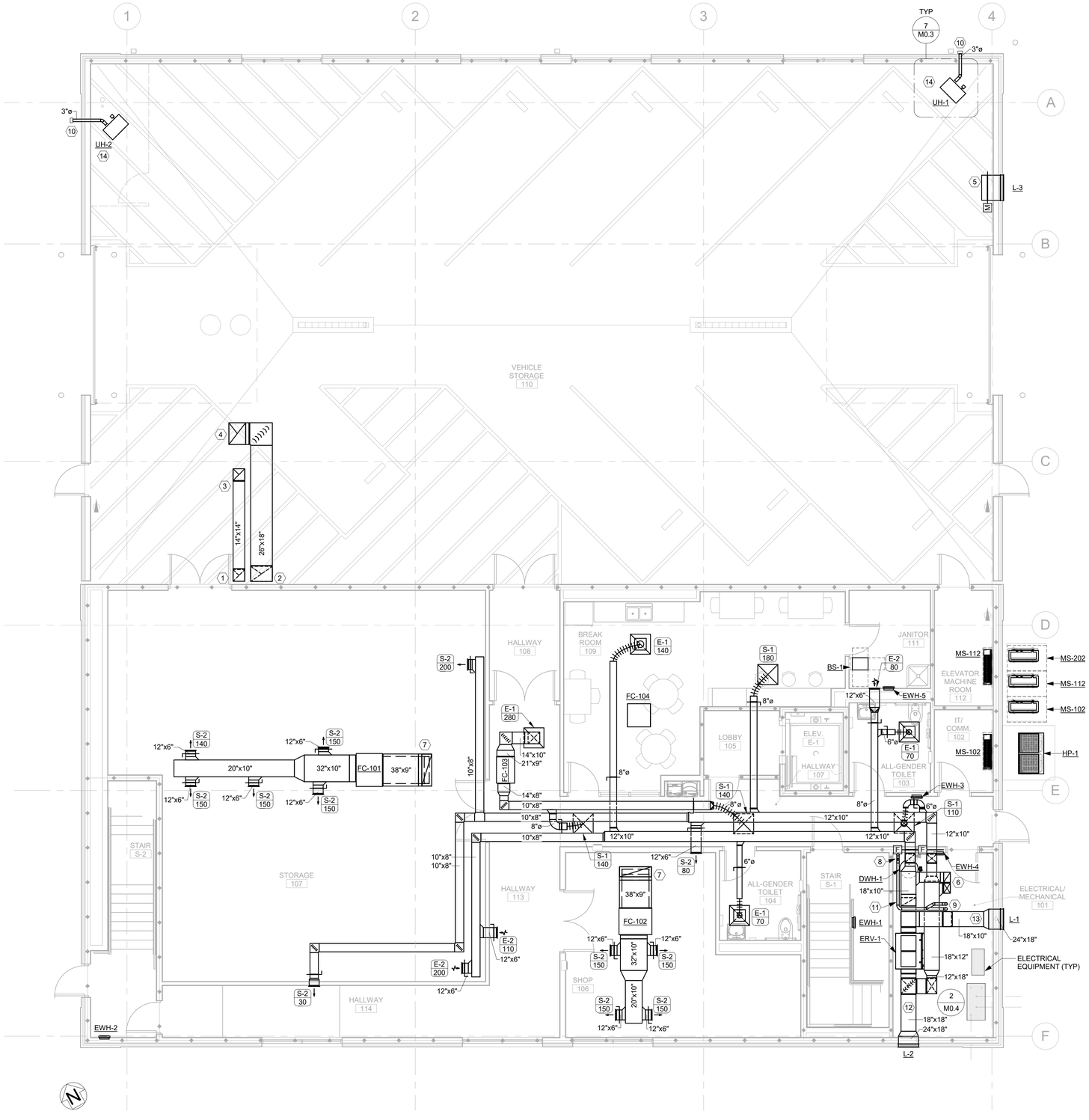
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
MECHANICAL DETAILS & CONTROLS

SheetNumber:
M0.4



1 HVAC PLAN - FIRST FLOOR
3/16" = 1'-0"

GENERAL MECHANICAL NOTES

A.) IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO FIELD COORDINATE THE LOCATION OF EQUIPMENT ROUTING OF ALL DUCTWORK AND PIPING WITH ALL OTHER TRADES.

B.) IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO REVIEW THE DRAWINGS FOR ALL DISCIPLINES AND PROVIDE ALL LABOR AND MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.

C.) COORDINATE THE INSTALLATION OF GRILLES, REGISTERS AND DIFFUSERS WITH THE ARCHITECTURAL REFLECTED CEILING PLANS AND THE ELECTRICAL LIGHTING PLANS.

D.) VERIFY THE LOCATION OF THERMOSTATS AND SENSORS WITH THE ARCHITECT AND ENGINEER PRIOR TO INSTALLATION. INSTALL THERMOSTATS 48" ABOVE FINISHED FLOOR PER ADA REQUIREMENTS.

E.) PROVIDE AND INSTALL SEISMIC BRACING FOR ALL EQUIPMENT, DUCTWORK AND PIPING PER THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE.

F.) FLEXIBLE DUCTWORK BETWEEN BRANCH DUCTS AND GRILLES, REGISTERS OR DIFFUSERS SHALL BE LIMITED TO 5FT.

G.) PROVIDE AND INSTALL FIRE, SMOKE AND/OR COMBINATION SMOKE/FIRE DAMPERS WHERE DUCTWORK PASSES THROUGH FIRE RATED ASSEMBLIES. ASSOCIATED DUCT DETECTORS SHALL BE ADDRESSABLE. SMOKE DAMPERS AND COMBINATION SMOKE/FIRE DAMPERS SHALL INCLUDE A KEYED REMOTE TEST SWITCH LOCATED IN AN ACCESSIBLE LOCATION. FIELD COORDINATE THE LOCATION OF TEST SWITCHES WITH THE ARCHITECT AND ENGINEER PRIOR INSTALLATION.

H.) SEAL ALL DUCT AND PIPE PENETRATIONS THROUGH FIRE RATED ASSEMBLIES WITH A UL-APPROVED FIRE STOP SYSTEM.

I.) PROVIDE ACCESS DOORS TO ALLOW SERVICE AND INSPECTION OF EQUIPMENT, VALVES, DAMPERS AND DEVICES INSTALLED ABOVE NON-REMOVABLE CEILINGS.

J.) PROVIDE REMOTE CONTROLLED DAMPER ACTUATORS FOR BALANCING DAMPERS INSTALLED IN INACCESSIBLE LOCATION. PROVIDE RUSKIN ZPD25 OR APPROVED EQUAL.

KEY NOTES:

1. 14"x14" EXHAUST DUCT DOWN. TERMINATE DUCTWORK 18" AFF. PROVIDE BIRD SCREEN COVER AT END OF OPEN DUCT. COORDINATE ROUTING WITH STRUCTURE.
2. 26"x18" EXHAUST DUCT DOWN. TERMINATE DUCTWORK AT 18" AFF. PROVIDE BIRD SCREEN COVER AT END OF OPEN DUCT. COORDINATE ROUTING WITH STRUCTURE.
3. 14"x14" EXHAUST DUCT UP TO EF-1.
4. 20"x20" EXHAUST DUCT UP TO EF-2.
5. PROVIDE BIRD SCREEN COVER AT END OF OPEN DUCT. INSTALL MIDDLE OF DUCT AT 8' AFF.
6. 12"x10" EXHAUST AND SUPPLY DUCT UP TO SECOND FLOOR. PROVIDE FIRE DAMPER AT PENETRATION OF SECOND FLOOR. COORDINATE ROUTING WITH STRUCTURE.
7. PROVIDE ACOUSTIC LINING AND ELBOW UP ON RETURN DUCT.
8. 3" OA AND 3" EA DOWN TO DWH-1.
9. 3" SA AND 3" EA DUCT UP. COORDINATE ROUTING WITH 18"x10" SA DUCT AND STRUCTURE.
10. PROVIDE MODINE #5H0722850005 OR EQUAL VENT TERMINAL. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
11. ROUTE 3" OA STACKED OVER 3" SA.
12. INSTALL MIDDLE OF DUCT AT 6' AFF.
13. INSTALL MIDDLE OF DUCT AT 10' AFF.
14. INSTALL BOTTOM OF UNIT HEATER AT 8' AFF.

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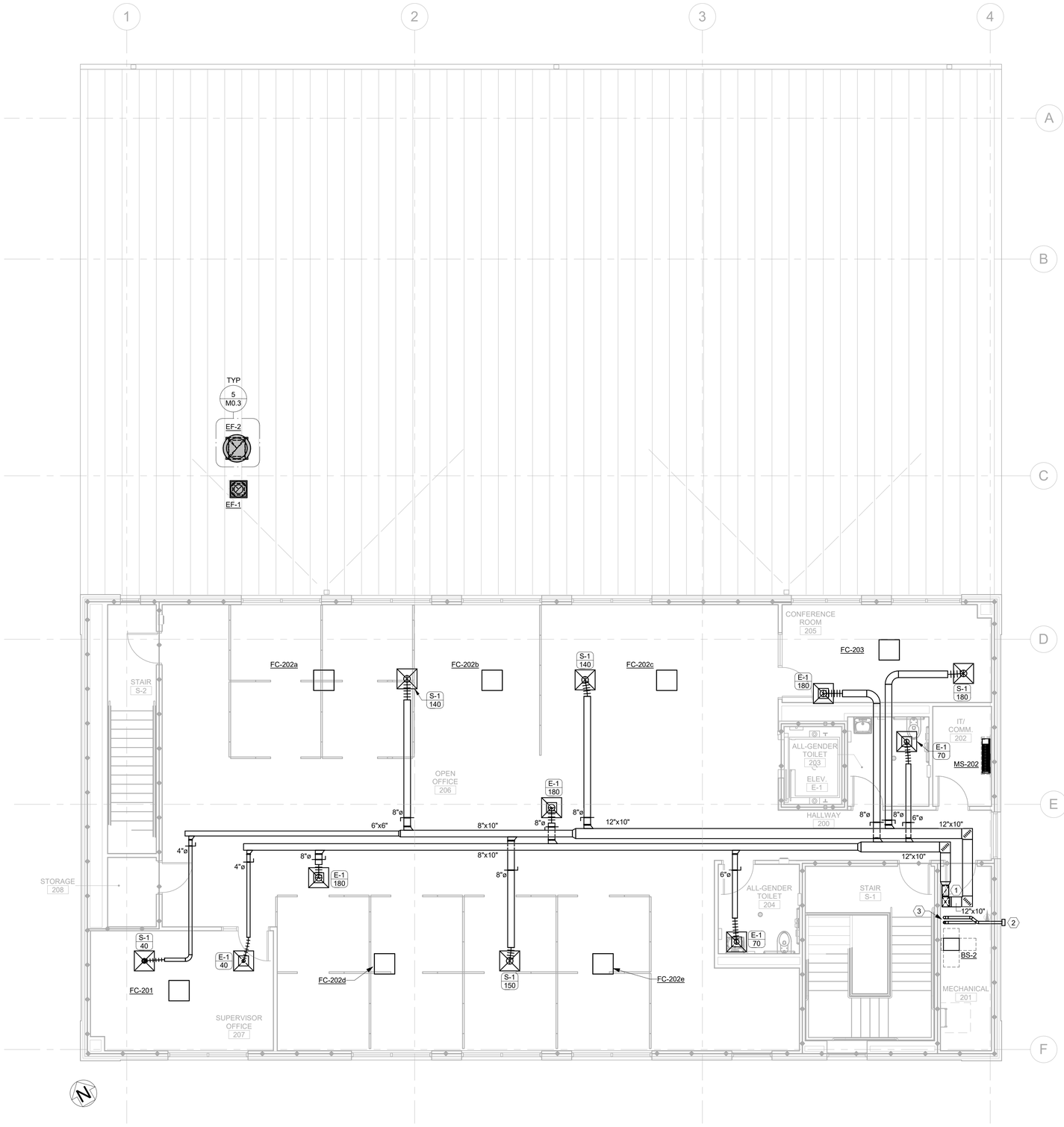
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
HVAC PLAN - FIRST FLOOR

SheetNumber:
M1.1



1 HVAC PLAN - SECOND FLOOR
N.T.S.

GENERAL MECHANICAL NOTES

A.) IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO FIELD COORDINATE THE LOCATION OF EQUIPMENT ROUTING OF ALL DUCTWORK AND PIPING WITH ALL OTHER TRADES.

B.) IT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO REVIEW THE DRAWINGS FOR ALL DISCIPLINES AND PROVIDE ALL LABOR AND MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.

C.) COORDINATE THE INSTALLATION OF GRILLES, REGISTERS AND DIFFUSERS WITH THE ARCHITECTURAL REFLECTED CEILING PLANS AND THE ELECTRICAL LIGHTING PLANS.

D.) VERIFY THE LOCATION OF THERMOSTATS AND SENSORS WITH THE ARCHITECT AND ENGINEER PRIOR TO INSTALLATION. INSTALL THERMOSTATS 48" ABOVE FINISHED FLOOR PER ADA REQUIREMENTS.

E.) PROVIDE AND INSTALL SEISMIC BRACING FOR ALL EQUIPMENT, DUCTWORK AND PIPING PER THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE.

F.) FLEXIBLE DUCTWORK BETWEEN BRANCH DUCTS AND GRILLES, REGISTERS OR DIFFUSERS SHALL BE LIMITED TO 5FT.

G.) PROVIDE AND INSTALL FIRE, SMOKE AND/OR COMBINATION SMOKE/FIRE DAMPERS WHERE DUCTWORK PASSES THROUGH FIRE RATED ASSEMBLIES. ASSOCIATED DUCT DETECTORS SHALL BE ADDRESSABLE. SMOKE DAMPERS AND COMBINATION SMOKE/FIRE DAMPERS SHALL INCLUDE A KEYED REMOTE TEST SWITCH LOCATED IN AN ACCESSIBLE LOCATION. FIELD COORDINATE THE LOCATION OF TEST SWITCHES WITH THE ARCHITECT AND ENGINEER PRIOR INSTALLATION.

H.) SEAL ALL DUCT AND PIPE PENETRATIONS THROUGH FIRE RATED ASSEMBLIES WITH A UL-APPROVED FIRE STOP SYSTEM.

I.) PROVIDE ACCESS DOORS TO ALLOW SERVICE AND INSPECTION OF EQUIPMENT, VALVES, DAMPERS AND DEVICES INSTALLED ABOVE NON-REMOVABLE CEILINGS.

J.) PROVIDE REMOTE CONTROLLED DAMPER ACTUATORS FOR BALANCING DAMPERS INSTALLED IN INACCESSIBLE LOCATION. PROVIDE RUSKIN ZPD25 OR APPROVED EQUAL.

KEY NOTES:

1. 12"x8" SUPPLY AND EXHAUST DUCT DOWN.
2. PROVIDE 3" CONCENTRIC VENT KIT. INSTALL A MINIMUM OF 10' ABOVE TOP OF L-1.
3. 3" OA AND 3" EA DOWN TO FIRST FLOOR.

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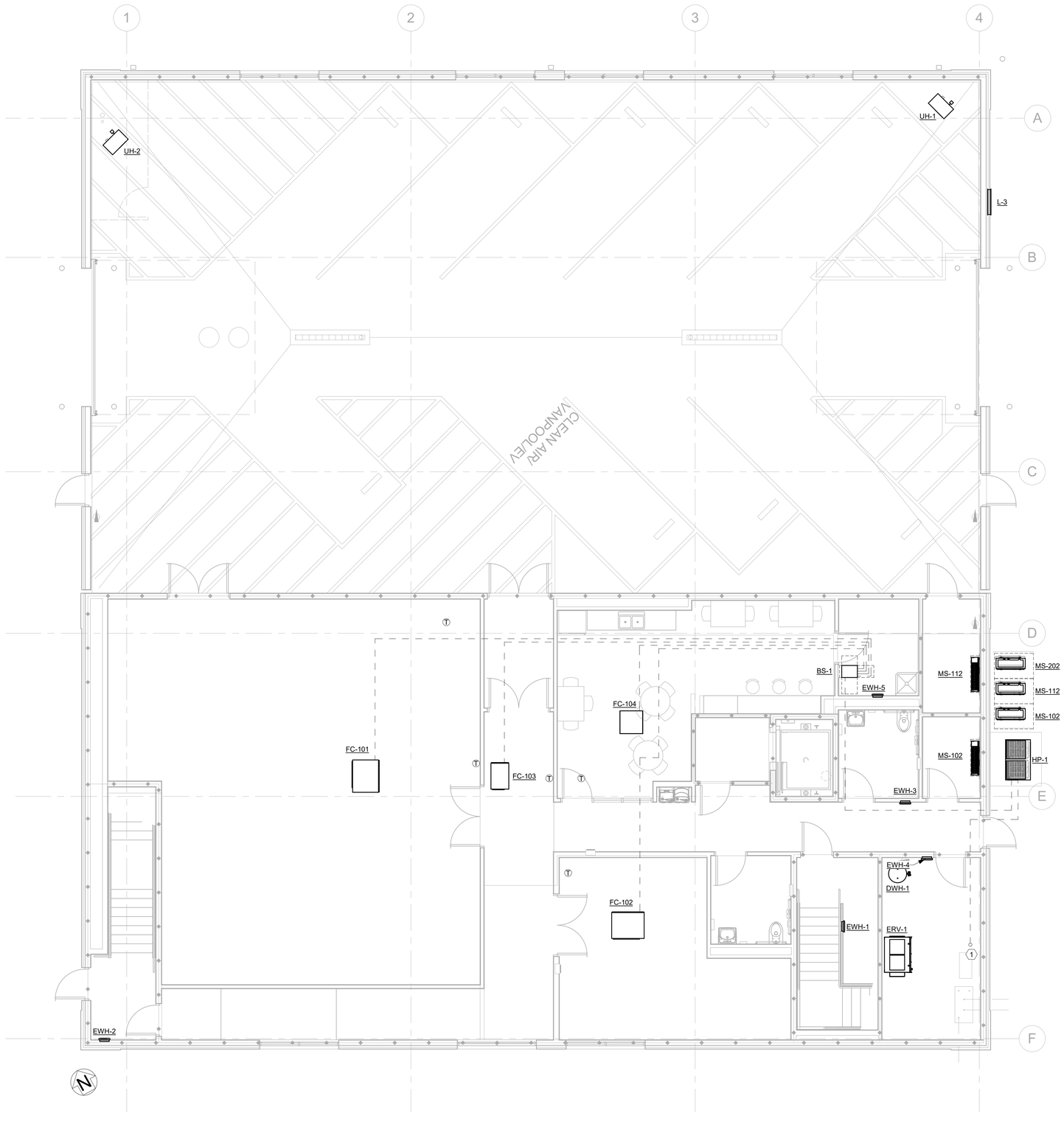
BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
HVAC PLAN - SECOND FLOOR

SheetNumber:
M1.2



1 REFRIGERANT PIPING PLAN - FIRST FLOOR
N.T.S.

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KEY NOTES:

1. REFRIGERANT PIPING UP TO BS-2.

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APN Number: 054-063-180
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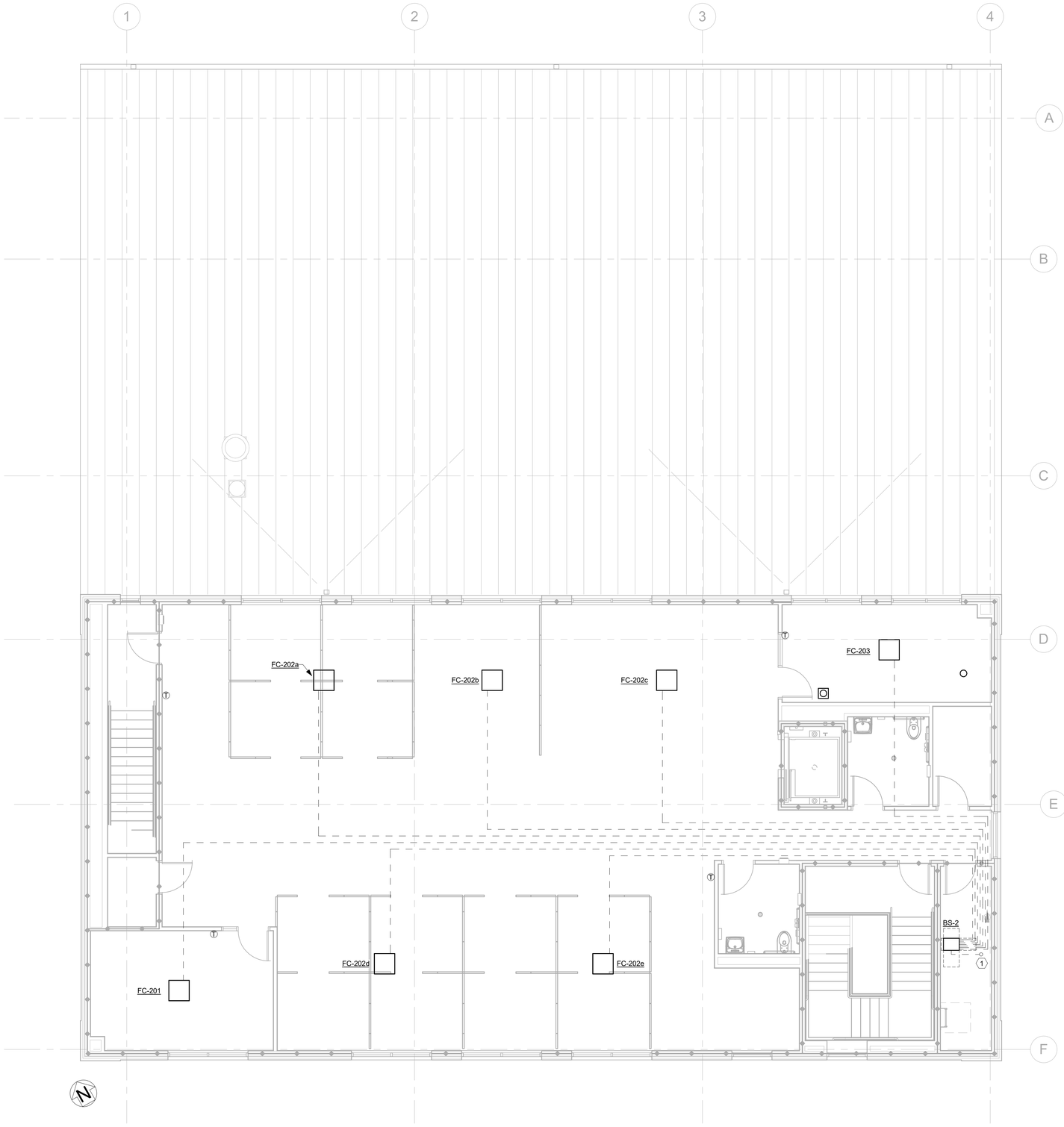
Sheet Title:
REFRIGERANT PIPING PLAN - FIRST FLOOR

SheetNumber:
M2.1



1 REFRIGERANT PIPING PLAN - SECOND FLOOR
N.T.S.

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KEY NOTES:

1. REFRIGERANT PIPING DOWN TO HP-1.

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Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:

REFRIGERANT PIPING - SECOND FLOOR

SheetNumber:

M2.2

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	MFRG	MODEL	MOUNTING / MOUNTING HEIGHT	MATERIAL & FINISH	CAL GREEN MAX FLOW	TRIM	DRAIN	VENT	COLD	HOT	REMARKS
EWC-1	DRINKING FOUNTAIN - DOUBLE - BOTTLE FILLER - FILTERED	HALSEY TAYLOR	HTHB-HAC8BLSS-WF	WALL / 33" & 39" TO ORIFICE	STAINLESS STEEL - LEAD FREE	- -	BUBBLER & BOTTLE FILLER	2"	1-1/2"	1/2"	- -	NO LEAD DESIGN - WALL MOUNTED - DUAL HEIGHT - 8 GPH COOLING - FILTERED - PROVIDE TRAP AND PROFLO STOP
FD-1	FLOOR DRAIN WITH TRAP PRIMER	JAY R. SMITH MFG. CO.	2005	FLOOR	CAST IRON BODY / NICKEL BRONZE STRAINER	- -	- -	3"	1-1/2"	- -	- -	PROVIDE COMPLETE WITH ROUND NICKEL BRONZE STRAINER HEAD, TRAP PRIMER CONNECTION, AND JAY R. SMITH QUAD CLOSE TRAP SEAL.
L-1	LAVATORY - WALL MOUNTED - AUTOMATIC FAUCET	KOHLER	K-2005	WALL / RIM 34"	VITREOUS CHINA	0.5 GPM	MOEN #8554 FAUCET - GRID DRAIN	2"	1-1/2"	1/2"	1/2"	WITH AUTOMATIC FAUCET & QUARTER TURN STOPS
S-1	SINK - DOUBLE COMPARTMENT - PULL OUT FAUCET	JUST	DL-2133-A-GR	COUNTER	STAINLESS STEEL	1.8 GPM	MOEN #67315C FAUCET W/ PULL-OUT SPRAY	2"	1-1/2"	1/2"	1/2"	PROVIDE BRASSCRAFT #KTCR STOPS - VERIFY DIMENSIONS WITH DRAWINGS PRIOR TO ORDERING - VERIFY HOLE PUNCH REQUIREMENTS - 8" DEEP
SO-1	OIL SEPARATOR	STRIEM	OS-75	FLOOR	POLYETHYLENE	- -	ADJUSTABLE RISERS	4"	2"	- -	- -	SNAP-IN FLOW CONTROL - HIGHWAY RATED COVERS - RISER EXTENSIONS AS NEEDED TO MEET GRADE - OIL CAPACITY 93 GAL
SS-1	SERVICE SINK - FLOOR MOUNTED 24" X 24"	FIAT	MSB 2424	FLOOR	MOLDED STONE CONSTRUCTION	- -	MOEN #8124 FAUCET	3"	2"	1/2"	1/2"	WITH #832-AA HOSE & HOSE BRACKET, #889-CC MOP HANGER, #E-88-AA STAINLESS STEEL BUMPER GUARD, AND #MSG2424 STAINLESS STEEL WALL GUARD
TD-1	TRENCH DRAIN - 12 INCH WIDE - 96 INCH LONG	ZURN	Z882-8201	FLOOR	HDPE CHANNEL, STEEL FRAME	- -	CLASS C SLOTTED GRATE	3"	2"	- -	- -	CLOSED END CAPS, 4" NO-HUB BOTTOM OUTLET WITH BOTTOM DOME STRAINER, PROVIDE TRAP PRIMER ADAPTER AND TRAP SEAL
TP-1	TRAP PRIMER - PRESSURE ACTIVATED	SIOUX CHIEF	695-01	ON WALL & ABOVE CEILING	BRASS - LEAD FREE - EPDM SEALS	- -	- -	- -	- -	1/2"	- -	MOUNT ON DCW PIPE SERVING FLUSH VALVE. PROVIDE ACCESS BOX IN WALL.
TP-2	TRAP PRIMER - ELECTRONIC	SIOUX CHIEF	695-ES01	ON WALL & ABOVE CEILING	BRASS - LEAD FREE - EPDM SEALS	- -	- -	- -	- -	1/2"	- -	PROVIDE COMPLETE WITH REQUIRED ACCESSORIES TO SERVE UP TO 2 TRAPS WITH SINGLE PRIMER. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL.
WC-1	WATER CLOSET - WALL MNTD - ELECT FLUSH - ADA HEIGHT	KOHLER	K-4325	WALL / RIM 17"	VITREOUS CHINA	1.28 GPF	MOEN #8311 FLUSH VALVE	4"	2"	1"	- -	PROVIDE JR SMITH #0300 SERIES CARRIER - BATTERY POWERED FLUSH VALVE - (1.0 GALLONS PER FLUSH WHEN LESS THAN 60 SECONDS - 1.28 GALLONS PER FLUSH WHEN LONGER THAN 60 SECONDS) KOHLER #K-4667-C EXTRA HEAVY DUTY ELONGATED OPEN FRONT SEAT

NOTES: PROVIDE ALL FIXTURES WITH APPROPRIATE COMMERCIAL GRADE SUPPORTS/CARRIERS, P-TRAPS, STOP VALVLES, BRAIDED FLEXIBLE SUPPLIES, UNDER FIXTURE PIPING INSULATION AND HAMMER ARRESTORS. PROVIDE AND INSTALL TRAP PRIMERS FOR ALL FLOOR DRAINS AND FLOOR SINKS UNLESS OTHERWISE INDICATED. INSTALL ALL TRAP PRIMERS IN RECESSED WALL MOUNTED BOXES IN AN ACCESSIBLE LOCATION. FIELD COORDINATE INSTALLATION LOCATION OF TRAP PRIMER WALL BOXES, WATER CLOSETS, LAVATORIES, AND URINALS FOR ADA COMPLIANCY WITH ARCHITECT/ENGINEER.

DOMESTIC WATER HEATER SCHEDULE

REMARKS:
1. ALL PIPING WITHIN 18" OF WATER HEATER SHALL BE COPPER OR STEEL.
2. PROVIDE ASME TEMPERATURE AND PRESSURE RELIEF VALVES. PIPE TO WITHIN 1" OF FLOOR.
3. PROVIDE TEMPERATURE AND PRESSURE GAUGE.
4. PROVIDE SEISMIC BRACING PER SPECIFICATIONS.
5. HAND HOLE CLEAN-OUT.
6. PROVIDE SHEET METAL PAN WITH 3/4" SCHEDULE 40 PVC DRAIN TO NEAREST FLOOR DRAIN.
7. FIVE YEAR LIMITED TANK WARRANTY
8. ZERO INCH CLEARANCE
9. MAGNESIUM ANODE RODS
10. DIRECT SPARK IGNITION
11. PROVIDE EXHAUST PRESSURE SWITCH AND CONTROLS
12. ELECTRONIC IGNITION
13. PROVIDE VENT DAMPER AND CONTROLS
14. POWER DIRECT VENT
15. HEAT TRAP
16. CONTRACTOR TO PROVIDE A TIGHTLY-FITTING WATER HEATER INSULATION JACKET WITH AN R-VALUE NO LESS THAN 10. TAPE AND SEAL ALL JOINTS.

ELECTRICAL DATA:
SEE MEP COORDINATION SCHEDULE FOR STARTER/DISCONNECT AND ALL OTHER ELEC. DATA.

2019 BUILDING ENERGY EFFICIENCY STANDARDS, SECTION 110.3(A):
CERTIFICATION BY MANUFACTURERS.
ANY SERVICE WATER-HEATING SYSTEM OR EQUIPMENT MAY BE INSTALLED ONLY IF THE MANUFACTURER HAS CERTIFIED THAT THE SYSTEM OR EQUIPMENT COMPLIES WITH ALL OF THE REQUIREMENTS OF THIS SUBSECTION FOR THAT SYSTEM OR EQUIPMENT.

1. TEMPERATURE CONTROLS FOR SERVICE WATER HEATING SYSTEMS. SERVICE WATER-HEATING SYSTEMS SHALL BE EQUIPPED WITH AUTOMATIC TEMPERATURE CONTROLS CAPABLE OF ADJUSTMENT FROM THE LOWEST TO THE HIGHEST ACCEPTABLE TEMPERATURE SETTINGS FOR THE INTENDED USE AS LISTED IN TABLE 3, CHAPTER 50 OF THE ASHRAE HANDBOOK, HVAC APPLICATIONS VOLUME.

2019 BUILDING ENERGY EFFICIENCY STANDARDS, SECTION 110.3 C(2):
CONTRACTOR IS TO PROVIDE A DOMESTIC HOT WATER RECIRCULATION CONTROL CAPABLE OF AUTOMATICALLY TURNING OFF THE SYSTEM.

MARK	MANUF.	MODEL	MOUNTING	HEAT SOURCE	TYPE	STORAGE (GAL)	KW	ENERGY FACTOR	INPUT (BTU/HR)	EFFICIENCY (%)	FLUE SIZE (IN)	COMBUSTION AIR SIZE (IN)	RECOVERY AT 90°F (GAL/HR)	WATER CONNECTION SIZE (DCW/DHW)	UNIT PHYSICAL DATA			
															HEIGHT (IN)	DIAMETER (IN)	SHIPPING WEIGHT (LBS)	WEIGHT FILLED (LBS)
DWH-1	AO SMITH	GPDL 40	4" CONCRETE PAD	NATURAL GAS	POWER DIRECT VENT	40	- -	0.68	40,000	- -	3"ø	3"ø	45	3/4"	58-1/4"	22"	174	491

PLUMBING EXPANSION TANK SCHEDULE

NOTES:
1. PROVIDE ANTIMICROBIAL LINER.
2. PROVIDE SEISMIC BRACING PER SPECIFICATIONS.

MARK	MANUF.	MODEL	FINISH	TANK VOLUME (GAL)	MAX. ACCEPTANCE FACTOR	MAXIMUM WORKING PRESSURE (PSI)	SYSTEM CONNECTION	DIAMETER (IN)	HEIGHT (IN)	SHIPPING WEIGHT (LBS)	REMARKS
PET-1	Taco	ST-5	URETHANE TOPCOAT ON STEEL SHELL	2.0	0.45	150	STAINLESS STEEL	8	13	5	SEE NOTES

PLUMBING PUMP SCHEDULE

NOTES:
1. PROVIDE ALL NECESSARY VALVING AND ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION.
2. PROVIDE INLINE CIRCULATOR RATED FOR USE WITH POTABLE DOMESTIC WATER WITH BRONZE OR STAINLESS STEEL IMPELLER AND SEALS.

ACCESSORIES:
1. PROVIDE TACO DIGITAL TIMER AND AQUASTAT.

CONTROLS:
1. PUMP TO ONLY OPERATE DURING OCCUPIED HOURS (ADJUSTABLE WITH TIMER).
2. PUMP TO ACTIVATE AT A RECIRCULATION TEMPERATURE LESS THAN 105°F AND DEACTIVATE AT A RECIRCULATION TEMPERATURE OF 120°F (ADJUSTABLE WITH AQUASTAT).

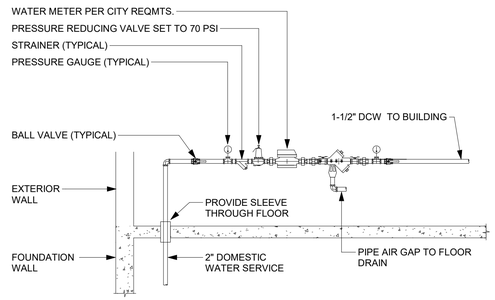
ELECTRICAL DATA:
SEE MEP COORDINATION SCHEDULE FOR STARTER/DISCONNECT AND ALL OTHER ELEC. DATA.

2019 BUILDING ENERGY EFFICIENCY STANDARDS, SECTION 110.3 C(2):
CONTRACTOR IS TO PROVIDE A DOMESTIC HOT WATER RECIRCULATION CONTROL CAPABLE OF AUTOMATICALLY TURNING OFF THE SYSTEM.

Mark	MANUF.	MODEL	SERVICE	MOTOR (RPM)	FLOW RATE (GPM)	HEAD (FT)	REMARKS
RCP-1	Taco	003-B	DOMESTIC HOT WATER	3,250	1.5	3	SEE NOTES

NATURAL GAS SCHEDULE

TAG	DESCRIPTION	BTU/H	PRESSURE
DWH-1	DOMESTIC WATER HEATER	40,000	4-14" WC
UH-1	UNIT HEATER	30,000	6-7" WC
UH-2	UNIT HEATER	30,000	6-7" WC



1 WATER SERVICE CONNECTION DETAIL
N.T.S.

WATER SUPPLY FIXTURE UNIT CALCULATION

FIXTURE	QTY	(PRIVATE, PUBLIC, OR ASSEMBLY) WFU	TOTAL WFU
DRINKING FOUNTAIN OR WATER COOLER	1	0.5	0.5
LAVATORY, SINGLE	4	1.0	4.0
SINKS	- -	- -	- -
KITCHEN, DOMESTIC	1	1.5	1.5
SERVICE OR MOP BASIN	1	3.0	3.0
WATER CLOSET, 1.28 GPF FLUSH VALVE	4	5.0	20.0
		TOTAL WFU:	29.0
WATER MAIN SIZE: 1-1/2"		MAX LENGTH:	214
WATER FLOW VELOCITY: 7.21 FPS		TOTAL PEAK FLOW:	40.0
BASED ON 2019 CPC TABLE A 103.1			

WASTE FIXTURE UNIT CALCULATION

FIXTURE	QTY	(PRIVATE, PUBLIC, OR ASSEMBLY) DFU	TOTAL DFU
DRINKING FOUNTAIN OR WATER COOLER	1	0.5	0.5
FLOOR DRAIN (FOR ADDITIONAL SIZES SEE SECTION 702.0)	9	2	18.0
LAVATORY, SINGLE	4	1.0	4.0
SINKS	- -	- -	- -
KITCHEN, DOMESTIC	1	2.0	2.0
SERVICE OR MOP BASIN	1	3.0	3.0
WATER CLOSET, 1.28 GPF FLUSH VALVE	4	4.0	16.0
		TOTAL DFU:	43.5
		WASTE PIPE SIZE:	4"
BASED ON 2019 CPC TABLE 702.1			

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PLUMBING NOTES & SCHEDULES

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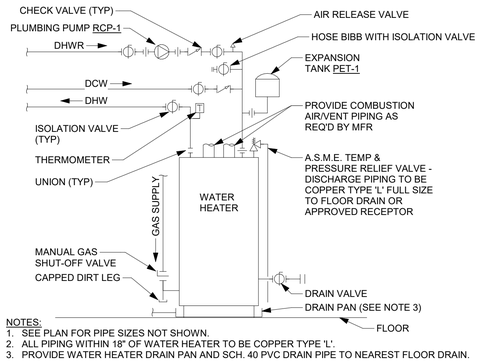
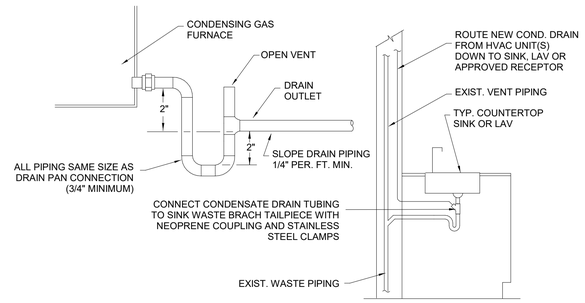
P0.1



NOTES:
1. SEE PLAN FOR PIPE SIZES NOT SHOWN.
2. ALL PIPING WITHIN 18" OF WATER HEATER TO BE COPPER TYPE 'L'.
3. PROVIDE WATER HEATER DRAIN PAN AND SCH. 40 PVC DRAIN PIPE TO NEAREST FLOOR DRAIN.

1 WATER HEATER DETAIL
N.T.S.



2 CONDENSATE DRAIN DETAIL
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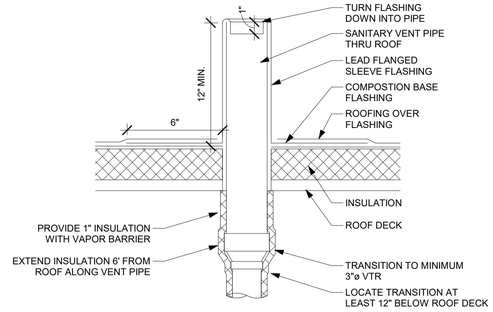

3 VENT THRU ROOF DETAIL
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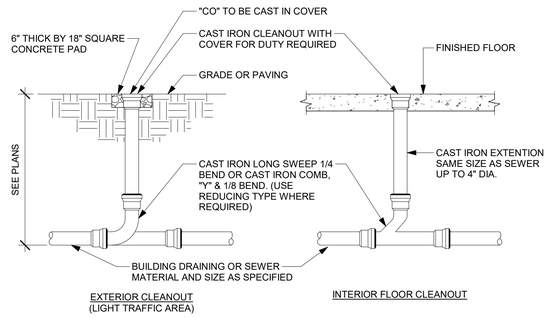

4 SEWER LINE CLEANOUT DETAIL
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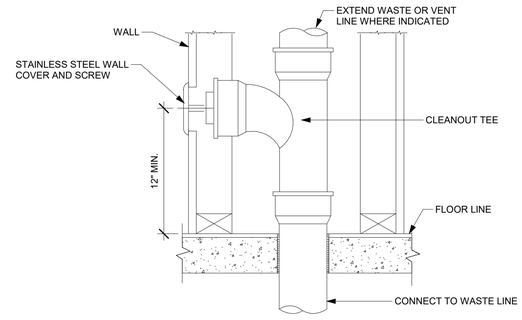

5 SEWER LINE CLEANOUT THRU WALL DETAIL
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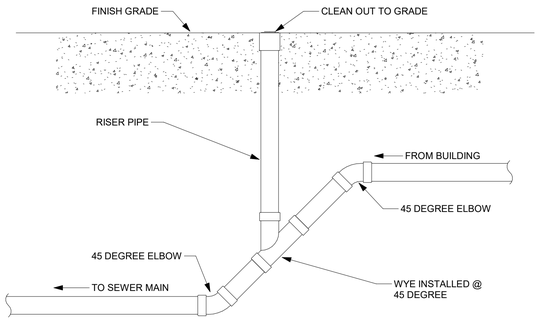

6 BUILDING SEWER SERVICE DETAIL
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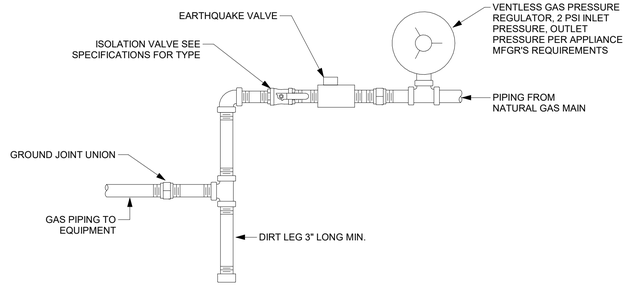
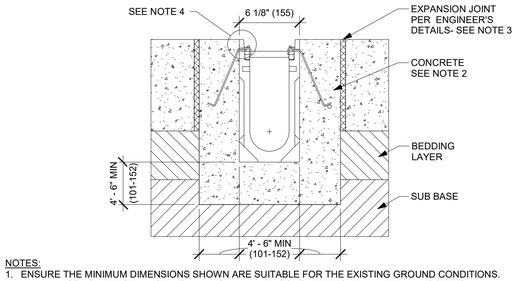
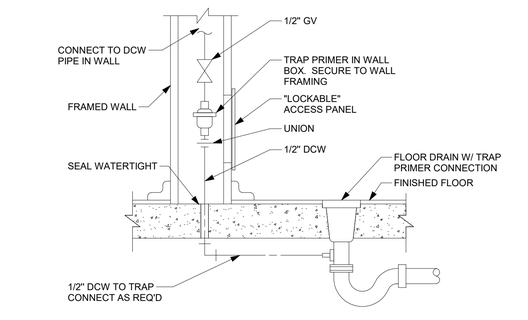


7 NATURAL GAS EQUIPMENT CONNECTION DETAIL
N.T.S.



NOTES:
1. ENSURE THE MINIMUM DIMENSIONS SHOWN ARE SUITABLE FOR THE EXISTING GROUND CONDITIONS.
2. MINIMUM CONCRETE STRENGTH IS 3000 PSI. VIBRATE CONCRETE TO ELIMINATE AIR POCKETS.
3. INSTALL EXPANSION AND CRACK CONTROL JOINTS AS SHOWN.
4. THE FINISHED LEVEL OF THE CONCRETE SURROUND MUST BE APPROX. 1/8" ABOVE THE TOP OF THE CHANNEL EDGE.
5. REFER TO MANUFACTURER'S LATEST INSTALLATION INSTRUCTIONS FOR COMPLETE DETAILS.

8 TRENCH DRAIN DETAIL
N.T.S.



9 TRAP PRIMER TO FLOOR DRAIN DETAIL
N.T.S.

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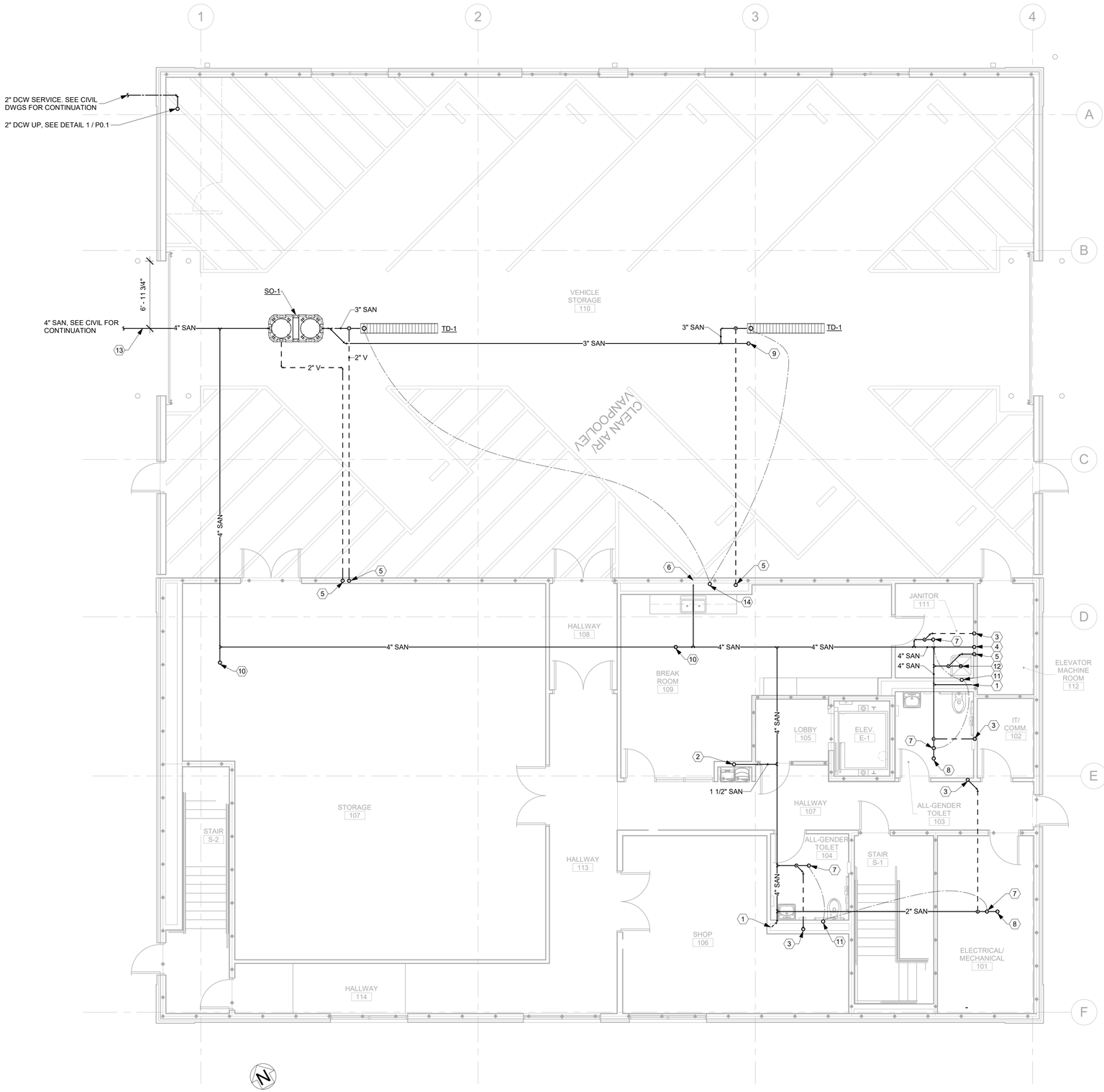
PLUMBING DETAILS

SheetNumber:

P0.2



1 UNDERSLAB PLUMBING PLAN - FIRST FLOOR
3/16" = 1'-0"

GENERAL PLUMBING NOTES

A.) IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO FIELD COORDINATE THE LOCATION OF EQUIPMENT AND ROUTING OF PIPING WITH ALL OTHER TRADES.

B.) IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO REVIEW THE DRAWINGS FOR ALL DICIPLINES AND PROVIDE ALL LABOR AND MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.

C.) PROVIDE AND INSTALL SEISMIC BRACING FOR ALL EQUIPMENT, DUCTWORK AND PIPING PER THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE.

D.) SEAL ALL PIPE PENETRATIONS THROUGH FIRE RATED ASSEMBLIES WITH A UL-APPROVED FIRE STOP SYSTEM.

E.) PROVIDE ACCESS DOORS TO ALLOW SERVICE AND INSPECTION OF EQUIPMENT, VALVES, DAMPERS AND DEVICES INSTALLED ABOVE NON-REMOVABLE CEILINGS.

F.) ALL BELOW SLAB VENT PIPING SHALL BE 2" MINIMUM.

G.) PROVIDE TRAP SEALS FOR ALL FLOOR DRAINS AND SINKS.

H.) PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS AND SINKS. LOCATE TRAP PRIMERS IN A VALVE BOX IN AN ACCESSIBLE LOCATION.

I.) INSTALL ACCESSIBLE PLUMBING FIXTURES IN COMPLIANCE WITH ADA REQUIREMENTS. INSULATE ALL EXPOSED PIPING BELOW ADA ACCESSIBLE FIXTURES.

J.) INSTALL FLOOR DRAIN STRAINERS AND CLEANOUT COVERS FLUSH AND LEVEL WITH FINISHED FLOOR.

KEY NOTES:

1. 4" SAN UP.
2. 1-1/2" SAN UP TO EWC-1.
3. 1-1/2" V UP.
4. 4" SAN UP TO WCO.
5. 2" V UP.
6. 2" SAN UP TO S-1.
7. 2" SAN UP TO FD-1.
8. 2" SAN UP TO FCO.
9. 3" SAN UP TO FCO.
10. 4" SAN UP TO FCO.
11. 1/2" DCW (PEX) UP TO TP-1. (TYP 2)
12. 3" SAN UP TO SS-1.
13. CENTER SAN AND SO-1 WITH DOOR.
14. 1/2" DCW (PEX) UP TO TP-2. (TYP 2)

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UNDERSLAB PLUMBING PLAN - FIRST FLOOR

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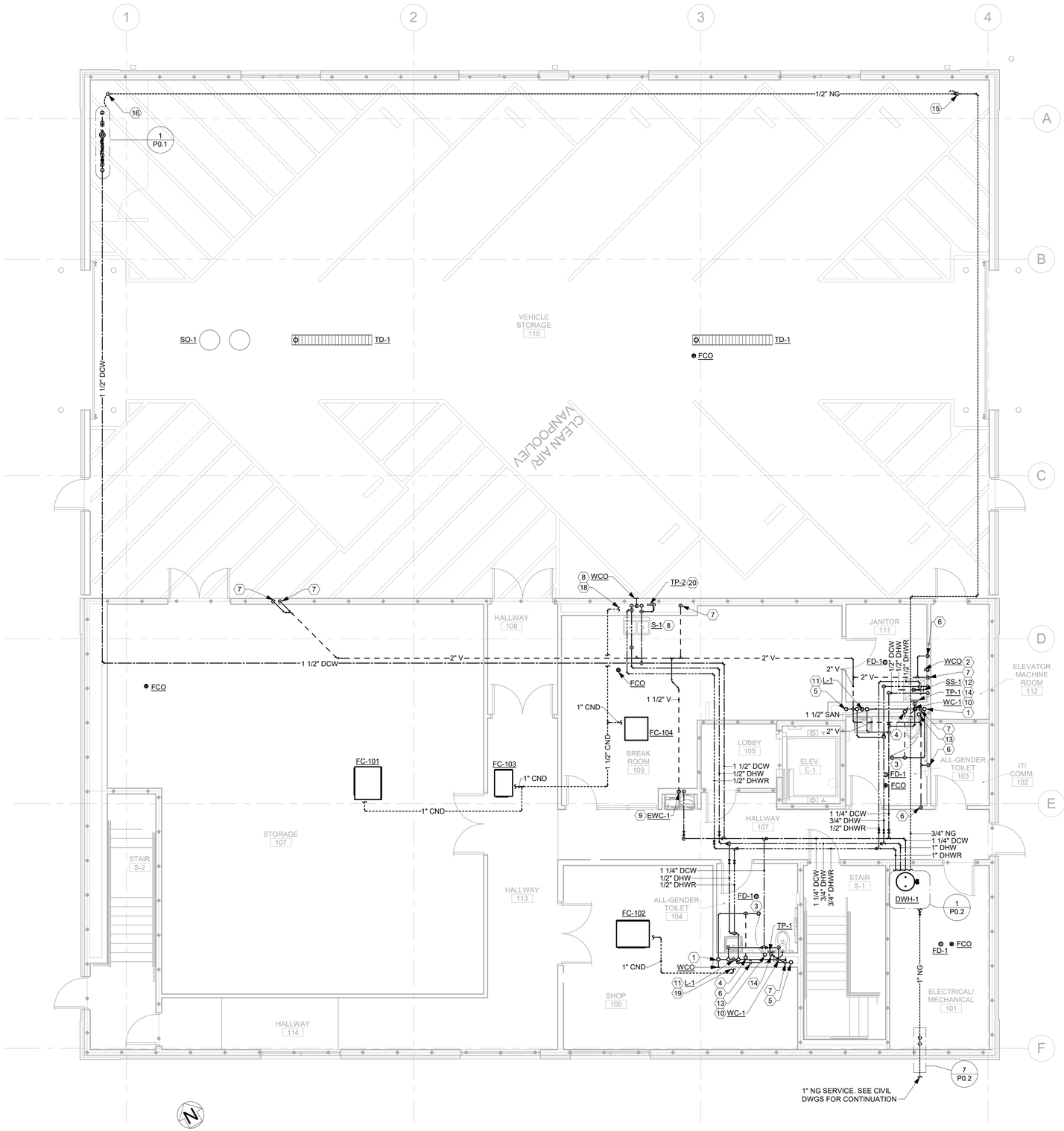
P1.1



1 PLUMBING PLAN - FIRST FLOOR
3/16" = 1'-0"

GENERAL PLUMBING NOTES

A.) IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO FIELD COORDINATE THE LOCATION OF EQUIPMENT AND ROUTING OF PIPING WITH ALL OTHER TRADES.

B.) IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO REVIEW THE DRAWINGS FOR ALL DICIPLINES AND PROVIDE ALL LABOR AND MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.

C.) PROVIDE AND INSTALL SEISMIC BRACING FOR ALL EQUIPMENT, DUCTWORK AND PIPING PER THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE.

D.) SEAL ALL PIPE PENETRATIONS THROUGH FIRE RATED ASSEMBLIES WITH A UL-APPROVED FIRE STOP SYSTEM.

E.) PROVIDE ACCESS DOORS TO ALLOW SERVICE AND INSPECTION OF EQUIPMENT, VALVES, DAMPERS AND DEVICES INSTALLED ABOVE NON-REMOVABLE CEILINGS.

F.) ALL BELOW SLAB VENT PIPING SHALL BE 2" MINIMUM.

G.) PROVIDE TRAP SEALS FOR ALL FLOOR DRAINS AND SINKS.

H.) PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS AND SINKS. LOCATE TRAP PRIMERS IN A VALVE BOX IN AN ACCESSIBLE LOCATION.

I.) INSTALL ACCESSIBLE PLUMBING FIXTURES IN COMPLIANCE WITH ADA REQUIREMENTS. INSULATE ALL EXPOSED PIPING BELOW ADA ACCESSIBLE FIXTURES.

J.) INSTALL FLOOR DRAIN STRAINERS AND CLEANOUT COVERS FLUSH AND LEVEL WITH FINISHED FLOOR.

KEY NOTES:

1. 4" SAN UP AND 4" SAN DOWN.
2. 4" SAN DOWN.
3. 2" SAN UP TO FD-1.
4. 1-1/2 " V UP.
5. 2" V UP.
6. 1-1/2" V DOWN.
7. 2" V DOWN.
8. 1-1/2" V DOWN TO S-1. 1/2" DCW DOWN TO S-1. 1/2" DHW DOWN TO S-1.
9. 1-1/2" V DOWN TO EWC-1. 1/2" DCW DOWN TO EWC-1.
10. 1" DCW DOWN TO WC-1 ON FIRST FLOOR AND 1" DCW UP TO WC-1 ON SECOND FLOOR.
11. 1/2" DCW DOWN TO L-1 ON FIRST FLOOR AND UP TO L-1 ON SECOND FLOOR. 1/2" DHW DOWN TO L-1 ON FIRST FLOOR AND UP TO L-1 ON SECOND FLOOR. 1-1/2" V DOWN.
12. 1/2" DCW DOWN TO SS-1. 1/2" DHW DOWN TO SS-1.
13. 1/2" DCW (PEX) UP TO TP-1.
14. 1/2" DCW TO TP-1. MOUNT TRAP PRIMER ON WALL ABOVE CEILING IN AN ACCESSIBLE LOCATION.
15. 3/4" NG DOWN TO UH-1. SEE DETAIL 7 ON M0.3.
16. 1/2" NG DOWN TO UH-2. SEE DETAIL 7 ON M0.3.
17. 2" SAN DOWN.
18. 1-1/2" CONDENSATE PIPE DOWN TO TAILPIECE OF SINK.
19. 1" CONDENSATE PIPE DOWN TO TAILPIECE OF SINK.
20. 1/2" DCW TO TP-2. MOUNT TRAP PRIMER ON WALL ABOVE CEILING IN AN ACCESSIBLE LOCATION.

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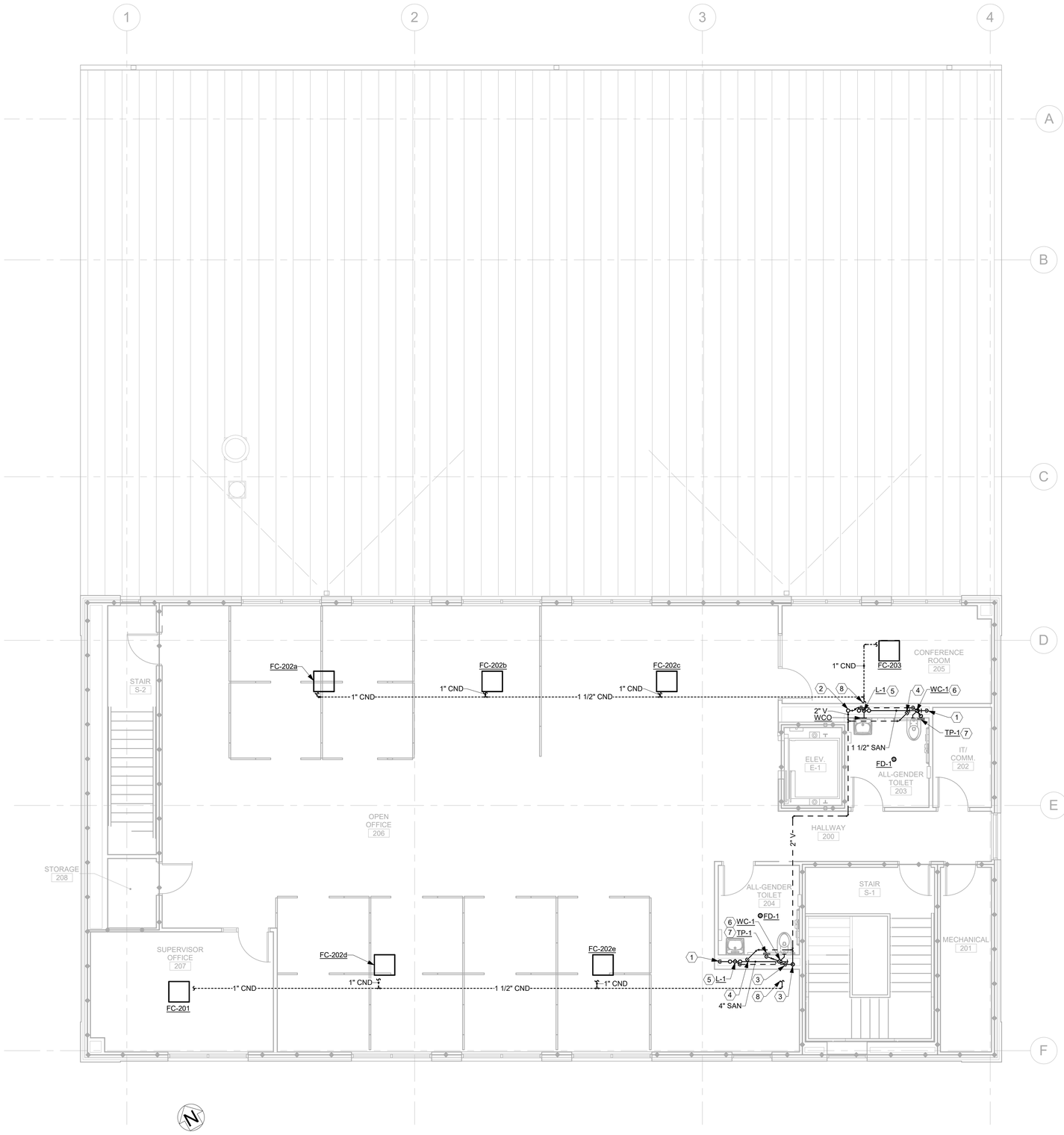
Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
PLUMBING PLAN - FIRST FLOOR

SheetNumber:
P1.2



1 PLUMBING PLAN - SECOND FLOOR
3/16" = 1'-0"

GENERAL PLUMBING NOTES

A.) IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO FIELD COORDINATE THE LOCATION OF EQUIPMENT AND ROUTING OF PIPING WITH ALL OTHER TRADES.

B.) IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO REVIEW THE DRAWINGS FOR ALL DICIPLINES AND PROVIDE ALL LABOR AND MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.

C.) PROVIDE AND INSTALL SEISMIC BRACING FOR ALL EQUIPMENT, DUCTWORK AND PIPING PER THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE.

D.) SEAL ALL PIPE PENETRATIONS THROUGH FIRE RATED ASSEMBLIES WITH A UL-APPROVED FIRE STOP SYSTEM.

E.) PROVIDE ACCESS DOORS TO ALLOW SERVICE AND INSPECTION OF EQUIPMENT, VALVES, DAMPERS AND DEVICES INSTALLED ABOVE NON-REMOVABLE CEILINGS.

F.) ALL BELOW SLAB VENT PIPING SHALL BE 2" MINIMUM.

G.) PROVIDE TRAP SEALS FOR ALL FLOOR DRAINS AND SINKS.

H.) PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS AND SINKS. LOCATE TRAP PRIMERS IN A VALVE BOX IN AN ACCESSIBLE LOCATION.

I.) INSTALL ACCESSIBLE PLUMBING FIXTURES IN COMPLIANCE WITH ADA REQUIREMENTS. INSULATE ALL EXPOSED PIPING BELOW ADA ACCESSIBLE FIXTURES.

J.) INSTALL FLOOR DRAIN STRAINERS AND CLEANOUT COVERS FLUSH AND LEVEL WITH FINISHED FLOOR.

(#) KEY NOTES:

1. 4" SAN DOWN.
2. 3" V DOWN. 3" V UP TO 3" VTR.
3. 2" V DOWN.
4. 1-1/2" V DOWN.
5. 1/2" DCW DOWN. 1/2" DHW DOWN. 1-1/2" V DOWN.
6. 1" DCW DOWN. 2" V DOWN.
7. 1/2" DCW TO TP-1. MOUNT TRAP PRIMER ON WALL ABOVE CEILING IN AN ACCESSIBLE LOCATION.
8. 1-1/2" CONDENSATE PIPE DOWN TO TAILPIECE OF SINK.

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Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
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Sheet Title:

PLUMBING PLAN - SECOND FLOOR

SheetNumber:

P1.3

GENERAL NOTES- ELECTRICAL:

A. CONTRACTOR SHALL FOLLOW SEISMIC RESTRAINT AND DESIGN REQUIREMENTS CONTAINED IN LATEST ADOPTED STATE AND INTERNATIONAL BUILDING CODES, WITH ALL AMENDMENTS AS ADOPTED BY THE CURRENT LEGISLATION.

B. THE TERM "PROVIDE" SHALL MEAN CONTRACTOR SHALL FURNISH AND INSTALL ITEMS AND CONNECT AS REQUIRED TO OBTAIN A COMPLETE WORKING SYSTEM.

C. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ALL LOCAL, STATE, AND NATIONAL CODES. INCLUDING BUT NOT LIMITED TO LATEST APPLICABLE CALIFORNIA ELECTRICAL CODE, NFPA 70 (NATIONAL ELECTRIC CODE), NFPA 72, INTERNATIONAL BUILDING CODE, CALIFORNIA TITLE 24, ETC.

D. ALL WORK SHALL BE COORDINATE WITH EXISTING CONDITIONS, NEW CONSTRUCTION, OWNER'S VENDORS, ALL TRADES, AND THEIR DOCUMENTS. THE CONTRACTOR SHALL VISIT THE SITE BEFORE SUBMITTING HIS BID.

E. NO MORE THAN THREE CIRCUITS (4-SINGLE CONDUCTOR CABLES PLUS GROUND) SHALL BE PULLED IN SINGLE CONDUIT, (EXCEPTION: SEPARATE NEUTRALS FOR GROUND FAULT CIRCUITS). WIRE (EXCEPT GROUND) MUST BE OF SAME SIZE AND MUST BE ON OPPOSITE PHASES IF USING COMMON NEUTRAL. ALL PANELBOARDS AND WIRING SHALL MEET NEC 210.4 MULTIWIRE BRANCH CIRCUITS. IT IS AT THE CONTRACTOR'S DISCRETION TO EITHER PROVIDE DEDICATED NEUTRALS OR MULTI-POLE BREAKERS.

F. WHEN RUNNING MORE THAN 3 CURRENT CARRYING CONDUCTORS IN A SINGLE CONDUIT, DERATE AMPACITIES IN ACCORDANCE WITH NFPA 70.

G. A CODE SIZE INSULATED GROUND CONDUCTOR SHALL BE PROVIDED IN ALL FEEDER AND BRANCH CIRCUIT CONDUITS.

H. ALL THHN/THWN/THHW/THW/XHHW CONDUCTORS ARE SIZED BASED ON 75°C TEMPERATURE RATING. ALL TERMINATIONS FOR ALL EQUIPMENT AND DEVICES SHALL BE LISTED AND IDENTIFIED FOR USE WITH 75°C CONDUCTORS. IF CONTRACTOR PROVIDES TERMINATIONS OF LESS THAN 75°C, THE ASSOCIATED CONDUCTOR SIZES SHALL BE INCREASED DUE TO THE DERATING AMPACITY PER NEC TABLE 310-15(B)(16). CONTRACTOR SHALL MAKE ALL CHANGES (I.E. CONDUIT SIZES, ETC.) AS NECESSARY AND SHALL MAKE ALL REVISIONS ON "AS-BUILT" DRAWINGS.

I. MINIMUM CONDUIT SIZE IS 3/4 INCH, MINIMUM WIRE SIZE IS #12 AWG (COPPER CONDUCTOR THHN/THWN), UNLESS OTHERWISE NOTED ON PLANS OR IN CIRCUIT REVIEWS.

J. ALL CONDUIT SHALL BE RUN CONCEALED WHEREVER POSSIBLE ABOVE CEILINGS, INSIDE WALLS, OR UNDER FLOOR SLAB (ONLY WHERE SHOWN DASHED ON PLAN, OR NOTED/ALLOWED BY ENIGEER), UNLESS OTHERWISE NOTED ON PLAN. IN HIGH-BAY (NO CEILING) AREAS, RUN EXPOSED CONDUIT HIGH AS POSSIBLE. ALL CONDUIT SHALL BE RUN PARALLEL OR PERPENDICULAR TO NEARBY SURFACE OR STRUCTURAL MEMBERS AND FOLLOW THE SURFACE CONTOURS AS MUCH AS PRACTICAL. NO CONDUIT SHALL BE INSTALLED IN FLOOR SLAB UNLESS SPECIFICALLY NOTED OTHERWISE.

K. CONTRACTOR SHALL PROVIDE RIGID METAL SLEEVES TO FACILITATE PATHWAY (I.E. THRU BLOCK WALLS) FOR ELECTRICAL AND TELECOMMUNICATION DEVICES.

L. PROVIDE ALL NECESSARY TEMPORARY OR PERMANENT CAPS OR PLUGS FOR CONDUITS. DO NOT LEAVE PIPING/ CONDUITS OPEN ENDED. PROVIDE END BUSHINGS FOR ALL STUB-OUTS AND SLEEVES DESIGNATED TO BE UTILIZED FOR THIS PROJECT. COORDINATE WITH OWNER'S REPRESENTATIVE FOR SYSTEMS NOT PROVIDED UNDER THIS CONTRACT.

M. PROVIDE FIRE STOP TO ALL CONDUITS AND DEVICES PENETRATING FIRE RATED WALLS, SMOKE WALLS AND FLOORS. ALL PENETRATIONS THROUGH FIRE WALLS SHALL BE BY UL LISTED FIRE PENETRATION METHODS/MATERIALS, ETC. SEE ARCHITECTURAL FOR RATED WALLS.

N. MOUNTING HEIGHTS ABOVE FINISHED FLOOR (AFF) ARE TO CENTER OF DEVICE UNLESS NOTED OTHERWISE.

O. DEVICES/OUTLETS SHALL BE COORDINATED WITH ASSOCIATED ARCHITECTURAL DRAWINGS (I.E. FLOOR PLANS, CASEWORK DETAILS/ELEVATIONS, ETC.) FOR EXACT LOCATIONS AND MOUNTING, PRIOR TO ROUGH-IN. IF EXACT LOCATIONS AND MOUNTING ARE NOT INDICATED ON ARCHITECTURAL DRAWINGS, FIELD VERIFY EXACT LOCATIONS AND MOUNTING WITH OWNER AND ALL TRADES. MOUNTING HEIGHTS SHALL MEET CBC ACCESSIBILITY

P. DEVICES SHALL NOT BE INSTALLED BACK TO BACK ON A COMMON WALL WHERE CONDITION EXISTS FOR ADJACENT OFFICE ROOMS OR ROOMS WHERE SOUND TRANSMISSION IS NOT PERMITTED. OR PROVIDE SOUND INSULATION.

Q. RECEPTACLES SHALL BE CIRCUITED WITH A SEPARATE GROUND WIRE. RECEPTACLES PROTECTED BY A GROUND FAULT CIRCUIT INTERRUPTER CIRCUIT BREAKER SHALL HAVE A DEDICATED NEUTRAL WIRE PULLED FOR THAT CIRCUIT. RECEPTACLES PROTECTED BY A GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE SHALL BE WIRED PER MANUFACTURERS RECOMMENDATIONS.

R. RECEPTACLES ARE TO BE INSTALLED WITH THE GROUND PIN IN THE TOP POSITION.

S. FOR EACH RECEPTACLE SUPPLIED FROM A GROUND FAULT CIRCUIT INTERRUPTER BREAKER IN PANELBOARD, PROVIDE A COVER PLATE WITH THE FOLLOWING PERMANENTLY ETCHED OR ENGRAVED MARKING: "G.F.C.I. PROTECTED".

T. ELECTRICAL DRAWINGS SHALL BE COORDINATED WITH EXISTING CONDITIONS, ASSOCIATED MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR FOR MOTORS, DEVICES, FIXTURES, ETC. FOR EXACT LOCATIONS BEFORE ROUGH-IN OF CONDUIT SYSTEM

U. LIGHTING FIXTURES SHALL BE WIRED TO SWITCHES GENERALLY SHOWN IN EACH ROOM AND CONNECTED TO LIGHTING PANELS WITH THE REQUIRED QUANTITY OF WIRES FOR PROPER OPERATION. A CONTINUOUS GROUND MUST BE PROVIDED THROUGH CONDUIT SYSTEM. EXIT LIGHTS, INVERTERS, AND NIGHT LIGHTS SHALL BE CONNECTED AHEAD OF LOCAL SWITCHING ON SAME CIRCUIT.

V. SEE/VERIFY ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF CEILING MOUNTED DEVICES, i.e. LIGHT FIXTURES, SPEAKERS, FIRE ALARM DEVICES, ETC.

W. FROM EACH TELEPHONE/DATA, TV, ETC. COMMUNICATION TYPE OUTLET, PROVIDE A (MIN.) 1-1/4 INCH CONDUIT (WITH PULL STRING) STUBBED TO ACCESSIBLE CEILING WITH INSULATED BUSHING, UNLESS OTHERWISE NOTED. IF NO CEILING IS INDICATED STUB CONDUIT TO ASSOCIATED TELECOM/IT ROOM, OR TO HEIGHT AFF AS COORDINATED WITH ARCHITECT.

X. WHEN ROUTED THROUGH AN AIR RETURN PLENUMS, ALL TELEPHONE/DATA, TV, ETC. COMMUNICATION CABLING SHALL BE ROUTED IN A COMPLETE CONDUIT RACEWAY SYSTEM OR SHALL BE PLENUM RATED. (NO PVC CONDUIT SHALL BE INSTALLED). COORDINATE ALL CONDUIT RUNS WITH ALL TRADES AND THEIR VENDORS. SEE MECHANICAL FOR LOCATION OF ANY AIR RETURN PLENUMS.

Y. TURN OVER TO THE OWNER ALL MANUFACTURER'S WARRANTIES FOR EQUIPMENT AND MATERIALS PROVIDED.

Z. PROVIDE NEW UPDATED TYPED PANEL LEDGER/CIRCUIT DIRECTORY FOR EACH NEW AND ALTERED PANELBOARD.

AA. ALL NEW ELECTRICAL JUNCTION BOXES ABOVE CEILING IN AREAS RELATED TO CONSTRUCTION ARE TO BE IDENTIFIED AND LABELED WITH A PERMANENT MARKER. FIRE ALARM JUNCTION BOXES ARE TO BE PAINTED RED.

AB. NO MC CABLE SHALL BE PERMITTED ON PROJECT.

SYSTEMS COORDINATION

SYSTEM TYPE	BACK BOX AND CONDUIT	DEVICES AND CABLING	EQUIPMENT	INSTALLATION	POWER	VENDOR	DESIGN	SPECIFICATIONS
FIRE ALARM	IN CONTRACT	IN CONTRACT	IN CONTRACT	IN CONTRACT	IN CONTRACT	PER CD	PER CD	PER CD
VOICE/DATA/INTERNET	IN CONTRACT	DEVICES BY OWNER; CABLE PER CD	OWNER'S VENDOR	OWNER'S VENDOR	IN CONTRACT	OWNER'S VENDOR	OWNER'S VENDOR	OWNER'S VENDOR

REMARKS: COORDINATE ALL SYSTEMS WORK WITH OWNER'S VENDORS FOR ALL, INCLUDING BUT NOT LIMITED TO: DEVICE LOCATIONS, DEVICE REQUIREMENTS, EQUIPMENT LOCATIONS, EQUIPMENT REQUIREMENTS, POWER LOCATIONS, POWER REQUIREMENTS, AND QUANITITIES REQUIRED. PROVIDE ALL LABOR AND MATERIALS FOR A COMPLETE AND OPERABLE SYSTEM.

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	MOUNTING	LAMPS	BALLAST	VOLTAGE	INPUT WATTS	EMERGENCY	MANUFACTURER	CATALOG NUMBER	ALTERNATE MANUFACTURERS	NOTES
D1	6"" APERATURE DOWNLIGHT WITH CLEAR MATTE DIFFUSED REFLECTOR AND NLIGHT ENABLED	CEILING RECESSED	LED 1100 LUMENS	eldoLED ECOdrive	120	13	N/A	GOTHAM	EVO60104AR MWDLD GZ1 NPP16D	PER REVIEW BY ENGINEER	1
E1	TWIN LAMP EMERGENCY UNIT WITH 10.6 WATT HEADS AND SELF DIAGNOSTICS	SURFACE	LED	N/A	120	N/A	INTEGRAL BATTERY	LITHONIA	ELM6L UVOLT LTP SDRT	PER REVIEW BY ENGINEER	2
L1E	1X4 LINEAR DIRECT LED FIXTURE WITH EXTRUDED ALUMINUM HOUSING, WITH INTEGRAL EMERGENCY INVERTER	SURFACE	LED 2400 LUMENS/LF	CONSTANT CURRENT	120	20	INTEGRAL BATTERY	LITHONIA	CPANL 1X4 24LM 40K M4 EL14L	PER REVIEW BY ENGINEER	2
OL1	EXTERIOR WALL BRACKET WITH DIE CAST ALUMINUM HOUSING AND INTEGRAL EMERGENCY INVERTER	SURFACE	LED 3500 LUMEN	CONSTANT CURRENT	120	25	N/A	LITHONIA	WST LED P2 40K VF MVOLT E20WC	PER REVIEW BY ENGINEER	2
T2	2X2 RECESSED LAY-IN LED TROFFER WITH CURVED SATIN ACRYLIC DIFFUSER	RECESSED	LED 3800 LUMEN	CONSTANT CURRENT	120	30	N/A	LITHONIA	2FSL2 33L MVOLT GZ1 LP840	PER REVIEW BY ENGINEER	1
T2E	SAME AS T2 EXCEPT WITH INTEGRAL EMERGENCY INVERTER	RECESSED	LED 3800 LUMEN	CONSTANT CURRENT	120	30	N/A	LITHONIA	2FSL2 33L MVOLT GZ1 LP840 EL14L	PER REVIEW BY ENGINEER	1
W1	2' LONG LED WALL BRACKET WITH FORMED STEEL HOUSING AND IMPACT RESISTANT LINEAR PRISMATIC LENS	WALL	LED 1869 LUMENS	CONSTANT CURRENT	120	18	N/A	LITHONIA	WL2 18L MVOLT GZ1 LP840	PER REVIEW BY ENGINEER	2
X1	COMBINATION EXIT EMERGENCY LIGHT WITH WHITE THERMOPLASTIC HOUSING AND SELF DIAGNOSTICS	UNIVERSAL	LED	N/A	120	N/A	INTEGRAL BATTERY	LITHONIA	LQM S3R 120/277 ELN	PER REVIEW BY ENGINEER	1
Z1	96" LINEAR LED STRIP FIXTURE WITH FORMED STEEL HOUSING AND WHITE ACRYLIC DIFFUSER	SURFACE	LED 6000 LUMEN	CONSTANT CURRENT	120	38	N/A	LITHONIA	CLX L96 6000LM FDL MVOLT GZ10 40K 80CRI	PER REVIEW BY ENGINEER	1
Z2	48" LINEAR LED STRIP FIXTURE WITH FORMED STEEL HOUSING AND WHITE ACRYLIC DIFFUSER	SURFACE	LED 4200 LUMEN	CONSTANT CURRENT	120	28	N/A	LITHONIA	CLXL48 4200LM SEF RDL MVOLT GZ10 40K 80 CRI	PER REVIEW BY ENGINEER	1
Z2E	SANE AS Z2 EXCEPT WITH INTEGRAL EMERGENCY INVERTER	SURFACE	LED 4200 LUMEN	CONSTANT CURRENT	120	28	INTEGRAL BATTERY	LITHONIA	CLXL48 4200LM SEF RDL MVOLT GZ10 40K 80 CRI EL14L	PER REVIEW BY ENGINEER	1
Z1E	SAME AS TYPE Z1 EXCEPT WITH EMERGENCY INVERTER	SURFACE	LED 6000 LUMEN	CONSTANT CURRENT	120	38	INTEGRAL BATTERY	LITHONIA	CLXL96 6000LM FDL MVOLT GZ10 40K 80CRI	PER REVIEW BY ENGINEER	1
Z3	24" LINEAR LED STRIP FIXTURE WITH FORMED STEEL HOUSING AND WHITE ACRYLILC DIFFUSER	SURFACE	LED 2500 LUMEN	CONSTANT CURRENT	120	19	N/A	LITHONIA	Z1LN L24 2500LM FST MVOLT 40K 80CRI	PER REVIEW BY ENGINEER	1
W2	4' LONG LED WALL BRACKET WITH FORMED STEEL HOUSING AND IMPACT RESISTANT LINEAR PRISMATIC LENS	WALL	LED 3000 LUMENS	CONSTANT CURRENT	120	28	INTEGRAL BATTERY	LITHONIA	WL4 30L MVOLT GZ1 LP840 EL14L	PER REVIEW BY ENGINEER	2

1. CONFIRM CEILING TRIM FOR FIXTURES WITH ARCHITECTURAL CEILING TYPE AND PROVIDE PER MANUFACTURER'S RECOMMENDATIONS, SEE ARCHITECTURAL
2. CONFIRM FINISH SELECTION WITH ARCHITECT

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
○	CEILING OUTLET AND INCANDESCENT, FLUORESCENT, LED OR HID FIXTURE
○□	WALL OUTLET AND INCANDESCENT, FLUORESCENT, LED OR HID FIXTURE
□ □	CEILING OUTLET AND FLUORESCENT FIXTURE OR LED FIXTURE (SEE FIXTURE SCHEDULE)
●	FIXTURE ON EMERGENCY POWER OR POWERED BY EMERGENCY INVERTER, SEE PLANS AND KEYNOTES AND FIXTURE SCHEDULE FOR EXACT INFORMATION
	WALL MOUNTED LED FIXTURE
	FLOODLIGHT
	EMERGENCY BATTERY PACK (8'-6" A.F.F. TO CENTER UNLESS OTHERWISE NOTED)
	EMERGENCY LIGHTING REMOTE HEAD
⊗	EXIT SIGN. CEILING MOUNTED
⊗	EXIT SIGN. MOUNT 4" ABOVE DOOR FRAME
a,b,c	LOWER CASE LETTERS AT OUTLETS INDICATE SWITCHING ARRANGEMENT
A (2)	LIGHT FIXTURE TYPE CALLOUT. REFER TO FIXTURE SCHEDULE FOR COMPLETE FIXTURE DESCRIPTION. QUANTITY OF THIS TYPE NOTED IN PARENTHESIS.
$	SINGLE POLE SWITCH - 20 AMP, 277V (46" A.F.F.TO BOTTOM, TYP. ALL SWS.)
$D	DIMMER SWITCH, TO MATCH TYPE OF LIGHTING CONTROLLED - COORDINATE WITH FIXTURE MANUFACTURER AND ENGINEER. LUTRON DVSTV-XX UON
$2	2=2-POLE SWITCH,3=THREE-WAY,4=FOUR-WAY, LV##=LOW VOLTAGE FOR OCC SENSOR (SEE DETAIL FOR MODEL NUMBERS), OC=OCCUPANCY SENSOR TYPE SENSOR SWITCH #WSXPDT, VS= VACANCY SENSOR TYPE SENSOR SWITCH #WSXPDTSA (SEMI-AUTOMATIC TO MEET IECC)
	DUPLEX RECEPTACLE - 20 AMP,125V,2P,3W,TYP.MTG. AT 18" A.F.F. TO BOTTOM UON WITH HEIGHT NOTED AFF
	DEDICATED 20AMP DUPLEX RECEPTACLE
	QUADRAPLEX RECEPTACLE - (2) DUPLEX RECEPTACLES IN 3 GANG BOX WITH 2 GANG PLASTER RING
	FLUSH FLOOR MOUNTED RECEPTACLE(S) PER SYMBOL - VERIFY COVERPLATE WITH FLOOR TYPE AND COLOR/FINISH BY ARCHITECT PRIOR TO ORDERING. WHEN SHOWN WITH ADJACENT COMMUNICATION DEVICE, PROVIDE COMBINATION DEVICE PER SYMBOL SHOWN. SEE COMMUNICATION DEVICE/GENERAL NOTES FOR ADDITIONAL INFORMATION, ROUTE CONDUITS UNDER FLOOR OVER TO NEAREST WALL AND STUB UP OR DOWN TO ABOVE CEILING AS NECESSARY.
	DUPLEX RECEPTACLE - 20 AMP, 125V, 2P, 3W, TYP MTG. ABOVE DROP CEILING
	JUNCTION BOX
6-20	SPECIAL OUTLET, NEMA CONFIGURATION AS NOTED OR AS REQUIRED BY EQUIPMENT
	SPECIALTY RECEPTACLE - TL = TWIST LOCK, AMPERAGE INDICATED NEMA CONFIGURATION INDICATE. COORDINATE ALL RECEPTACLES WITH EQUIPMENT MANUFACTURES RECOMMENDATIONS AND REQUIREMENTS.
	PUSH-BUTTON REMOTE RELEASE OR DOOR OPERATOR - COORDINATE WITH ARCHITECT, VENDOR/MANUFACTURER/SUPPLIER
EPO	EMERGENCY POWER OFF PUSH-BUTTON, RED MUSHROOM HEAD, AT 54" AFF, UNO.
	START/STOP PUSH-BUTTON STATION, AT 54" AFF, UNO.
	NEMA 1 ENCL, 600 VOLT, 3P, 30AMP, FUSED DISCONNECT SWITCH AT 4'-6" AFF, UNO.
	NEMA 1 ENCL., 600 VOLT, 3P, 30AMP, NON-FUSED DISCONNECT SWITCH AT 4'-6" A.F.F., UNO.
	MAGNETIC STARTER SIZE 1, NEMA 1 ENCLOSURE WITH HAND-OFF-AUTO SELECTOR SWITCH AT 4'-6" AFF, UNO.
	COMBINATION MAGNETIC STARTER AND FUSED SWITCH SIZE 1, NEMA 1 ENCLOSURE WITH HAND-OFF-AUTO SELECTOR SWITCH AT 4'-6" AFF, UNO.
	MOTOR LOCATION
	EXHAUST FAN WITH INTEGRAL DISCONNECT FURNISHED BY MECHANICAL
$M	MANUAL MOTOR RATED SWITCH/CONTROLLER, SIZE AS REQUIRED BY LOAD. MOUNT 46" A.F.F. UNLESS OTHERWISE NOTED
	CONDUIT CONCEALED WHERE POSSIBLE (NOTE NOT ALL CONDUIT IS INDICATED ON PLANS)
	CONDUIT CONCEALED IN FLOOR OR BELOW GRADE (NOTE NOT ALL CONDUIT IS INDICATED ON PLANS)
	RECESSED MOUNTED PANELBOARDSEE PLANS/SINGLE-LINE FOR NAME, VOLTAGE AND SIZE
	SURFACE MOUNTED PANELBOARD, SEE PLANS/SINGLE-LINE FOR NAME, VOLTAGE AND SIZE
	SURFACE MOUNTED PANELBOARD, SEE PLANS/SINGLE-LINE FOR NAME, VOLTAGE AND SIZE
▽ ▼	BOX AND COVER PLATE FOR COMMUNICATION OUTLET. MOUNT 18" A.F.F. (W = 48" AFF). PROVIDE 1-1/4" CONDUIT W/BUSHING & PULLSTRING STUBBED ABOVE ACCESSIBLE CEILING U.O.N. PROVIDE (2) CAT 6 TO EACH OUTLET.
▽ ▼	BOX AND COVER PLATE FOR COMMUNICATION OUTLET. FLOOR MOUNTED. PROVIDE 1-1/4" CONDUIT W/BUSHING & PULLSTRING STUBBED ABOVE ACCESSIBLE CEILING U.O.N. PROVIDE (2) CAT 6 TO EACH OUTLET.
F C 30cd	VISUAL ADA COMPLIANT FIRE ALARM APPLIANCE:(WALL MOUNT AT 80" A.F.F.), 30 CANDELLA(cd), OR AS OTHERWISE REQUIRED BY SPACE TO MEET CODE, (C = CEILING MOUNT). VERIFY CANDELLA OF STROVE WITH CODE AND FIRE ALARM VENDOR.
70db	CALCULATED SOUND VALUE IN DECIBLES(db),ASSUME 100db AT 10FT FROM HORN WITH 35db LOSS THRU DOOR OR PARTITION TO OBTAIN 70db DESIGN AVERAGE
SD	SMOKE DETECTOR IN DUCT SYSTEM WITH REMOTE TEST SWITCH IN CORRIDOR WALL UNLESS OTHERWISE NOTED. CONNECT PER CODE AND MANUFACTURER REQUIREMENTS, COORDINATE WITH HVAC AND FIRE ALARM MANUFACTURER. PROVIDE FOR FAN SHUTDOWN.
FS	FIRE ALARM FLOW SWITCH
PS	FIRE ALARM PRESSURE SWITCH
TS	FIRE ALARM TAMPER SWITCH
F	FIRE ALARM BREAK STATION MOUNTED 46" A.F.F. TO BOTTOM
F	AUDIO/VISUAL ADA COMPLIANT FIRE ALARM DEVICE (WALL MOUNT @80" A.F.F.), HORN (OR SPEAKER IN HIGH RISE) WITH STROBE APPLIANCE, UNLESS NOTED OTHERWISE ON PLAN OR SPECS. VERIFY CANDELLA OF STROBE WITH CODE & FIRE ALARM VENDOR.
S	SPEAKER/SOUNDER CODE COMPLIANT FIRE ALARM DEVICE(WALL MOUNT AT 80" A.F.F.),
SD A	SYSTEM SMOKE DETECTOR, CEILING MOUNTED UNLESS OTHERWISE NOTED. A= LOW FREQ. AUDIBLE BASE TO MEET APPLICABLE RESIDENTIAL CODE REQUIREMENTS, COORDINATE EXACT LOCATION WITH VENDOR, OTHER EQUIPMENT AND CODE.
R	135 DEGREE F.FIXED TEMPERATURE & RATE OF RISE DETECTOR,UNLESS OTHERWISE NOTED ON PLAN
FP	FIRE FIGHTERS PHONE JACK. COORDINATE EXACT REQUIREMENTS WITH FIRE ALARM.
FACP	MAIN"FIRE ALARM CONTROL PANEL"
FAA	REMOTE"FIRE ALARM ANNUNCIATOR"
SDT	BEAM TYPE WALL MOUNTED SMOKE DETECTOR TRANSMITTER, FIELD ALIGN BEAM WITH RECEIVER, SEE PLANS FOR LOCATION.
SDR	BEAM TYPE WALL MOUNTED SMOKE DETECTOR RECEIVER, FIELD ALIGN BEAM FROM TRANSMITTER, SEE PLANS FOR LOCATION.
TV	BOX AND COVER PLATE FOR TV OUTLET AND 120V RECEPTACLE WITH SEPARATE COMPARTMENTS. COORDINATE EXACT LOCATION AND HEIGHT WITH ARCHITECTURAL ELEVATIONS, PROVIDE COMMON DUAL COVERPLATE. SEE GENERAL NOTES, PROVIDE RG-6U COAX TO CTV IN DATA/TELECOM RM AS DIRECTED BY OWNER
CTV	INCOMING COAX PATCH PANEL/SPLITTERS BY LOCAL UTILITY. COIL RG-6U COAX AT LOCATION FOR TERMINATION BY LOCAL PROVIDER.
KP	KP = KEYPAD, CR = CARD READER, EL = ELECTRIC LATCH. CONTRACTOR SHALL PROVIDE BACKBOX AND 1"C STUBBED AND TURNED ABOVE ACCESSIBLE CEILING WITH PULL STRING FOR SECURITY/ACCESS CONTROL DEVICE. PROVIDE 120V CONNECTION TO DOOR LATCHES AS REQUIRED, COORDINATE WITH SECURITY VENDOR FOR EXACT REQUIREMENTS
SPD	SURGE PROTECTION DEVICE, ALSO LABELED AS "TVSS" TRANSIENT VOLTAGE SURGE SUPPRESSION
AC	ABOVE COUNTER - BOTTOM OF COVER PLATE FOR OUTLET 2" ABOVE COUNTER TOP BACKSPLASH.
AFF	ABOVE FINISHED FLOOR - (TO CENTER, UNO.)
HD	HD TELEVISION OUTLET DUPLEX RECEPTACLE AT 57"AFF IN A RECESSED FLAT SCREEN COMBINATION BACK BOX, UNO.
C	CONDUIT
IG	ISOLATED GROUND(TYPE RECEPTACLE)
EM	EMERGENCY
NL	NIGHT LIGHT CIRCUIT (NON-SWITCHED)
WP	WEATHERPROOF (NEMA 3R). PROVIDE IN USE TYPE COVER WHERE NEC REQUIRED
GND	GROUND
GFI GF	GROUND FAULT INTERRUPTER(RECEPTACLE)
UON	UNLESS OTHERWISE NOTED
	THIS IS A STANDARD LEGEND. ALL ITEMS MAY NOT APPEAR ON THIS JOB.

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COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
ELECTRICAL LEGEND, GENERAL NOTES AND SCHEDULES

Sheet Number:
E0.0

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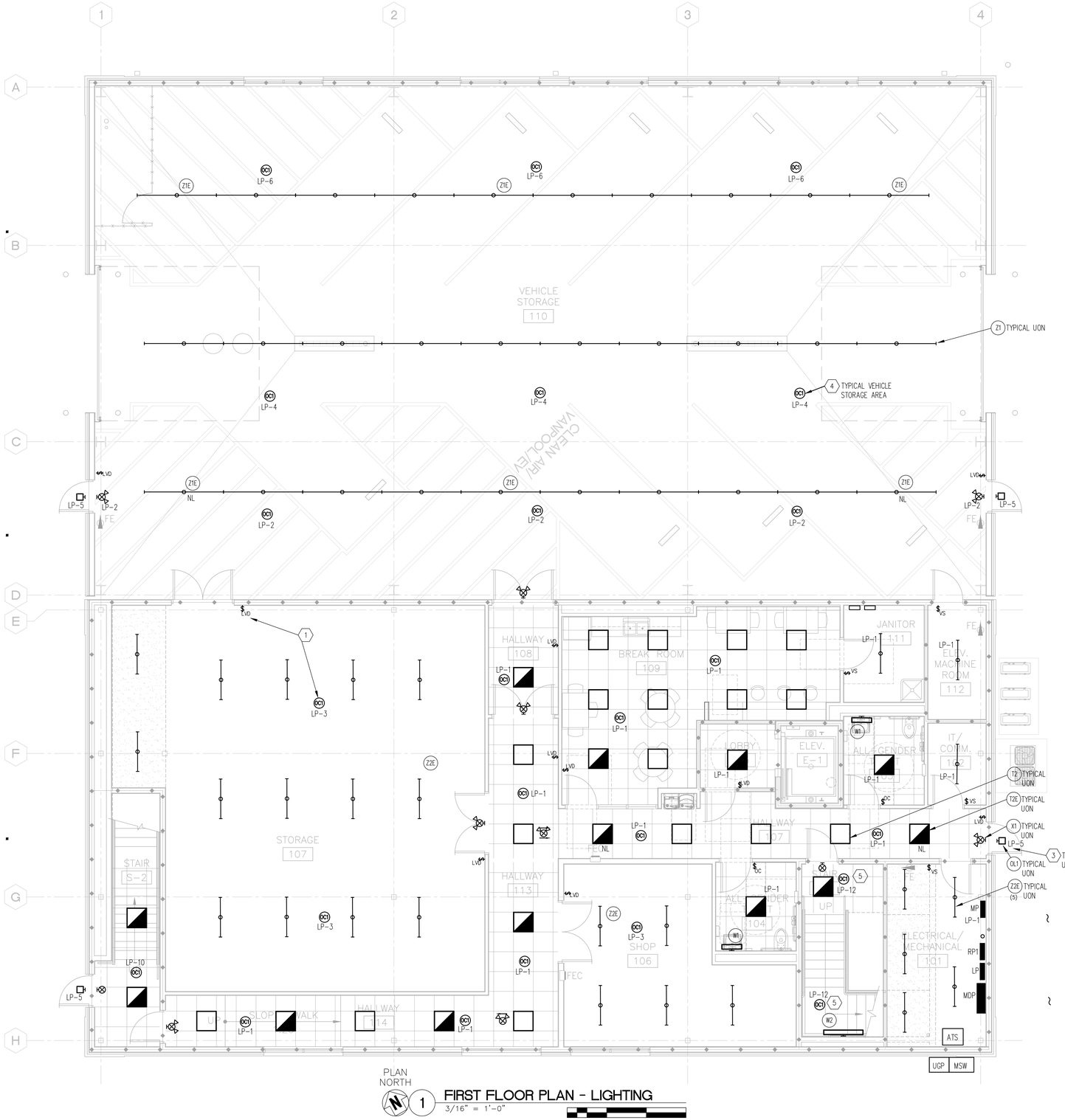

PLAN NORTH

1 FIRST FLOOR PLAN - LIGHTING
3/16" = 1'-0"

0 4' 8' 12'

GENERAL NOTES - LIGHTING:

(ALL NOTES MAY NOT APPLY TO THIS SHEET)

A. SEE DRAWING E0.0 FOR ADDITIONAL NOTES AND FIXTURE SCHEDULE.

B. COORDINATE EXACT MOUNTING HEIGHTS AND LOCATIONS WITH ARCHITECTURAL ELEVATIONS, NEW WORK, AND ALL TRADES (MECHANICAL, PLUMBING EQUIPMENT, DUCTWORK, ETC.)

C. ALL LIGHTING FIXTURES ARE TO BE SUPPORTED PER CURRENT NEC AND MEETING ALL SEISMIC REQUIREMENT FOR LOCALITY.

D. ALL DEVICES AND WALL PLATES IN FINISHED AREAS TO BE OF COLOR BY ARCHITECT. COORDINATE WITH LIGHTING CONTROL DIAGRAM AND REQUIRED DEVICES.

E. LIGHTING FIXTURES SHALL BE WIRED TO SWITCHES GENERALLY SHOWN IN EACH ROOM AND CONNECTED TO LIGHTING PANELS WITH THE REQUIRED QUANTITY OF WIRES FOR PROPER OPERATION. A CONTINUOUS GROUND MUST BE PROVIDED THROUGH CONDUIT SYSTEM. EXIT LIGHTS, INVERTERS, AND NIGHT LIGHTS SHALL BE CONNECTED AHEAD OF LOCAL SWITCHING ON SAME CIRCUIT.

F. FOR CEILING MOUNTED OCCUPANCY SENSORS, PROVIDE CEILING MOUNTED LIGHTING CONTROL CONSISTING OF A SENSOR SWITCH, CIRCUIT AHEAD OF ANY WALL BOX CONTROLS OR SWITCHES, (SEE PLAN). COLOR PER ARCHITECT. SEE TYPICAL DIAGRAM DRAWING E3.2.

G. FOR EXIT SIGNS AT STORE FRONT GLASS INSTALLATIONS, PROVIDE PENDANT MOUNTED STEMS FROM ABOVE PER ARCHITECTURAL ELEVATIONS TO HEIGHT ACCEPTABLE BY LOCAL AHJ. FIELD COORDINATE EXACT REQUIREMENTS. PROVIDE STEM ACCESSORY FROM LIGHTING VENDOR TO MATCH EXIT SIGN IN LENGTH NECESSARY.

KEYNOTES - LIGHTING:

(ALL NOTES MAY NOT APPLY TO THIS SHEET)

1. SEE VACANCY/OCCUPANCY CONTROL TYPICAL WIRING DIAGRAMS ON DRAWING E3.2, TYPICAL. COORDINATE WITH ENGINEER. COORDINATE EXACT LOCATION OF CEILING MOUNTED SENSORS WITH MANUFACTURER, OTHER TRADES AND ENGINEER/CONTRACTOR/ARCHITECT PRIOR TO ROUGH-IN TO CONFIRM COVERAGE.
2. ALL EXTERIOR FIXTURES SHALL TO BE ROUTED THRU CONTROL SYSTEM AND CAPABLE OF CONTROL VIA TIMECLOCK OR PHOTOCELL, COORDINATE WITH MANUFACTURER AND ENGINEER. COORDINATE PROGRAMMING WITH OWNER/ENGINEER AND SEE E3.2 FOR DESCRIPTION OF LIGHTING CONTROL SYSTEM.
3. ALL EXTERIOR LIGHTING SHALL BE CONTROLLED BY LIGHTING CONTROL SYSTEM DESCRIBED IN KEYNOTE #2. CIRCUIT ALL TO LP-5 FOR BUILDING MOUNTED LIGHTING.
4. PROVIDE UNITSTRUT/PENDANT MOUNTING FOR OCCUPANCY SENSORS IN VEHICLE STORAGE, UNFINISHED AREAS. MOUNT AT 9'-0" AFF TYPICAL, FIELD COORDINATE.
5. LIGHTING CONTROL SENSORS IN STAIRWAYS SHALL REDUCE LIGHTING IN THE STAIRWAYS TO 50% WHEN UN-OCCUPIED, UPON OCCUPANCY LIGHTING SHALL INCREASE TO 100%

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FIRST FLOOR PLAN - LIGHTING

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E1.1

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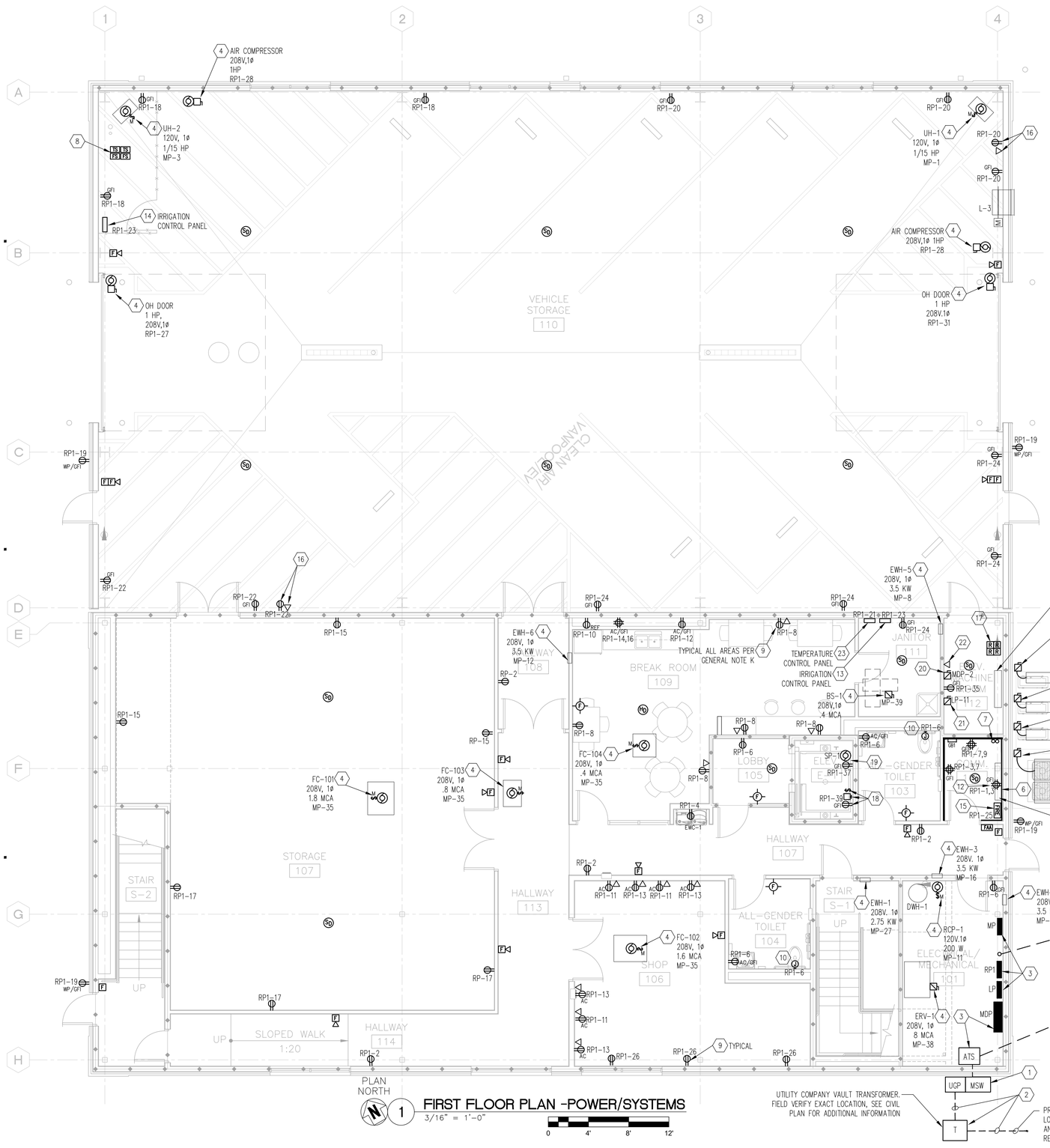

GENERAL NOTES - POWER:

(ALL NOTES MAY NOT APPLY TO THIS SHEET)

A. SEE DRAWING E0.1 FOR ADDITIONAL LEGEND, GENERAL NOTES, AND OTHER SCHEDULES.

B. COORDINATE EXACT MOUNTING HEIGHTS AND LOCATIONS WITH EXISTING CONDITIONS, ARCHITECTURAL ELEVATIONS, NEW WORK, AND ALL TRADES. ALL DEVICES AND COVERPLATES TO BE COLOR PER ARCHITECT.

C. PROVIDE FIRE STOP TO ALL CONDUITS AND DEVICES PENETRATING FIRE RATED WALLS, SMOKE WALLS AND FLOORS. ALL PENETRATIONS THROUGH FIRE WALLS SHALL BE BY UL LISTED FIRE PENETRATION METHODS/MATERIALS, ETC. SEE ARCHITECTURAL FOR RATED WALLS.

D. COORDINATE WITH ALL SYSTEMS AND TRADES TO PROVIDE COMPLETE DISTRIBUTION SYSTEMS REQUIRED FOR COMPLETE AND OPERABLE SYSTEMS. INCLUDING BUT NOT LIMITED TO HVAC, PLUMBING, FIRE ALARM, SECURITY, DOOR ELECTRONICS, CCTV, CTV, MONITORING, INTERCOM, PAGING, VOICE/DATA, CABLE TELEVISION, ETC.

E. COORDINATE MOUNTING AND EXACT LOCATIONS OF ALL MECHANICAL AND PLUMBING EQUIPMENT DISCONNECTS, STARTERS, ETC. WITH ALL TRADES AND IN ACCORDANCE WITH ALL STATE, LOCAL, AND NATIONAL CODES. PROVIDE ALL LABOR AND MATERIALS TO CONNECT COMPLETE. PROVIDE SIZES PER UNIT NAME PLATE, FINAL CONNECTIONS WITH SEAL-TITE. FOR SERVICE TO ALL ROOF TOP MECHANICAL EQUIPMENT, CONTRACTOR SHALL COORDINATE FEEDER PENETRATION AND SHALL ADHERE TO DETAIL BY MECHANICAL IN ORDER TO GROUP ALL LINES/PIPING INTO WATERTIGHT PENETRATIONS PER MECHANICAL DETAIL.

F. COORDINATE EXACT POWER AND SIGNAL-VOLTAGE REQUIREMENTS, LOCATIONS, CONDUITS, AND CABLING REQUIREMENTS FOR ALL SYSTEMS SPECIFIED BY OWNER'S VENDORS AND WITH GENERAL CONTRACTOR AND OWNER. PROVIDE ALL LABOR AND MATERIALS TO CONNECT COMPLETE.

G. REFER TO EQUIPMENT SCHEDULES ON ALL CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION FOR HVAC AND PLUMBING CONNECTIONS. PROVIDE ALL LABOR AND MATERIALS TO CONNECT COMPLETE.

H. COORDINATE EXACT WALL BOX REQUIREMENTS PRIOR TO ROUGH-IN. NO SURFACE RACEWAY IS TO BE PROVIDED UNLESS DIRECT DOCUMENTED VARIANCE IS INDICATED OR GIVEN BY OWNER. IF GRANTED PERMISSION, PROVIDE SURFACE MOUNTED RACEWAY CONDUITS, BACK BOXES AND ALL ACCESSORIES EQUAL TO WIREMOLD SERIES #V2000WH WHERE RACEWAYS AND BACK BOXES ARE EXPOSED. PROVIDE ALL LABOR AND MATERIALS TO CONNECT NEW EQUIPMENT, DEVICES, ETC. COMPLETE TO PANEL INDICATED, 20A/1P, U.N.O.

I. ALL RECEPTACLES NEAR SINKS AND OTHER SIMILAR LOCATIONS, EXTERIOR AND ROOFTOP AREAS SHALL BE PROTECTED BY GFCI PER NEC 210.8 (B). IN GENERAL, ALL DEVICES IN AREAS DESIGNATED IN NEC 210.8 SHALL BE GFCI PROTECTED WHETHER INDICATED OR NOT.

J. ALL UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC, 36" BELOW GRADE. ALL STUB-UPS/90'S SHALL TRANSITION TO BE SCHEDULE 80 PVC. COORDINATE WITH ALL OTHER UNDERGROUND UTILITIES.

K. AT LEAST ONE CONTROLLED RECEPTACLE SHALL BE INSTALLED WITHIN 6 FEET OF EACH UNCONTROLLED RECEPTACLE, OR SPLIT-WIRED DUPLEX ARE INSTALLED (THAT HAVE ONE CONTROLLED AND ONE UNCONTROLLED RECEPTACLE) IN ALL OF THE FOLLOWING SPACES (CONTRACTOR SHALL PROVIDE PERMANENT AND DURABLE MARKING TO DISTINGUISH BETWEEN CONTROLLED AND UNCONTROLLED):
K.A. PRIVATE OFFICES
K.B. RECEPTIONS AND LOBBIES
K.C. CONFERENCE ROOMS
K.D. KITCHENETTES IN OFFICE SPACES
K.E. COPY ROOM

L. FOR EACH DATA OUTLET PROVIDE (2) CAT 6 CABLES TO IT DATA BOARD PER FLOOR. PROVIDE 20' SPOOL AT DATA BOARD AND 18" LOOP WITHIN EACH DATA BOX.

KEYNOTES - POWER:

(ALL NOTES MAY NOT APPLY TO THIS SHEET)

1. PROVIDE MAIN EXTERIOR GEAR COMPRISED OF PG&E COMPLIANT UG PULL SECTION AND MAIN SERVICE ENTRANCE BREAKER SECTION (MSW) WITH PG&E METERING IN NEMA 3R ENCLOSURE. COORDINATE WITH PG&E. SEE SINGLE-LINE DIAGRAM ON E3.1 FOR ADDITIONAL INFORMATION. FIELD COORDINATE EXACT LOCATIONS WITH OTHER TRADES, STRUCTURE, ENGINEER, ETC. TO PROVIDE NEC REQUIRED WORKING CLEARANCE, ETC.
2. PROVIDE SECONDARY FEEDER, UG CONDUIT, AS NECESSARY FROM NEW SERVICE ENTRANCE GEAR TO EXISTING UTILITY TRANSFORMER, (SEE SINGLE-LINE DIAGRAM ON E3.1 FOR ADDITIONAL INFORMATION). FIELD COORDINATE EXACT LOCATION AND ALL REQUIREMENTS WITH UTILITY COMPANY FOR TRANSFORMER LOCATION. CONTRACTOR SHALL PROVIDE ALL IN COORDINATION WITH REQUIREMENT OF UTILITY FOR INSTALLATION PER UTILITY HANDBOOK AND ALL REQUIRED INSTALLATION DETAILS, ETC.
3. PROVIDE NEW ELECTRICAL PANELS, ATS, ETC. AS INDICATED. SEE SINGLE-LINE DIAGRAM ON E3.1 AND PANEL SCHEDULES ON E4.1-E4.2 FOR ADDITIONAL INFORMATION.
4. POWER CONNECTION FOR MECHANICAL/PLUMBING EQUIPMENT. COORDINATE EXACT LOCATION, CONTROLS, POWER AND REQUIREMENTS WITH EQUIPMENT MANUFACTURER AND ALL TRADES TO INSTALL COMPLETE. PROVIDE DISCONNECT RATED (NEMA 1 INTERIOR, NEMA 3R EXTERIOR) AND SIZED/FUSED PER MANUFACTURER RECOMMENDATIONS IF NOT FACTORY PROVIDED AS PART OF EQUIPMENT (SEE MECHANICAL FOR BASIS OF DESIGN MCA AND MOCP, ACCESSORIES AND CONTROLS). PROVIDE CIRCUIT AS INDICATED. EXACT CIRCUIT BREAKER AND BRANCH CIRCUIT SIZE SHALL BE BASED ON ACTUAL EQUIPMENT PROVIDED TO MEET MANUFACTURER'S RECOMMENDATIONS. FINAL CONNECTION WITH SEAL-TITE.
5. PROVIDE MULTIPLE SERVICE, FLUSH FLOOR OUTLET WIREMOLD TYPE #RFB2 2GANG (FOR DUPLEX AND DATA), #RFB4 SERIES 4GANG FLOOR BOX (FOR QUADRAPLEX AND DATA) OR #RFB6 6GANG (FOR QUADRAPLEX, DATA AND AV) AS INDICATED BY SYMBOLS ON DRAWING. PROVIDE FLOORPORT STYLE COVERPLATE (PROVIDE BLANK TOP FOR CONCRETE/TILE APPLICATION, OR CUTOUT TOP FOR CARPET INSTALATIONS – COORDINATE FLOOR TYPE WITH ARCHITECTURAL, ALSO COORDINATE FINISH OF COVERPLATE WITH ARCHITECTURAL). PROVIDE FP-CTR FOR CONCRETE POUR APPLICATIONS TO ENSURE FINISHED COVERPLATE IS TOTALLY FLUSH WITH FINISH FLOOR. PROVIDE DUPLEX RECEPTACLE(S) AS INDICATED PER SPECIFICATIONS. COORDINATE DATA PORTS WITH IT IF DATA CABLING IS NOTED ON DRAWINGS. COORDINATE EXACT LOCATION, FLOORING TYPE AND MANUFACTURER INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN AND PROVIDE ALL COMPONENTS FOR COMPLETE INSTALLATION. ALL OUTLETS SHALL HAVE CONDUIT RUN IN/UNDER FLOOR SLAB TO NEAREST WALL AND CONDUIT STUBBED UP TO ABOVE ACCESSIBLE CEILING (IF APPLICABLE) FOR CONTINUATION TO ELECTRICAL PANEL OR TELECOM BACKBOARD (ALL TELECOM CONDUIT WITH PULLSTRING). FIELD COORDINATE EXACT LOCATIONS AND FULL REQUIREMENTS WITH VENDOR AND OWNER FOR COMPLETE SYSTEM. FLOOR BOX COVERS MUST BE FLUSH WITH FINISHED FLOOR TO AVOID ANY TRIPPING HAZARD. PROVIDE (1) 1-1/4"C WITH PULLSTRING UNDER SLAB STUB AND TURN ABOVE ACCESSIBLE CEILING..
6. PROVIDE FIRE RETARDANT PLYWOOD BACKBOARD FOR DATA/TELECOM EQUIPMENT. PROVIDE DEDICATED 20A, 120V CIRCUITS TO QUADRAPLEX OUTLETS AS INDICATED, FIELD COORDINATE EXACT LOCATION OF OUTLETS WITH IT REPRESENTATIVE OR ARCHITECT/ENGINEER. TELECOM BOARD IN DATA ROOMS IN SUITE AREAS SHALL BE AROUND ROOM PERIMETER AS INDICATED. PROVIDE GROUND BAR GB-# AS INDICATED, SEE DETAIL ON E3.1.
7. PROVIDE (2) 4"C FROM IT/COMM. ROOM 102 UNDERGROUND TO UTILITY POLE CONNECTION PER LOCAL UTILITY REQUIREMENT. SEE CIVIL FOR CONTINUATION AND/OR COORDINATE WITH ARCHITECT AND LOCAL UTILITY. ALL ELLS SHALL BE SWEEPING TYPE. FIELD COORDINATE EXACT LOCATION OF ALL STUB UPS WITH ARCHITECT/ENGINEER/OWNER PRIOR TO ROUGH-IN.
8. PROVIDE CONNECTIONS TO FLOW AND TAMPER SWITCHES AND TO TROUBLE SWITCHES AT AIR COMPRESSOR. FIELD COORDINATE TO PROVIDE CONNECTIONS AND COMPLIANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND REGULATIONS. REFER TO FIRE PROTECTION DRAWINGS FOR EXACT LOCATIONS PRIOR TO ROUGHT-IN OF ELECTRICAL DEVICES.
9. SPLIT WIRE RECEPTACLES TO MEET TITLE 24. SEE OCCUPANCY/VACANCY SENSOR WIRING DIAGRAM ON DRAWING. E3.2.
10. PROVIDE 120V. CIRCUIT TO ACCOMMODATE PLUMBING FIXTURE. COORDINATE EXACT LOCATION, CONNECTION, ETC. WITH MANUFACTURER.
11. MAIN SERVICE GROUND COUNTERPOISE SYSTEM, FIELD COORDINATE EXACT LOCATION IN FIELD WITH ALL UTILITIES, TRADES, GRADE – FINAL SELECTION BY ENGINEER. SEE DRAWING E3.1 FOR CONNECTIONS AND FURTHER DESCRIPTION/INFORMATION.
12. PROVIDE (2) CIRCUITS TO EACH QUAD RECEPTACLE, (1) CIRCUIT THRU POWER PACK TO CONTROL RECEPTACLE (TO COMPLY WITH GENERAL NOTE K). SEE CONTROL DIAGRAM ON DRAWING E3.1.
13. PROVIDE POWER CONNECTION AND ALL CABLING TO IRRIGATION CONTROL PANEL, ETC. PER MANUFACTURER'S RECOMMENDATIONS, COORDINATE WITH ARCHITECT FOR COMPLETE INSTALLATION. FIELD VERIFY EXACT LOCATION WITH SUPPLIER AND ARCHITECT.
14. PROVIDE POWER AND DATA JUNCTION BOX CONNECTION FOR SYSTEMS FURNITURE CONNECTION. CONTRACTOR SHALL COORDINATE CLOSELY WITH FURNITURE VENDOR AND IT/DATA PERSONNEL FOR PROPER BOX CONFIGURATIONS AND REQUIREMENTS. PROVIDE FLEX CONNECTION TO SYSTEMS FURNITURE BOX/RACEWAY FOR DATA AND POWER AS DICTATED BY VENDOR AND AS COORDINATED WITH IT PERSONNEL. AT MINIMUM PROVIDE 1-1/4"" FLEX CONNECTION FOR TELECOM AND (6) CAT 6. FIELD VERIFY EXACT LOCATIONS AND REQUIREMENTS WITH SYSTEMS FURNITURE VENDOR AND OWNER FOR COMPLETE SYSTEM.
15. PROVIDE FIRE ALARM SYSTEM WITH DIGITAL DIALER FOR CONNECTION TO UL LISTED CENTRAL STATION MONITORING SERVICE AND REMOTE ANNUNCIATOR CONFORMING TO ALL LOCAL, STATE AND NATIONAL CODES. COORDINATE WITH LOCAL AHJ/FIRE MARSHALL FOR ALL REQUIREMENTS AND PROVIDE COMPLETE. COORDINATE EXACT LOCATION OF REMOTE ANNUNCIATOR WITH LOCAL AHJ. PROVIDE DUCT SMOKE DETECTION/FAN SHUTDOWN, SPRINKLER SUPERVISION, ETC. – INCLUDING ALL MONITOR MODULES, ETC. TO MEET APPLICABLE CODES.
16. PROVIDE RECEPTACLE AND COMMUNICATION OUTLET FOR MONITOR/TV. FIELD COORDINATE HEIGHT AND EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN
17. PROVIDE (4) RELAYS FOR ELEVATOR PRIMARY, SECONDARY RECALL, FIRE HAT AND ELEVATOR SHUNT TRIP IN ELEVATOR MACHINE ROOM 112.
18. PROVIDE GFCI RECEPTACLE WITH COVER AND GUARD IN PIT. PROVIDE LIGHT FIXTURE WITH GUARD IN PIT AND ASSOCIATED SWITCH LOCATED AT PIT/LADDER ENTRANCE PER CODE AND ELEVATOR MANUFACTURER'S CHECKLIST. PROVIDE DEDICATED 20A, 1P 120V CIRCUIT WITH 3 #12, 3/4 INCH CONDUIT TO CIRCUIT INDICATED. SERVICE TO RECEPTACLE AND LIGHT – LIGHT SHALL NOT BE CONNECTED TO LOAD SIDE OF GFCI.
19. PROVIDE DEDICATED 20A/1P, 120V RECEPTACLE FOR SUMP PUMP (SP-1). PROVIDE CORD AND PLUG IF NOT PROVIDED WITH SUMP PUMP UNIT, COORDINATE WITH SUMP PUMP MANUFACTURER. CIRCUIT AS INDICATED. MEET ALLL APPLICABLE CODE ELEVATOR INSPECITON CHECKLIST REQUIREMENTS.
20. PROVIDE 208V, 3ø, 100A, 3P ENCLOSED SHUNT TRIP CIRCUIT BREAKER FOR ELEVATOR POWER (VERIFY EXACT SIZE WITH MANUFACTURER NAMEPLATE AND SIZE ACCORDINGLY). INSTALL PER MANUFACTURER'S RECOMMENDATIONS. BREAKER SHALL BE CAPABLE OF BEING LOCKED IN THE OPEN POSITION. SHUNT TRIP BREAKER SHALL BE CONNECTED AS REQUIRED SO THAT ACTIVATION OF ASSOCIATED HEAT DETECTORS SHALL CAUSE POWER TO BE DISCONNECTED PRIOR TO APPLICATION OF WATER BY SPRINKLER SYSTEM TO MEET ALL APPLICABLE CODES.
21. PROVIDE 20A, 1P ENCLOSED BREAKER OR FUSED DISCONNECT FOR ELEVATOR CAB LIGHTS, CONTROL, ETC. DISCONNECT SHALL BE CAPABLE OF BEING LOCKED IN THE OPEN POSITION. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. FIELD COORDINATE EXACT LOCATION.
22. PROVIDE DEDICATED OUTSIDE TELEPHONE CONNECTION AS REQUIRED. FIELD COORDINATE EXACT LOCATION AND CONNECTION.
23. PROVIDE 20A, 1P, 120V, 1ø POWER FOR TEMPERATURE CONTROL PANEL. VERIFY EXACT LOCATION OF PANEL WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN OF ELECTRICAL.
24. PROVIDE (2) 1"C TO HANDHOLE FOR FUTURE ELECTRIC VEHICLE CHARGING STATIONS. FIELD COORDINATE EXACT LOCATION AND REQUIREMENTS WITH OWNER, SEE CIVIL PLAN FOR LOCATION.
25. PROVIDE EMERGENCY GENERATOR FEEDER PER SINGLE-LINE DIAGRAM ON E3.1, SEE CIVIL PLAN FOR CONTINUATION.

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Sheet Title:
FIRST FLOOR PLAN - POWER/SYSTEMS

Sheet Number:
E1.2

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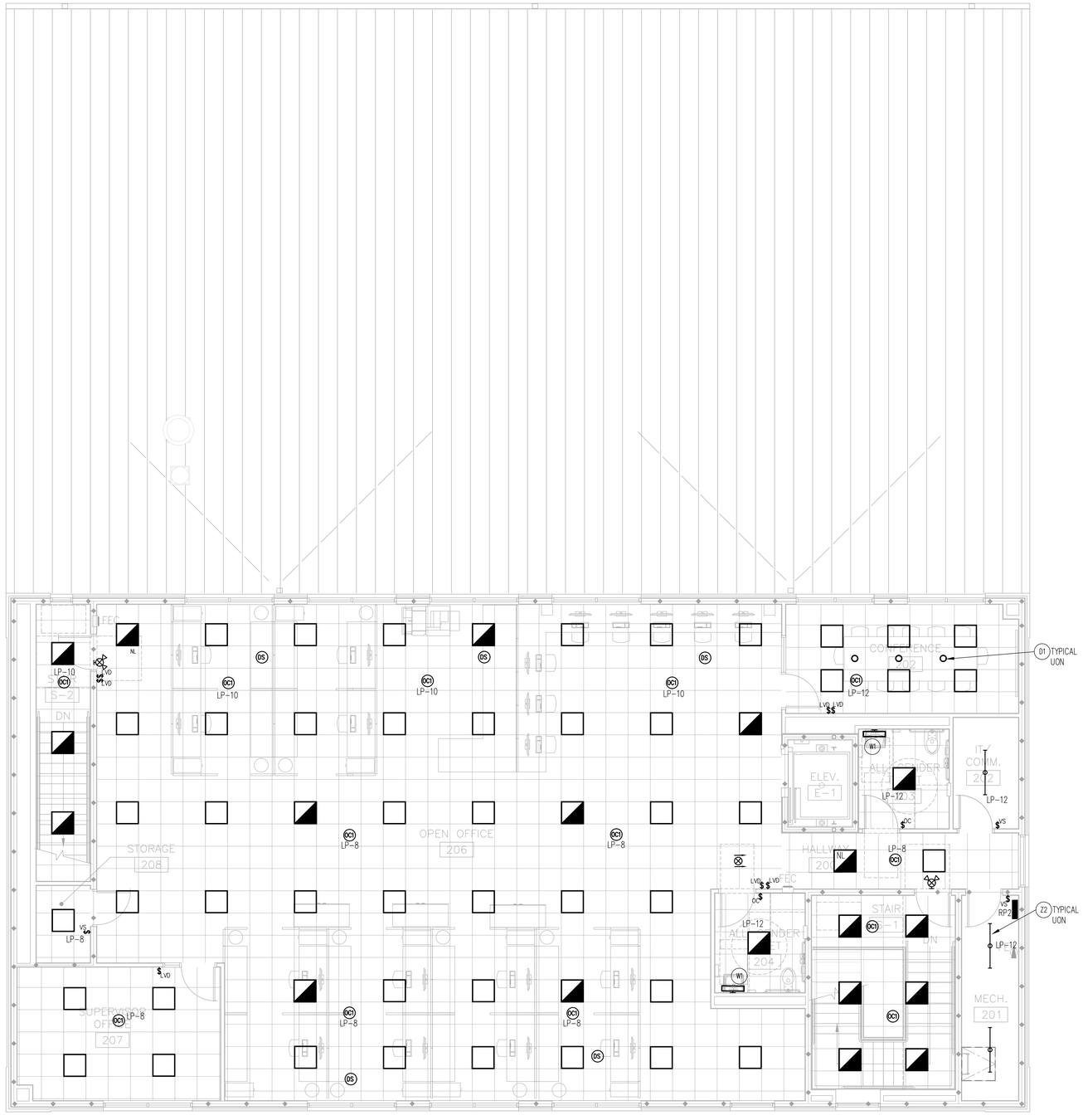

PLAN NORTH

1 SECOND FLOOR PLAN - LIGHTING

3/16" = 1'-0"

0 4' 8' 12'

GENERAL NOTES - LIGHTING:

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F. FOR CEILING MOUNTED OCCUPANCY SENSORS, PROVIDE CEILING MOUNTED LIGHTING CONTROL CONSISTING OF A SENSOR SWITCH, CIRCUIT AHEAD OF ANY WALL BOX CONTROLS OR SWITCHES, (SEE PLAN). COLOR PER ARCHITECT. SEE TYPICAL DIAGRAM DRAWING E3.2.

G. FOR EXIT SIGNS AT STORE FRONT GLASS INSTALLATIONS, PROVIDE PENDANT MOUNTED STEMS FROM ABOVE PER ARCHITECTURAL ELEVATIONS TO HEIGHT ACCEPTABLE BY LOCAL AHJ. FIELD COORDINATE EXACT REQUIREMENTS. PROVIDE STEM ACCESSORY FROM LIGHTING VENDOR TO MATCH EXIT SIGN IN LENGTH NECESSARY.

KEYNOTES - LIGHTING:

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2. ALL EXTERIOR FIXTURES SHALL TO BE ROUTED THRU CONTROL SYSTEM AND CAPABLE OF CONTROL VIA TIMECLOCK OR PHOTOCELL, COORDINATE WITH MANUFACTURER AND ENGINEER. COORDINATE PROGRAMMING WITH OWNER/ENGINEER AND SEE E3.2 FOR DESCRIPTION OF LIGHTING CONTROL SYSTEM.
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4. PROVIDE UNITSTRUT/PENDANT MOUNTING FOR OCCUPANCY SENSORS IN VEHICLE STORAGE, UNFINISHED AREAS. MOUNT AT 9'-0" AFF TYPICAL, FIELD COORDINATE.
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Sheet Title:

SECOND FLOOR PLAN - LIGHTING

Sheet Number:

E2.1

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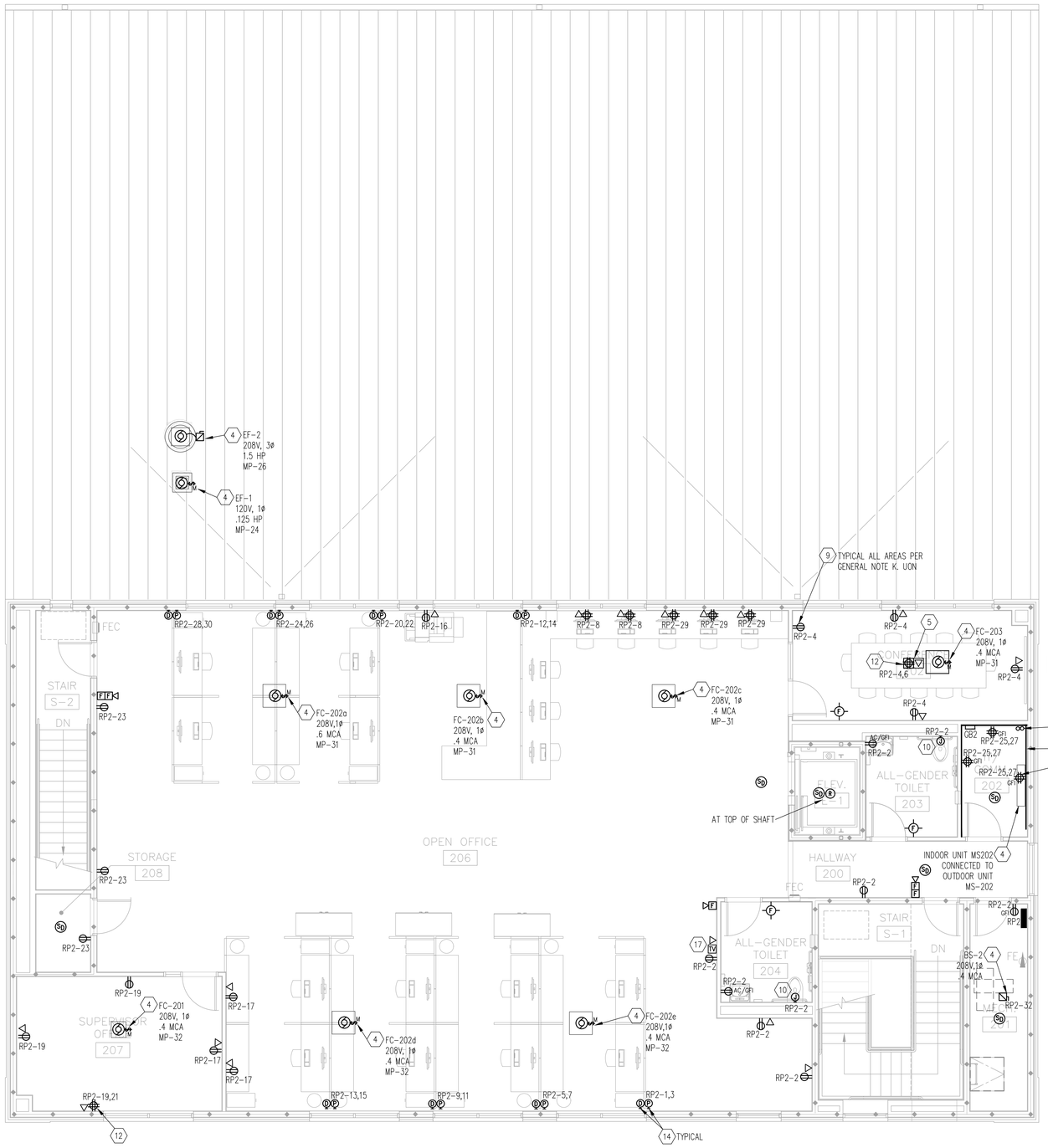

PLAN NORTH

1 SECOND FLOOR PLAN -POWER/SYSTEMS

3/16" = 1'-0"

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C. PROVIDE FIRE STOP TO ALL CONDUITS AND DEVICES PENETRATING FIRE RATED WALLS, SMOKE WALLS AND FLOORS. ALL PENETRATIONS THROUGH FIRE WALLS SHALL BE BY UL LISTED FIRE PENETRATION METHODS/MATERIALS, ETC. SEE ARCHITECTURAL FOR RATED WALLS.

D. COORDINATE WITH ALL SYSTEMS AND TRADES TO PROVIDE COMPLETE DISTRIBUTION SYSTEMS REQUIRED FOR COMPLETE AND OPERABLE SYSTEMS. INCLUDING BUT NOT LIMITED TO HVAC, PLUMBING, FIRE ALARM, SECURITY, DOOR ELECTRONICS, CCTV, CTV, MONITORING, INTERCOM, PAGING, VOICE/DATA, CABLE TELEVISION, ETC.

E. COORDINATE MOUNTING AND EXACT LOCATIONS OF ALL MECHANICAL AND PLUMBING EQUIPMENT DISCONNECTS, STARTERS, ETC. WITH ALL TRADES AND IN ACCORDANCE WITH ALL STATE, LOCAL, AND NATIONAL CODES. PROVIDE ALL LABOR AND MATERIALS TO CONNECT COMPLETE. PROVIDE SIZES PER UNIT NAME PLATE, FINAL CONNECTIONS WITH SEAL-TITE. FOR SERVICE TO ALL ROOF TOP MECHANICAL EQUIPMENT, CONTRACTOR SHALL COORDINATE FEEDER PENETRATION AND SHALL ADHERE TO DETAIL BY MECHANICAL IN ORDER TO GROUP ALL LINES/PIPING INTO WATERTIGHT PENETRATIONS PER MECHANICAL DETAIL.

F. COORDINATE EXACT POWER AND SIGNAL-VOLTAGE REQUIREMENTS, LOCATIONS, CONDUITS, AND CABLING REQUIREMENTS FOR ALL SYSTEMS SPECIFIED BY OWNER'S VENDORS AND WITH GENERAL CONTRACTOR AND OWNER. PROVIDE ALL LABOR AND MATERIALS TO CONNECT COMPLETE.

G. REFER TO EQUIPMENT SCHEDULES ON ALL CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION FOR HVAC AND PLUMBING CONNECTIONS. PROVIDE ALL LABOR AND MATERIALS TO CONNECT COMPLETE.

H. COORDINATE EXACT WALL BOX REQUIREMENTS PRIOR TO ROUGH-IN. NO SURFACE RACEWAY IS TO BE PROVIDED UNLESS DIRECT DOCUMENTED VARIANCE IS INDICATED OR GIVEN BY OWNER. IF GRANTED PERMISSION, PROVIDE SURFACE MOUNTED RACEWAY CONDUITS, BACK BOXES AND ALL ACCESSORIES EQUAL TO WIREMOLD SERIES #V2000WH WHERE RACEWAYS AND BACK BOXES ARE EXPOSED. PROVIDE ALL LABOR AND MATERIALS TO CONNECT NEW EQUIPMENT, DEVICES, ETC. COMPLETE TO PANEL INDICATED, 20A/1P, U.N.O.

I. ALL RECEPTACLES NEAR SINKS AND OTHER SIMILAR LOCATIONS, EXTERIOR AND ROOFTOP AREAS SHALL BE PROTECTED BY GFCI PER NEC 210.8 (B). IN GENERAL, ALL DEVICES IN AREAS DESIGNATED IN NEC 210.8 SHALL BE GFCI PROTECTED WHETHER INDICATED OR NOT.

J. ALL UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC, 36" BELOW GRADE. ALL STUB-UPS/90'S SHALL TRANSITION TO BE SCHEDULE 80 PVC. COORDINATE WITH ALL OTHER UNDERGROUND UTILITIES.

K. AT LEAST ONE CONTROLLED RECEPTACLE SHALL BE INSTALLED WITHIN 6 FEET OF EACH UNCONTROLLED RECEPTACLE, OR SPLIT-WIRED DUPLEX ARE INSTALLED (THAT HAVE ONE CONTROLLED AND ONE UNCONTROLLED RECEPTACLE) IN ALL OF THE FOLLOWING SPACES (CONTRACTOR SHALL PROVIDE PERMANENT AND DURABLE MARKING TO DISTINGUISH BETWEEN CONTROLLED AND UNCONTROLLED):
K.A. PRIVATE OFFICES
K.B. RECEPTIONS AND LOBBIES
K.C. CONFERENCE ROOMS
K.D. KITCHENETTES IN OFFICE SPACES
K.E. COPY ROOM

L. FOR EACH DATA OUTLET PROVIDE (2) CAT 6 CABLES TO IT DATA BOARD PER FLOOR. PROVIDE 20' SPOOL AT DATA BOARD AND 18" LOOP WITHIN EACH DATA BOX.

KEYNOTES - POWER:

(ALL NOTES MAY NOT APPLY TO THIS SHEET)

1. PROVIDE SERVICE RATED AUTOMATIC TRANSFER SWITCH (ATS) AND MAIN DISTRIBUTION PANELBOARD (MDP) AS INDICATED. SEE SINGLE-LINE DIAGRAM ON E3.1 FOR ADDITIONAL INFORMATION. FIELD COORDINATE EXACT LOCATIONS WITH OTHER TRADES, STRUCTURE, ENGINEER, ETC. TO PROVIDE NEC REQUIRED WORKING CLEARANCE, ETC.
2. PROVIDE SECONDARY FEEDER, UG CONDUIT, AS NECESSARY FROM NEW SERVICE RATED ATS TO EXISTING UTILITY TRANSFORMER, (SEE SINGLE-LINE DIAGRAM ON E3.1 FOR ADDITIONAL INFORMATION). FIELD COORDINATE EXACT LOCATION AND ALL REQUIREMENTS WITH UTILITY COMPANY FOR TRANSFORMER LOCATION. CONTRACTOR SHALL PROVIDE ALL IN COORDINATION WITH REQUIREMENT OF UTILITY FOR INSTALLATION PER UTILITY HANDBOOK AND ALL REQUIRED INSTALLATION DETAILS, ETC.
3. PROVIDE NEW ELECTRICAL PANELS AS INDICATED. SEE SINGLE-LINE DIAGRAM ON E3.1 AND PANEL SCHEDULES ON E4.1-E4.2 FOR ADDITIONAL INFORMATION.
4. POWER CONNECTION FOR MECHANICAL/PLUMBING EQUIPMENT. COORDINATE EXACT LOCATION, CONTROLS, POWER AND REQUIREMENTS WITH EQUIPMENT MANUFACTURER AND ALL TRADES TO INSTALL COMPLETE. PROVIDE DISCONNECT RATED (NEMA 1 INTERIOR, NEMA 3R EXTERIOR) AND SIZED/FUSED PER MANUFACTURER RECOMMENDATIONS IF NOT FACTORY PROVIDED AS PART OF EQUIPMENT (SEE MECHANICAL FOR BASIS OF DESIGN MCA AND MOCP, ACCESSORIES AND CONTROLS). PROVIDE CIRCUIT AS INDICATED. EXACT CIRCUIT BREAKER AND BRANCH CIRCUIT SIZE SHALL BE BASED ON ACTUAL EQUIPMENT PROVIDED TO MEET MANUFACTURER'S RECOMMENDATIONS. FINAL CONNECTION WITH SEAL-TITE.
5. PROVIDE MULTIPLE SERVICE, FLUSH FLOOR OUTLET WIREMOLD TYPE #RFB2 2GANG (FOR DUPLEX AND DATA), #RFB4 SERIES 4GANG FLOOR BOX (FOR QUADRAPLEX AND DATA) OR #RFB6 6GANG (FOR QUADRAPLEX, DATA AND AV) AS INDICATED BY SYMBOLS ON DRAWING. PROVIDE FLOORPORT STYLE COVERPLATE (PROVIDE BLANK TOP FOR CONCRETE/TILE APPLICATION, OR CUTOUT TOP FOR CARPET INSTALLATIONS - COORDINATE FLOOR TYPE WITH ARCHITECTURAL, ALSO COORDINATE FINISH OF COVERPLATE WITH ARCHITECTURAL). PROVIDE FP-CTR FOR CONCRETE POUR APPLICATIONS TO ENSURE FINISHED COVERPLATE IS TOTALLY FLUSH WITH FINISH FLOOR. PROVIDE DUPLEX RECEPTACLE(S) AS INDICATED PER SPECIFICATIONS. COORDINATE DATA PORTS WITH IT IF DATA CABLING IS NOTED ON DRAWINGS. COORDINATE EXACT LOCATION, FLOORING TYPE AND MANUFACTURER INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN AND PROVIDE ALL COMPONENTS FOR COMPLETE INSTALLATION. ALL OUTLETS SHALL HAVE CONDUIT RUN IN/UNDER FLOOR SLAB TO NEAREST WALL AND CONDUIT STUBBED UP TO ABOVE ACCESSIBLE CEILING (IF APPLICABLE) FOR CONTINUATION TO ELECTRICAL PANEL OR TELECOM BACKBOARD (ALL TELECOM CONDUIT WITH PULLSTRING). FIELD COORDINATE EXACT LOCATIONS AND FULL REQUIREMENTS WITH VENDOR AND OWNER FOR COMPLETE SYSTEM. FLOOR BOX COVERS MUST BE FLUSH WITH FINISHED FLOOR TO AVOID ANY TRIPPING HAZARD. PROVIDE (1) 1-1/4"C WITH PULLSTRING UNDER SLAB STUB AND TURN ABOVE ACCESSIBLE CEILING..
6. PROVIDE FIRE RETARDANT PLYWOOD BACKBOARD FOR DATA/TELECOM EQUIPMENT. PROVIDE DEDICATED 20A, 120V CIRCUITS TO QUADRAPLEX OUTLETS AS INDICATED, FIELD COORDINATE EXACT LOCATION OF OUTLETS WITH IT REPRESENTATIVE OR ARCHITECT/ENGINEER. TELECOM BOARD IN DATA ROOMS IN SUITE AREAS SHALL BE AROUND ROOM PERIMETER AS INDICATED. PROVIDE GROUND BAR GB-# AS INDICATED, SEE DETAIL ON E3.1.
7. PROVIDE (2) 4"C FROM IT/COMM. ROOM 102 UNDERGROUND TO UTILITY POLE CONNECTION PER LOCAL UTILITY REQUIREMENT. SEE CIVIL FOR CONTINUATION AND/OR COORDINATE WITH ARCHITECT AND LOCAL UTILITY. ALL ELLS SHALL BE SWEEPING TYPE. FIELD COORDINATE EXACT LOCATION OF ALL STUB UPS WITH ARCHITECT/ENGINEER/OWNER PRIOR TO ROUGH-IN.
8. PROVIDE CONNECTIONS TO FLOW AND TAMPER SWITCHES AND TO TROUBLE SWITCHES AT AIR COMPRESSOR. FIELD COORDINATE TO PROVIDE CONNECTIONS AND COMPLIANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND REGULATIONS. REFER TO FIRE PROTECTION DRAWINGS FOR EXACT LOCATIONS PRIOR TO ROUGHT-IN OF ELECTRICAL DEVICES.
9. SPLIT WIRE RECEPTACLES TO MEET TITLE 24. SEE OCCUPANCY/VACANCY SENSOR WIRING DIAGRAM ON DRAWING. E3.2.
10. PROVIDE 120V. CIRCUIT TO ACCOMMODATE PLUMBING FIXTURE. COORDINATE EXACT LOCATION, CONNECTION, ETC. WITH MANUFACTURER.
11. MAIN SERVICE GROUND COUNTERPOISE SYSTEM. FIELD COORDINATE EXACT LOCATION IN FIELD WITH ALL UTILITIES, TRADES, GRADE - FINAL SELECTION BY ENGINEER. SEE DRAWING E3.1 FOR CONNECTIONS AND FURTHER DESCRIPTION/INFORMATION.
12. PROVIDE (2) CIRCUITS TO EACH QUAD RECEPTACLE, (1) CIRCUIT THRU POWER PACK TO CONTROL RECEPTACLE (TO COMPLY WITH GENERAL NOTE K). SEE CONTROL DIAGRAM ON DRAWING E3.1.
13. PROVIDE POWER CONNECTION AND ALL CABLING TO IRRIGATION CONTROL PANEL, ETC. PER MANUFACTURER'S RECOMMENDATIONS, COORDINATE WITH ARCHITECT FOR COMPLETE INSTALLATION. FIELD VERIFY EXACT LOCATION WITH SUPPLIER AND ARCHITECT.
14. PROVIDE POWER AND DATA JUNCTION BOX CONNECTION FOR SYSTEMS FURNITURE CONNECTION. CONTRACTOR SHALL COORDINATE CLOSELY WITH FURNITURE VENDOR AND IT/DATA PERSONNEL FOR PROPER BOX CONFIGURATIONS AND REQUIREMENTS. PROVIDE FLEX CONNECTION TO SYSTEMS FURNITURE BOX/RACEWAY FOR DATA AND POWER AS DICTATED BY VENDOR AND AS COORDINATED WITH IT PERSONNEL. AT MINIMUM PROVIDE 1-1/4"" FLEX CONNECTION FOR TELECOM AND (6) CAT 6. FIELD VERIFY EXACT LOCATIONS AND REQUIREMENTS WITH SYSTEMS FURNITURE VENDOR AND OWNER FOR COMPLETE SYSTEM.
15. PROVIDE FIRE ALARM SYSTEM WITH DIGITAL DIALER FOR CONNECTION TO UL LISTED CENTRAL STATION MONITORING SERVICE AND REMOTE ANNUNCIATOR CONFORMING TO ALL LOCAL, STATE AND NATIONAL CODES. COORDINATE WITH LOCAL AHJ/FIRE MARSHAL FOR ALL REQUIREMENTS AND PROVIDE COMPLETE. COORDINATE EXACT LOCATION OF REMOTE ANNUNCIATOR WITH LOCAL AHJ. PROVIDE DUCT SMOKE DETECTION/FAN SHUTDOWN, SPRINKLER SUPERVISION, ETC. - INCLUDING ALL MONITOR MODULES, ETC. TO MEET APPLICABLE CODES.
16. PROVIDE RECEPTACLE AND COMMUNICATION OUTLET FOR MONITOR/TV. FIELD COORDINATE HEIGHT AND EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN
17. PROVIDE (4) RELAYS FOR ELEVATOR PRIMARY, SECONDARY RECALL, FIRE HAT AND ELEVATOR SHUNT TRIP IN ELEVATOR MACHINE ROOM 112.
18. PROVIDE GFCI RECEPTACLE WITH COVER AND GUARD IN PIT. PROVIDE LIGHT FIXTURE WITH GUARD IN PIT AND ASSOCIATED SWITCH LOCATED AT PIT/LADDER ENTRANCE PER CODE AND ELEVATOR MANUFACTURER'S CHECKLIST. PROVIDE DEDICATED 20A, 1P 120V CIRCUIT WITH 3 #12, 3/4 INCH CONDUIT TO CIRCUIT INDICATED. SERVICE TO RECEPTACLE AND LIGHT - LIGHT SHALL NOT BE CONNECTED TO LOAD SIDE OF GFCI.
19. PROVIDE DEDICATED 20A/1P, 120V RECEPTACLE FOR SUMP PUMP (SP-1). PROVIDE CORD AND PLUG IF NOT PROVIDED WITH SUMP PUMP UNIT, COORDINATE WITH SUMP PUMP MANUFACTURER. CIRCUIT AS INDICATED. MEET ALLL APPLICABLE CODE ELEVATOR INSPECITON CHECKLIST REQUIREMENTS.
20. PROVIDE 208V, 3ø, 100A, 3P ENCLOSED SHUNT TRIP CIRCUIT BREAKER FOR ELEVATOR POWER (VERIFY EXACT SIZE WITH MANUFACTURER NAMEPLATE AND SIZE ACCORDINGLY). INSTALL PER MANUFACTURER'S RECOMMENDATIONS. BREAKER SHALL BE CAPABLE OF BEING LOCKED IN THE OPEN POSITION. SHUNT TRIP BREAKER SHALL BE CONNECTED AS REQUIRED SO THAT ACTIVATION OF ASSOCIATED HEAT DETECTORS SHALL CAUSE POWER TO BE DISCONNECTED PRIOR TO APPLICATION OF WATER BY SPRINKLER SYSTEM TO MEET ALL APPLICABLE CODES.
21. PROVIDE 20A, 1P ENCLOSED BREAKER OR FUSED DISCONNECT FOR ELEVATOR CAB LIGHTS, CONTROL, ETC. DISCONNECT SHALL BE CAPABLE OF BEING LOCKED IN THE OPEN POSITION. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. FIELD COORDINATE EXACT LOCATION.
22. PROVIDE DEDICATED OUTSIDE TELEPHONE CONNECTION AS REQUIRED. FIELD COORDINATE EXACT LOCATION AND CONNECTION.
23. PROVIDE 20A, 1P, 120V, 1ø POWER FOR TEMPERATURE CONTROL PANEL. VERIFY EXACT LOCATION OF PANEL WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN OF ELECTRICAL.

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Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
SECOND FLOOR PLAN - POWER/SYSTEMS

Sheet Number:
E2.2

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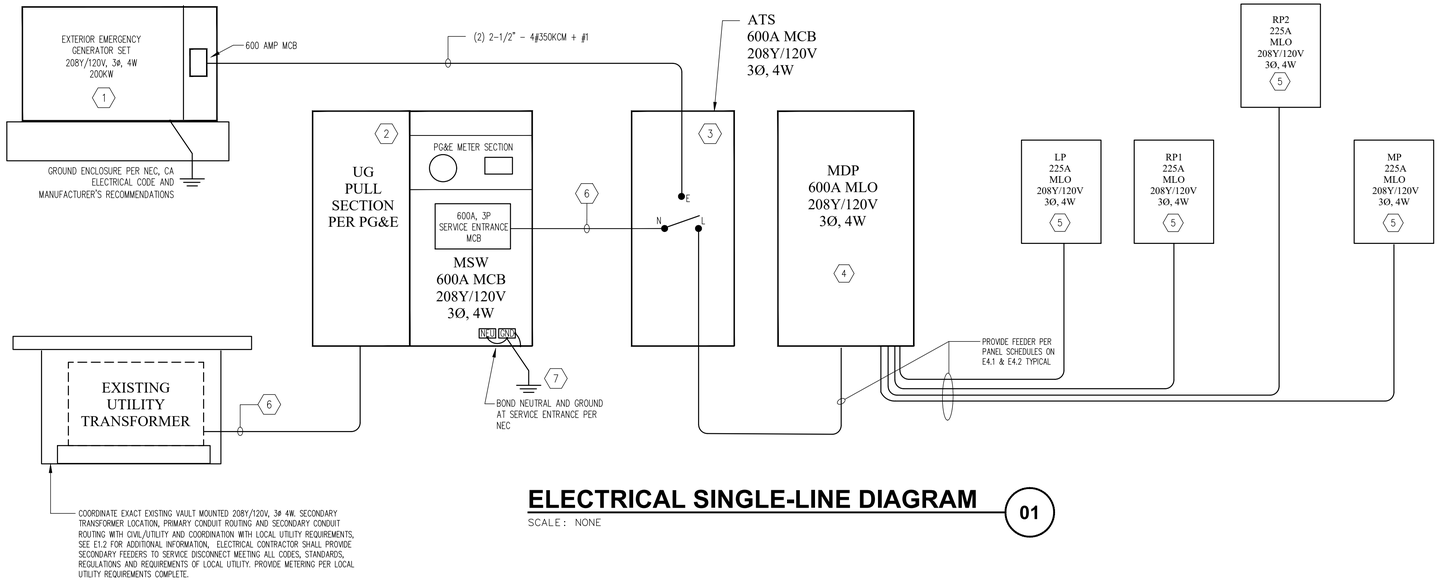


ELECTRICAL SINGLE-LINE DIAGRAM 01

SCALE: NONE

KEYNOTES - PANELBOARD AND RISER DIAGRAM:

1. PROVIDE EXTERIOR EMERGENCY GENERATOR SET IN WEATHERPROOF SOUND ATTENUATED ENCLOSURE WITH SUB BASE DIESEL FUEL TANK, 48 HOURS FUEL SUPPLY. 200KW, 208Y/120V, 3ø 4W. WITH 600 AMP MAIN CIRCUIT BREAKER.
2. PROVIDE PG&E STANDARD EXTERIOR UG PULL SECTION AND MAIN SERVICE ENTRANCE BREAKER SECTION WITH PG&E METERING SECTION. COORDINATE ALL WITH PG&E. PROVIDE CONCRETE PAD AS REQUIRED FOR GEAR COMPLETE.
3. PROVIDE INTERIOR SERVICE ENTRANCE RATED AUTOMATIC TRANSFER SWITCH "ATS" WITH SERVICE ENTRANCE MAIN CIRCUIT BREAKER.
4. PROVIDE MAIN DISTRIBUTION PANELBOARD "MDP" AS INDICATED. COORDINATE EXACT LOCATION WITH ARCHITECTURAL AND ALL TRADES. ENSURE COMPLIANCE WITH NEC CLEARANCES, ETC. PROVIDE FEEDER PER PANEL SCHEDULE THIS DRAWING. PROVIDE INTEGRAL SURGE PROTECTION DEVICE (SPD) IN MAIN PER GEAR MANUFACTURER RECOMMENDATIONS, PROVIDE ANY BRANCH BREAKER IN SWITCHBOARD FOR SPD (COORDINATE EXACT SIZE WITH MANUFACTURER). THE SPD SHALL BE AN 125/250KA, INTEGRAL TO MAIN SWITCHBOARD AND CONNECTED TO PANEL PER MANUFACTURER'S RECOMMENDATIONS.
5. PROVIDE NEW DISTRIBUTION/BRANCH PANELBOARD AS INDICATED. SEE PLANS FOR LOCATION – FIELD COORDINATE EXACT LOCATIONS WITH OTHER TRADES AND ARCHITECTURAL LAYOUT TO PROVIDE NECESSARY NEC CLEARANCES, ETC. SEE PANEL SCHEDULES ON E3.1 AND E4.1
6. PROVIDE SECONDARY FOR ATS, (2) 2-1/2" – 4#350KCM. CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY TO PROVIDE ALL NECESSARY COMPONENTS. LOCATION PER LOCAL UTILITY AND COORDINATION WITH CIVIL. SEE E1.2 FOR ADDITIONAL INFORMATION AND DETAILS.
7. PROVIDE SERVICE GROUNDING PER LOCAL UTILITY, SEE DETAIL 02 FOR ADDITIONAL INFORMATION.

GENERAL NOTES - PANELBOARD AND SINGLE-LINE DIAGRAM:

A. PROVIDE PANELBOARDS WITH TYPE WRITTEN SCHEDULES AND AS-BUILT DRAWINGS PER ACTUAL INSTALLATION.

B. FOR ALL PANELBOARD FEEDER SIZES REFER TO SAME PANELBOARD SCHEDULES, ON DRAWING E3.1 & E4.1

C. ALL EQUIPMENT FEEDER SIZES INDICATED ON PANEL SCHEDULE, UON, OR PROVIDE PER NEC TO MATCH NAMEPLATE AND CORRESPONDING OVERCURRENT PROTECTION DEVICE.

D. REFER TO POWER PLAN(S) FOR DISTRIBUTION EQUIPMENT 'BASIS OF DESIGN' PHYSICAL SIZES AND LAYOUTS. CONTRACTOR SHALL PROVIDE AND INSTALL DISTRIBUTION EQUIPMENT TO MEET REQUIREMENTS OF ALL LOCAL, STATE, NATIONAL CODES AND AUTHORITY HAVING JURISDICTION. COORDINATE WITH EXISTING CONDITIONS, ALL NEW WORK, ACTUAL ROOM SIZE, ALL TRADES AND DISTRIBUTION EQUIPMENT SUPPLIER.

E. VERIFY EXACT A.I.C. RATING FOR ALL DISTRIBUTION EQUIPMENT WITH ACTUAL SITE AND EQUIPMENT CHARACTERISTICS OF AVAILABLE FAULT CURRENT PER LOCAL UTILITY AND PROPER SHORT CIRCUIT CALCULATIONS PER MANUFACTURER CALCULATION. SIZES INDICATED ARE A MINIMAL DESIGN SIZE BASED ON INFORMATION PROVIDED AT TIME OF DESIGN. CONTRACTOR TO VERIFY.

208Y/120V 3-Phase 4-Wire POWER PANEL — Name: MDP

Mains: 600A Main molded case breaker — Min Sym IC: 65000
Trim: Surface Door: No — Fed from: ATS
Branch OCP: Molded case breaker — Provide UL SE Label
Neutral: S/N — Feeder: Note 1
Ground bar: Yes

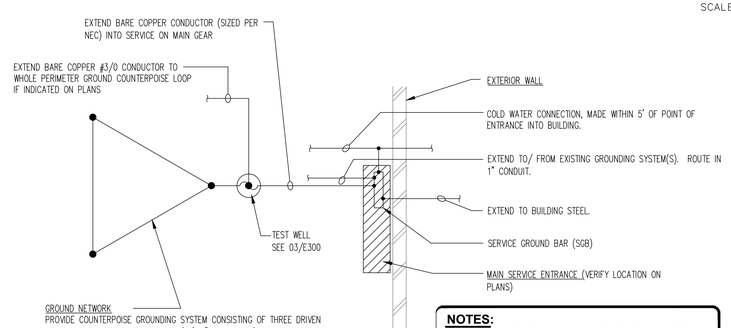
CIR	DESCRIPTION	TRIP	POLES	PHASE LOADS A	B	C	CONDUITS	PHASES	NEUTRAL	GROUND	WIRE TYPE
1	LP	225	3	3592	3502	2414	(1)2-1/2"	3#4/0	4/0	#4	THWN Copper
2	RP1	225	3	8308	8656	8768	(1)2-1/2"	3#4/0	4/0	#4	THWN Copper
3	RP2	225	3	10242	9161	9200	(1)2-1/2"	3#4/0	4/0	#4	THWN Copper
4	MP	225	3	22200	21235	17410	(1)2-1/2"	3#4/0	4/0	#4	THWN Copper
5	ELEVATOR	100	3	9384	9384	9384	1"	3#3	–	#8	THWN Copper
6	SPARE	100	3	——	——	——	–				
7	SPARE	100	3	——	——	——	–				
8	SPARE	100	3	——	——	——	–				
9	SPARE	400	3	——	——	——	–				
10	Space only	400	3	——	——	——	–				
	Phase load totals			53726	51938	47176					

Demand load = 128.4 KVA — Demand amps = 356

Notes for MDP:

1 Feeder is (2) 2-1/2" – 4#350kcmil + #1 GND THWN Copper from Transfer switch ATS

COMPUTATION SUMMARY		VOLT-AMPS		DEMAND FACTOR	DEMAND
Continuous lights		5508	*	1.25 =	6885
Noncontinuous lights		0			0
Receptacles	- total =	38500			
	1st 10000	10000	*	1.00 =	10000
	remainder	28500	*	0.50 =	14250
Resistance heat		54920	*	1.00 =	54920
Heat motors (seasonal)		0			0
A/C motors (seasonal)		0			0
Motors (nonseasonal)		1456	*	1.00 =	1456
Other continuous		600	*	1.25 =	750
Other noncontinuous		39856	*	1.00 =	39856
Water heat		0			0
Kitchen		0			0
User defined		0			0
Spares		0			0
Largest motor (nonseasonal add 25%)		956	*	0.25 =	239
TOTAL DEMAND					128356
NOTE: TOTAL DEMAND does not include subfed spare demand				=	12000
Minimum feeder ampacity =		128356	/	360.27 =	356A
Minimum feeder overcurrent protection					400A
Feeder overcurrent protection in use					600A
Usable V-A on 600A feeder = 600 * 360.27 minus 128356				=	87804

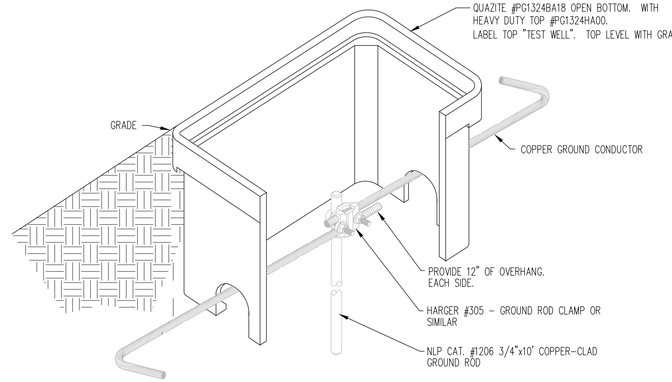


NOTES:
ALL CONNECTION TO BE #3/0 BARE COPPER (BOLTED CONNECTION). PROVIDE ALL LABOR AND MATERIALS TO COMPLY WITH NEC FOR GROUNDING OF ALL SYSTEMS AND EQUIPMENT. ROUTE IN 1" EMT CONDUITS

ALL GROUNDING SHALL MEET APPROVAL OF LOCAL AUTHORITY HAVING JURISDICTION AND SHALL BE CONFIRMED AND COORDINATED PRIOR TO INSTALLATION. DEVIATIONS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW.

GROUND NETWORK DETAIL 02

SCALE: NONE

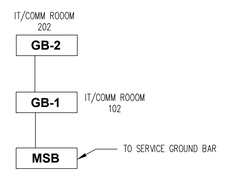


GROUND INSPECTION WELL (TEST WELL) 03

SCALE: NONE

TELECOM KEY NOTES:

1. PROVIDE 1/4"X 4" X 24" COPPER SERVICE GROUND BARS WALL MOUNTED ON 2" STAND-OFF INSULATORS FOR ALL.
2. INTERCONNECT TELECOM GROUND BARS VIA #4 BARE COPPER CONDUCTOR TO GROUND BAR GB0 AT NEW MSWBD. PROVIDE ALL MOUNTING HARDWARE NECESSARY.



TELECOMMUNICATION
GROUNDING SYSTEM DETAIL 04

SCALE: NONE

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Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
ELECTRICAL DIAGRAMS, DETAILS AND SCHEDULES

Sheet Number:
E3.1

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Sheet Title:
ELECTRICAL DIAGRAMS AND DETAILS

Sheet Number:
E3.2

NOTE:
DIAGRAM THE SAME FOR AREAS WITHOUT DAYLIGHT SENSOR - EXCEPT ELIMINATE DAYLIGHT SENSOR AND ADDITIONAL POWER PACK

OCCUPANCY/DAYLIGHT SENSOR LEGEND

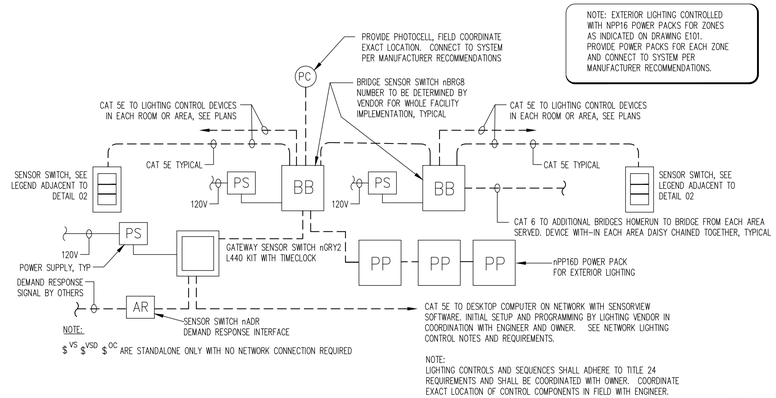
- (OC1) LOW VOLTAGE, CEILING MOUNTED SENSOR. nCM PDT-9
- (OC2) LOW VOLTAGE, CORNER MOUNTED WIDE VIEW SENSOR. nWV PDT-10
- (DS) LOW VOLTAGE, CEILING MOUNTED SENSOR. nCM PC ADC
- S^{LV} LOW VOLTAGE CONTROL STATION. SENSOR SWITCH #nPODM
- S^{LVD} LOW VOLTAGE CONTROL STATION, DIMMABLE. SENSOR SWITCH #nPODMD

NOTE:
CONTROL VENDORS SHALL PROVIDE COMPLETE SHOP DRAWINGS DOCUMENTS INDICATING DEVICE LOCATIONS, AREAS OF COVERAGE, QUANTITIES AND WIRING REQUIREMENTS FOR APPROVAL AND DISTRIBUTION TO THE CONTRACTOR FOR INSTALLATION.

SYSTEM TO BE PART OF FULL FACILITY NETWORK LIGHTING CONTROL SYSTEM, SEE CONTROL DIAGRAM 02

OCCUPANCY/VACANCY/DAYLIGHT SENSOR SYSTEM STANDARD
TYPICAL WIRING DIAGRAM
01

SCALE: NONE



NOTE: EXTERIOR LIGHTING CONTROLLED WITH NPP16 POWER PACKS FOR ZONES AS INDICATED ON DRAWING E101. PROVIDE POWER PACKS FOR EACH ZONE AND CONNECT TO SYSTEM PER MANUFACTURER RECOMMENDATIONS.

NOTE:
S^{VS} S^{VSD} S^{OC} ARE STANDALONE ONLY WITH NO NETWORK CONNECTION REQUIRED

NOTE:
LIGHTING CONTROLS AND SEQUENCES SHALL ADHERE TO TITLE 24 REQUIREMENTS AND SHALL BE COORDINATED WITH OWNER. COORDINATE EXACT LOCATION OF CONTROL COMPONENTS IN FIELD WITH ENGINEER

TYPICAL NETWORK LIGHTING CONTROL DIAGRAM
02

SCALE: NONE

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208Y/120V 3-Phase 4-Wire LIGHTING PANEL — Name: LP

Mains: 225A MLO
Trim: Surface Door: Yes
Neutral: S/N
Ground bar: Yes

Min Sym IC: 22000
Fed from: MDP
Feeder: Note 1

CIR	DESCRIPTION	CONDUIT	PHASE	NEUT	GND	TRIP	POLES	A	B	C	POLES	TRIP	CONDUIT	PHASE	NEUT	GND	DESCRIPTION	CIR
1	Ltg.Corr,Break	3/4"	#12	#12	#12	20	1	742										
								660			1	20	3/4"	#12	#12	#12	Ltg.Vehicle Stor	2
3	Ltg.Stor, Shop	3/4"	#12	#12	#12	20	1		532									
									660		1	20	3/4"	#12	#12	#12	Ltg.Vehicle Stor	4
5	Ltg.Exterior	3/4"	#12	#12	#12	20	1			75								
										660	1	20	3/4"	#12	#12	#12	Ltg.Vehicle Stor	6
7	Spare	–				20	1	500										
								690			1	20	3/4"	#12	#12	#12	Ltg.Open Off	8
9	Spare	–				20	1		500									
									810		1	20	3/4"	#12	#12	#12	Ltg.Open Off	10
11	Ltg.Elevator Cab	3/4"	#12	#12	#12	20	1			100								
										579	1	20	3/4"	#12	#12	#12	Ltg.Conf,Stair	12
13	Spare	–				20	1	500										
								500			1	20	–				Spare	14
15	Spare	–				20	1		500									
									500		1	20	–				Spare	16
17	Spare	–				20	1			500								
										500	1	20	–				Spare	18
19	Space only	–				—	1	———										
								———			1	—	–				Space only	20
21	Space only	–				—	1		———									
									———		1	—	–				Space only	22
23	Space only	–				—	1			———								
										———	1	—	–				Space only	24
25	Space only	–				—	1	———										
								———			1	—	–				Space only	26
27	Space only	–				—	1		———									
									———		1	—	–				Space only	28
29	Space only	–				—	1			———								
										———	1	—	–				Space only	30
31	Space only	–				—	1	———										
								———			1	—	–				Space only	32
33	Space only	–				—	1		———									
									———		1	—	–				Space only	34
35	Space only	–				—	1			———								
										———	1	—	–				Space only	36
37	Space only	–				—	1	———										
								———			1	—	–				Space only	38
39	Space only	–				—	1		———									
									———		1	—	–				Space only	40
41	Space only	–				—	1			———								
										———	1	—	–				Space only	42

Phase load totals A 3592, B 3502, C 2414

Demand load = 10.9 KVA Demand amps = 30

Notes for LP:

1 Feeder is (1) 2-1/2" – 4#4/0 + #4 GND THWN Copper

208Y/120V 3-Phase 4-Wire LIGHTING PANEL — Name: MP

Mains: 225A MLO
Trim: Surface Door: Yes
Neutral: S/N
Ground bar: Yes

Min Sym IC: 10000
Fed from: MDP
Feeder: Note 1

CIR	DESCRIPTION	CONDUIT	PHASE	NEUT	GND	TRIP	POLES	A	B	C	POLES	TRIP	CONDUIT	PHASE	NEUT	GND	DESCRIPTION	CIR
1	UH-1	3/4"	#12	#12	#12	20	1	200										
								6996			3	80	1"	#4	–	#8	HP-1	2
3	UH-2	3/4"	#12	#12	#12	20	1		200									
									6996		–			#4			–	4
5	Spare	–				20	1			500								
										6996	–			#4			–	6
7	EWH-4	3/4"	#10	–	#10	30	2	1750										
								1750			2	30	3/4"	#10	–	#10	EWH-5	8
9	–		#10				–	1750			–			#10			–	10
11	RCP- 1	3/4"	#12	#12	#12	20	1		200									
									1750		2	30	3/4"	#10	–	#10	EWH-6	12
13	MS-112	3/4"	#10	–	#10	30	2	1903										
								1750			–			#10			–	14
15	–		#10				–		1903									
									1750		2	30	3/4"	#10	–	#10	EWH-3	16
17	Spare	–				20	1			500								
										1750	–			#10			–	18
19	MS-202	3/4"	#10	–	#10	30	2	1903										
								1750			2	30	3/4"	#10	–	#10	EWH-2	20
21	–		#10				–		1903									
									1750		–			#10			–	22
23	MS-102	3/4"	#10	–	#10	30	2			1903								
										200	1	20	3/4"	#12	#12	#12	EF-1	24
25	–		#10				–	1903										
								718			3	15	3/4"	#12	–	#12	EF-2	26
27	EWH-1	3/4"	#12	–	#12	20	2		1375									
									717		–			#12			–	28
29	–		#12				–			1375								
										717	–			#12			–	30
31	FCE02A,202B,202C	3/4"	#12	–	#12	15	2	250										
								17			2	15	3/4"	#12	–	#12	FC 201,202D,202E	32
33	–		#12				–		250									
									17		–			#12			–	34
35	FC 101 THRU 104	3/4"	#12	–	#12	15	2			478								
										500	1	20	–				Spare	36
37	–		#12				–	478										
								832			2	20	3/4"	#12	–	#12	EVR-1	38
39	BS-1	3/4"	#12	–	#12	15	2		42									
									832		–			#12			–	40
41	–		#12				–			41								
43	Space only	–				—	1	———		500	1	20	–				Spare	42
								———			1	—	–				Space only	44
45	Space only	–				—	1		———									
									———		–		–				–	46
47	–	–					–			———								
										———	–		–				–	48
49	–	–					–	———										
								———			–		–				–	50
51	–	–					–		———									
									———		–		–				–	52
53	–	–					–			———								
										———	–		–				–	54
55	–	–					–	———										
								———			–		–				–	56
57	–	–					–		———									
									———		–		–				–	58
59	–	–					–			———								
										———	–		–				–	60

Phase load totals A 22200, B 21235, C 17410

Demand load = 61.1 KVA Demand amps = 170

Notes for MP:

1 Feeder is (1) 2-1/2" – 4#4/0 + #4 GND THWN Copper

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PHARIS ENGINEERING

REGISTERED PROFESSIONAL ENGINEER — KEITH A. PHARIS — No. 17740 — Exp. 3/31/23 — ELECTRICAL — STATE OF CALIFORNIA — 11/17/2020

COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11-16-2020

BID SET

Client Project Number: P30J1
APN Number: 054-063-180
KPA Project Number: 714.00
Date: NOV 16, 2020

Sheet Title:
ELECTRICAL PANEL SCHEDULES

Sheet Number:
E4.1

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208Y/120V 3-Phase 4-Wire LIGHTING PANEL — Name: RP1

Mains: 225A MLO
Trim: Surface Door: Yes
Neutral: S/N
Ground bar: Yes

Min Sym IC: 10000
Fed from: MDP
Feeder: Note 1

CIR	DESCRIPTION	CONDUIT	PHASE	NEUT	GND	TRIP	POLES	PHASE LOADS A	PHASE LOADS B	PHASE LOADS C	POLES	TRIP	CONDUIT	PHASE	NEUT	GND	DESCRIPTION	CIR
1	Recept.IT/COMM	3/4"	#12	#12	#12	20	1	180										
								540			1	20	3/4"	#12	#12	#12	Recept Corridors	2
3	Recept.IT/COMM	3/4"	#12	#12	#12	20	1		180									
									600		1	20	3/4"	#12	#12	#12	Recept EWC	4
5	Recept.IT/COMM	3/4"	#12	#12	#12	20	1			180								
										1080	1	20	3/4"	#12	#12	#12	Rec.RR,Lobby	6
7	Recept.IT/COMM	3/4"	#12	#12	#12	20	1	180										
								900			1	20	3/4"	#12	#12	#12	Rec.Break Rm	8
9	Recept.IT/COMM	3/4"	#12	#12	#12	20	1		180									
									800		1	20	3/4"	#12	#12	#12	Rec.Break Rm Ref	10
11	Recept.Shop	3/4"	#12	#12	#12	20	1			720								
										1000	1	20	3/4"	#12	#12	#12	Rec.Break Rm	12
13	Recept.Shop	3/4"	#12	#12	#12	20	1	720										
								500			1	20	3/4"	#12	#12	#12	Rec.Break Rm	14
15	Recept.Storage	3/4"	#12	#12	#12	20	1		540									
									500		1	20	3/4"	#12	#12	#12	Rec.Break Rm	16
17	Recept.Storage	3/4"	#12	#12	#12	20	1			540								
										540	1	20	3/4"	#12	#12	#12	Rec.Vehicle Stor	18
19	Recept.Exterior	3/4"	#12	#12	#12	20	1	720										
								540			1	20	3/4"	#12	#12	#12	Rec.Vehicle Stor	20
21	Temp.Control pnl	3/4"	#12	#12	#12	20	1		200									
									360		1	20	3/4"	#12	#12	#12	Rec.Vehicle Stor	22
23	Irrigation Panel	3/4"	#12	#12	#12	20	1			200								
										540	1	20	3/4"	#12	#12	#12	Rec.Vehicle Stor	24
25	FACP	3/4"	#12	#12	#12	20	1	200										
								540			1	20	3/4"	#12	#12	#12	Rec.Shop	26
27	OH DOOR	3/4"	#12	–	#12	20	2		832									
									1456		2	20	3/4"	#12	–	#12	Air Compressor	28
29	–		#12				–			832								
										1456	–			#12			–	30
31	OH DOOR	3/4"	#12	–	#12	20	2	832										
								1456			2	20	3/4"	#12	–	#12	Air Compressor	32
33	–		#12				–		832									
									1456		–			#12			–	34
35	Recept.elev mach	3/4"	#12	#12	#12	20	1			180								
										500	1	20	–				Spare	36
37	Recept.sump pump	3/4"	#12	#12	#12	20	1	500										
								500			1	20	–				Spare	38
39	Light & Rec pi	3/4"	#12	#12	#12	20	1		220									
									500		1	20	–				Spare	40
41	Spare	–				20	1			500								
										500	1	20	–				Spare	42
43	Space only	–				—	1	———										
								———			1	—	–				Space only	44
45	–	–				–			———									
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59	–	–				–				———								
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Phase load totals A 8308 B 8656 C 8768

Demand load = 24.1 KVA Demand amps = 67

Notes for RP1:

1 Feeder is (1) 2-1/2" - 4#4/0 + #4 GND THWN Copper

208Y/120V 3-Phase 4-Wire LIGHTING PANEL — Name: RP2

Mains: 225A MLO
Trim: Surface Door: Yes
Neutral: S/N
Ground bar: Yes

Min Sym IC: 10000
Fed from: MDP
Feeder: Note 1

CIR	DESCRIPTION	CONDUIT	PHASE	NEUT	GND	TRIP	POLES	PHASE LOADS A	PHASE LOADS B	PHASE LOADS C	POLES	TRIP	CONDUIT	PHASE	NEUT	GND	DESCRIPTION	CIR
1	Rept.system furn	3/4"	#12	#12	#12	20	1	1000										
								900			1	20	3/4"	#12	#12	#12	Recept.HALL,MECH	2
3	Rept.system furn	3/4"	#12	#12	#12	20	1		1000									
									900		1	20	3/4"	#12	#12	#12	Recept.Conf Rm	4
5	Rept.system furn	3/4"	#12	#12	#12	20	1			1000								
										180	1	20	3/4"	#12	#12	#12	Recept.Conf Rm	6
7	Rept.system furn	3/4"	#12	#12	#12	20	1	1000										
								720			1	20	3/4"	#12	#12	#12	Recept. Open Off	8
9	Rept.system furn	3/4"	#12	#12	#12	20	1		1000									
									1000		1	20	3/4"	#12	#12	#12	Recept.Sys. Furn	10
11	Rept.system furn	3/4"	#12	#12	#12	20	1			1000								
										1000	1	20	3/4"	#12	#12	#12	Recept.Sys. Furn	12
13	Rept.system furn	3/4"	#12	#12	#12	20	1	1000										
								1000			1	20	3/4"	#12	#12	#12	Recept.Sys. Furn	14
15	Rept.system furn	3/4"	#12	#12	#12	20	1		1000									
									1000		1	20	3/4"	#12	#12	#12	Recept. Copier	16
17	Recept. Sup. Off	3/4"	#12	#12	#12	20	1			540								
										500	1	20	–				Spare	18
19	Recept. Sup. Off	3/4"	#12	#12	#12	20	1	540										
								1000			1	20	3/4"	#12	#12	#12	Recept.Sys. Furn	20
21	Recept. Sup. Off	3/4"	#12	#12	#12	20	1		180									
									1000		1	20	3/4"	#12	#12	#12	Recept.Sys. Furn	22
23	Recept.Stor, Off	3/4"	#12	#12	#12	20	1			900								
										1000	1	20	3/4"	#12	#12	#12	Recept.Sys. Furn	24
25	Recept.IT/COMM	3/4"	#12	#12	#12	20	1	540										
								1000			1	20	3/4"	#12	#12	#12	Recept.Sys. Furn	26
27	Recept.IT/COMM	3/4"	#12	#12	#12	20	1		540									
									1000		1	20	3/4"	#12	#12	#12	Recept.Sys. Furn	28
29	Recept. OPEN Off	3/4"	#12	#12	#12	20	1			1080								
										1000	1	20	3/4"	#12	#12	#12	Recept.Sys. Furn	30
31	Spare	–				20	1	500										
								42			2	15	3/4"	#12	–	#12	BS-2	32
33	Spare	–				20	1		500									
									41		–			#12			–	34
35	Spare	–				20	1			500								
										500	1	20	–				Spare	36
37	Spare	–				20	1	500										
								500			1	20	–				Spare	38
39	Space only	–				—	1	———										
								———			1	—	–				Space only	40
41	Space only	–				—	1		———									
									———		1	—	–				Space only	42
43	Space only	–				—	1	———										
								———			1	—	–				Space only	44
45	–	–				–			———									
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59	–	–				–				———								
										———	–		–				–	60

Phase load totals A 10242 B 9161 C 9200

Demand load = 21.1 KVA Demand amps = 59

Notes for RP2:

1 Feeder is (1) 2-1/2" - 4#4/0 + #4 GND THWN Copper

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PHARIS ENGINEERING

REGISTERED PROFESSIONAL ENGINEER
KEITH A. PHARIS
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Exp. 3/31/23
ELECTRICAL
STATE OF CALIFORNIA
11/16/2020

COUNTY OF SAN MATEO
GRANT YARD RADIO SHOP
752 CHESTNUT STREET
REDWOOD CITY, CA 94063

Revisions:
2 11-16-2020

BID SET

Client Project Number: **P30J1**
APN Number: **054-063-180**
KPA Project Number: **714.00**
Date: **NOV 16, 2020**

Sheet Title:

ELECTRICAL PANEL SCHEDULES

Sheet Number:

E4.2

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