

SHOWER HOUSE F.W. KENT PARK

JOHNSON COUNTY CONSERVATION
F.W. KENT PARK, 2048 US-6 NW, OXFORD, IA 52322

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JOHNSON COUNTY CONSERVATION BOARD (JCCB)

AUTHORIZED FOR LETTING

CHAIR, JOHNSON COUNTY CONSERVATION BOARD

DATE

TOTAL SHEETS 39
PROJECT NUMBER
225000910

CERTIFICATIONS

CIVIL ENGINEER

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.	
SIGNATURE	01/21/2026
PRINTED OR TYPED NAME	Daniel J. Jensen
LICENSE NUMBER	P25063
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2027	
PAGES, SHEETS OR DIVISIONS COVERED BY THIS SEAL	ALL C SHEETS

LANDSCAPE ARCHITECT

I HEREBY CERTIFY THAT THE PORTION OF THIS TECHNICAL SUBMISSION DESCRIBED BELOW WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF IOWA.	
Garret Munch	
PRINTED OR TYPED NAME OR SECURE ELECTRONIC SIGNATURE	
SIGNATURE	01/21/2026
License Expires June 30, 2026	
PAGES OR SHEETS COVERED BY THIS SEAL	
ALL L SHEETS	

STRUCTURAL ENGINEER

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.	
SIGNATURE	01/21/2026
PRINTED OR TYPED NAME	Joseph W. Page
LICENSE NUMBER	P28577
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2026	
PAGES, SHEETS OR DIVISIONS COVERED BY THIS SEAL	ALL S SHEETS

MECHANICAL ENGINEER

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.	
SIGNATURE	01/21/2026
PRINTED OR TYPED NAME	Jessica L Dooley
LICENSE NUMBER	P27051
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2026	
PAGES, SHEETS OR DIVISIONS COVERED BY THIS SEAL	ALL P AND M SHEETS

ELECTRICAL ENGINEER

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.	
SIGNATURE	01/21/2026
PRINTED OR TYPED NAME	Matthew K. Gordon
LICENSE NUMBER	19216
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2026	
PAGES, SHEETS OR DIVISIONS COVERED BY THIS SEAL	ALL E SHEETS

THE LOCATIONS OF UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS PLOTTED ON THIS DRAWING ARE APPROXIMATE ONLY AND WERE OBTAINED FROM RECORDS MADE AVAILABLE TO SHIVE-HATTERY, INC. THERE MAY BE OTHER EXISTING UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS NOT KNOWN TO SHIVE-HATTERY, INC. AND NOT SHOWN ON THIS DRAWING. THE VERIFICATION OF EXISTENCE OF, AND THE DETERMINATION OF THE EXACT LOCATION OF, UTILITY MAINS, STRUCTURES AND SERVICE CONNECTIONS SHALL BE

SOME UTILITIES HAVE BEEN DISCONNECTED BY OWNER AND ABANDONED IN PLACE. IF ABANDONED UTILITIES ARE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, NOTIFY THE

NOTIFY UTILITY COMPANIES WHOSE FACILITIES ARE SHOWN ON THE PLANS OR KNOWN TO BE WITHIN CONSTRUCTION LIMITS OF THE SCHEDULE PRIOR TO EACH STAGE OF CONSTRUCTION.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES AT CRITICAL LOCATIONS TO VERIFY EXACT HORIZONTAL AND VERTICAL LOCATION.

IOWA CODE 480, UNDERGROUND FACILITIES INFORMATION, REQUIRES VERBAL NOTICE TO IOWA ONE-CALL 1-800-292-8989, NOT LESS THAN 48 HOURS BEFORE EXCAVATING, EXCLUDING

NOTIFY THE APPROPRIATE GOVERNING AUTHORITY 48 - 72 HOURS PRIOR TO BEGINNING CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY. JOHNSON COUNTY CONSERVATION SHALL BE THE PUBLIC AGENCY RESPONSIBLE FOR INSPECTION DURING CONSTRUCTION OF THE PUBLIC PORTIONS OF THE PROJECT.

THE MEANS OF THE WORK AND THE SAFETY OF THE CONTRACTOR'S EMPLOYEES ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

NO WORK SHALL BE PERFORMED BEYOND THE PROJECT LIMITS WITHOUT PRIOR AUTHORIZATION FROM THE OWNER'S REPRESENTATIVE.

A PRE-CONSTRUCTION MEETING SHALL BE HELD FOLLOWING ISSUANCE OF THE NOTICE TO PROCEED BUT PRIOR TO COMMENCING WORK.

, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

ALL CONCRETE SHALL BE CONSTRUCTED AT A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI.

PROVIDE TRAFFIC AND PEDESTRIAN CONTROL MEASURES (SIGNS, BARRICADES, FLAGGERS, ETC.) IN COMPLIANCE WITH PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

MAINTAIN POSITIVE DRAINAGE ON THE SITE THROUGHOUT THE PROJECT DURATION.

ADJUST ALL VALVES, MANHOLES, CASTINGS, GAS VENTS, ETC. TO MATCH THE NEW SURFACE. ADJUSTMENT SHALL BE COORDINATED WITH THE UTILITY COMPANIES AND THE COST FOR ALL ADJUSTMENTS SHALL BE INCIDENTAL TO THE CONSTRUCTION. AT NO ADDITIONAL COST TO THE OWNER, REPAIR ANY DAMAGE TO SAID STRUCTURES AND APPURTENANCES THAT OCCUR

SITE CLEAN-UP SHALL BE PERFORMED ON A DAILY BASIS. SIDEWALKS, PARKING LOTS, ROADWAYS, ETC. SHALL BE KEPT CLEAN AT ALL TIMES.

REPLACE ANY PROPERTY MONUMENTS REMOVED OR DESTROYED BY CONSTRUCTION. MONUMENTS SHALL BE SET BY A LAND SURVEYOR REGISTERED TO PRACTICE IN THE STATE OF IOWA.

ANY WORK REQUIRED TO COMPLETE THE SCOPE OF THIS PROJECT BUT NOT SET FORTH AS A SPECIFIC BID ITEM, SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. NO ADDITIONAL

REPAIR OR REPLACE EXISTING FACILITIES (CURBS, PAVEMENT, UTILITIES, ETC.) TO REMAIN, AT NO ADDITIONAL EXPENSE TO THE OWNER.

IT IS INTENDED THAT ALL COSTS OF MATERIALS, EQUIPMENT, TOOLS, LABOR AND INCIDENTALS BE PAID FOR UNDER THE ITEMS LISTED ON THE BIDDER'S PROPOSAL. BEFORE SUBMITTING A BID ON THIS PROJECT, THE CONTRACTOR SHALL EXAMINE ALL DRAWINGS, SPECIFICATIONS, SPECIAL PROVISIONS AND THE JOB SITE. IF ANY DISCREPANCIES OR DELETIONS OCCUR IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL REPORT SAME TO SHIVE-HATTERY, INC. IN WRITING AND OBTAIN WRITTEN CLARIFICATION AND/OR INSTRUCTIONS ON HOW TO PROCEED.

WORK WHICH DOES NOT CONFORM TO THE REQUIREMENTS OF THE CONTRACT WILL BE CONSIDERED UNACCEPTABLE. UNACCEPTABLE WORK, WHETHER THE RESULT OF POOR WORKMANSHIP, USE OF DEFECTIVE MATERIALS, DAMAGE THROUGH CARELESSNESS OR ANY OTHER CAUSE, FOUND TO EXIST PRIOR TO THE FINAL ACCEPTANCE OF THE WORK, SHALL BE REMOVED AND REPLACED IN AN ACCEPTABLE MANNER, AS REQUIRED BY SHIVE-HATTERY, INC. AT THE CONTRACTOR'S EXPENSE. WORK DONE CONTRARY TO THE INSTRUCTIONS OF SHIVE-HATTERY, INC., WORK DONE BEYOND THE LINES SHOWN ON THE PLANS OR ANY EXTRA WORK DONE WITHOUT AUTHORITY WILL NOT BE PAID FOR.

THE CONTRACTOR SHALL PROTECT ALL TREES SHOWN TO BE SAVED ON THE PLANS. CONTRACTOR SHALL ERECT FENCING AROUND TREE AT THE DRIP LINE, UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR PARK OR TRAVEL WITH ANY VEHICLE UNDER THE TREE DRIP LINE.

LEGEND	
EXISTING GENERAL SITE	
PLAN MARK	DESCRIPTION
	EXISTING STRUCTURE
	BOLLARD
	SHRUB
	DECIDUOUS TREE
	CONIFEROUS TREE
	SINGLE POLE SIGN
	DOUBLE POLE SIGN
	TREE LINE
	MINOR CONTOUR
	MAJOR CONTOUR

LEGEND		
UTILITY LINES		
EXISTING LINE TYPE	DESCRIPTION	PROPOSED LINE TYPE
	ELECTRIC - OVERHEAD	
	ELECTRIC - UNDERGROUND	
	GAS MAIN	
	WATER MAIN	
	SANITARY SEWER	
	STORM SEWER	
	TELEPHONE - UNDERGROUND	
	FIBER OPTICS	
	HIGH VOLTAGE ELECTRICAL	
	LOW VOLTAGE ELECTRICAL	

LEGEND	
UTILITIES	
PLAN MARK	DESCRIPTION
	WATER IRRIGATION VALVE
	UTILITY POLE W/TRANSFORMER
	SIREN POLE
	WATER SHUTOFF VALVE
	GUY ANCHOR
	FIRE HYDRANT
	FLARED END SECTION
	VALVE
	STOP BOX
	CABLE TV PEDESTAL
	CLEANOUT
	JUNCTION BOX

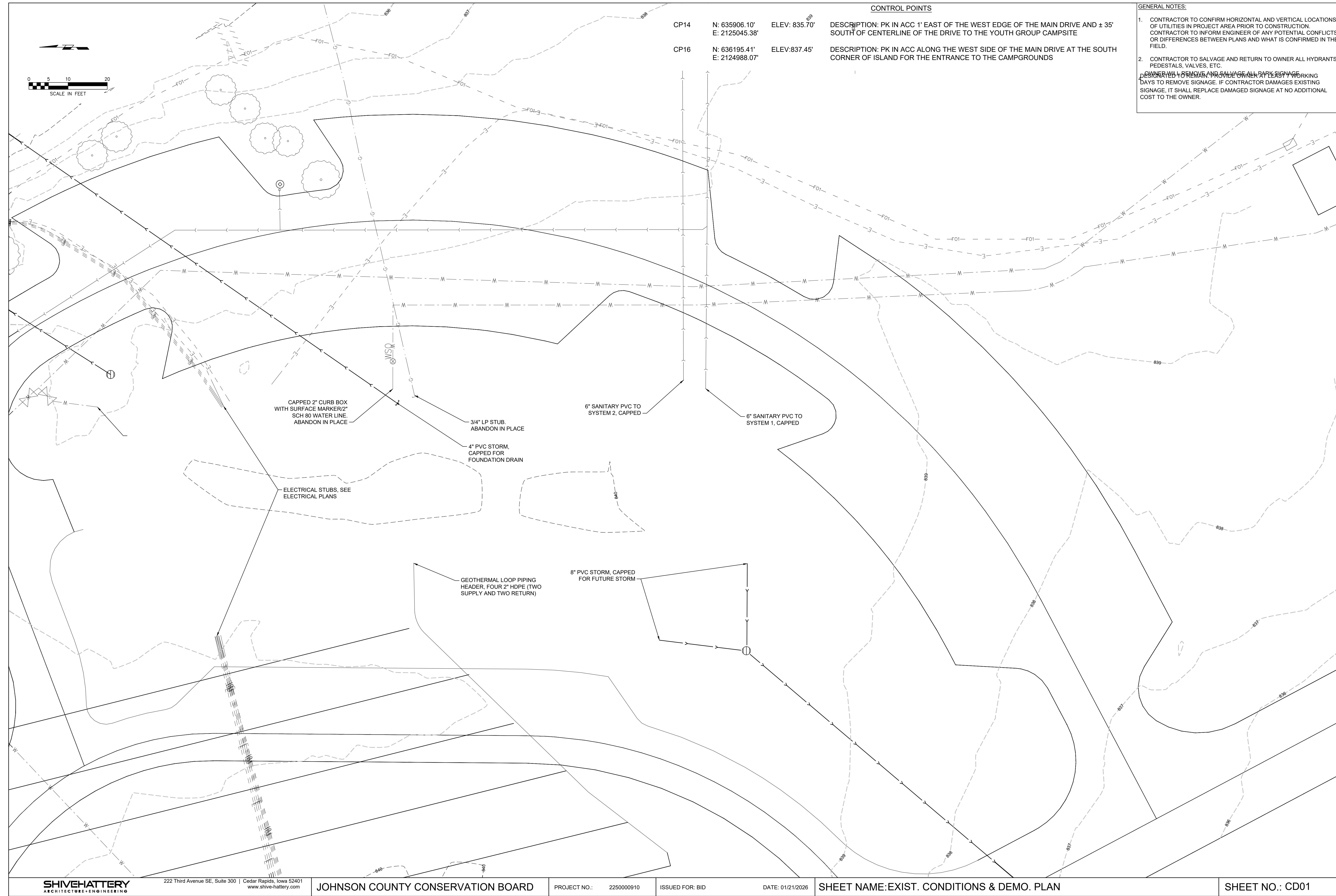
LEGEND	
RIGHT-OF-WAY	
PLAN MARK	DESCRIPTION
	PROPOSED RIGHT-OF-WAY
	EXISTING RIGHT-OF-WAY
	EXISTING PROPERTY LINE
	EXISTING EASEMENT
	TEMPORARY EASMENT
	PROPOSED EASEMENT

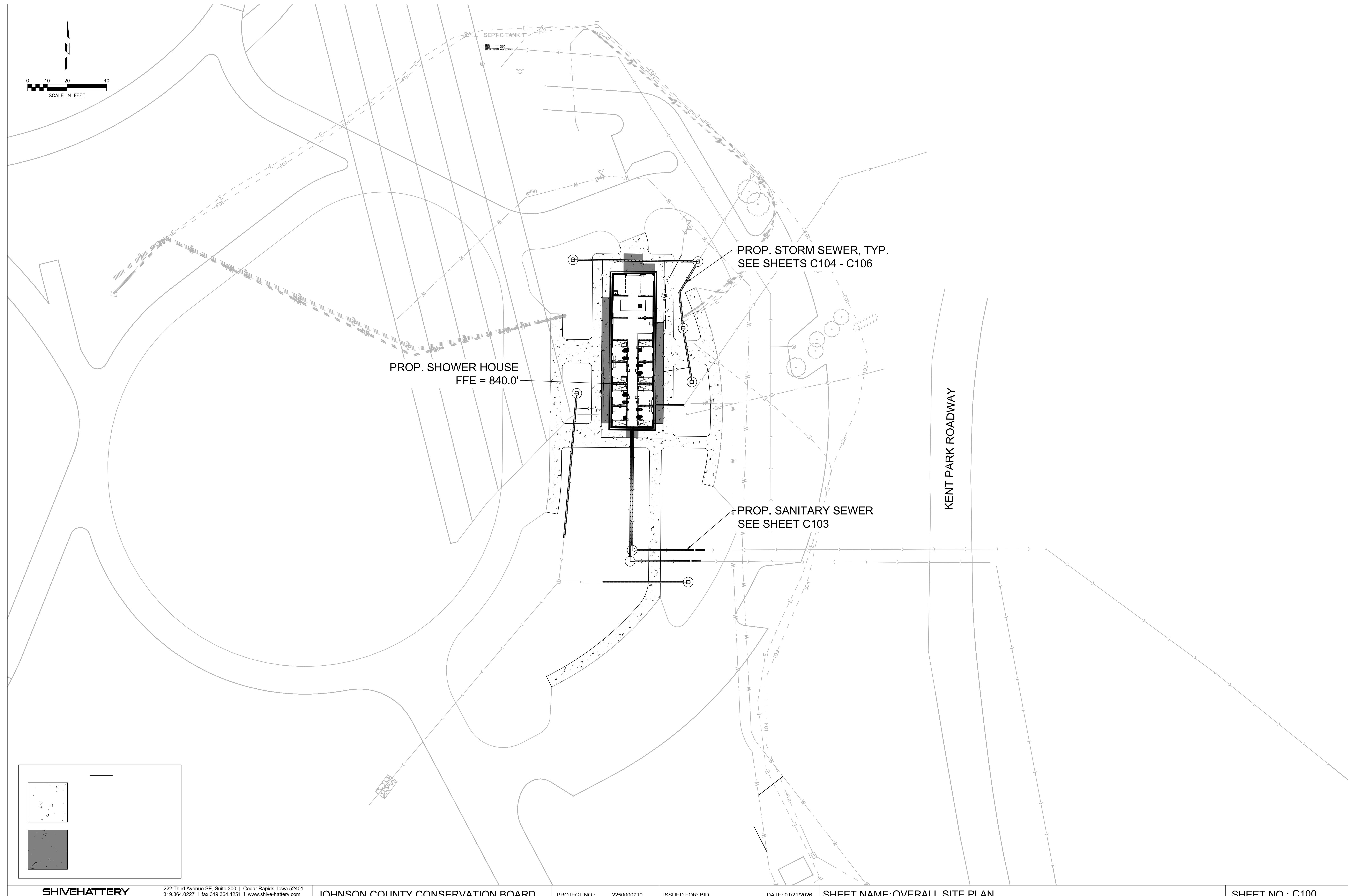
LEGEND	
GENERAL SITE GRADING / EROSION CONTROL	
PLAN MARK	DESCRIPTION
	SLOPE ARROW
	FLOW ARROW
	SILT FENCE
	INLET PROTECTION
	COMPOST SOCK
	GRADING LIMITS

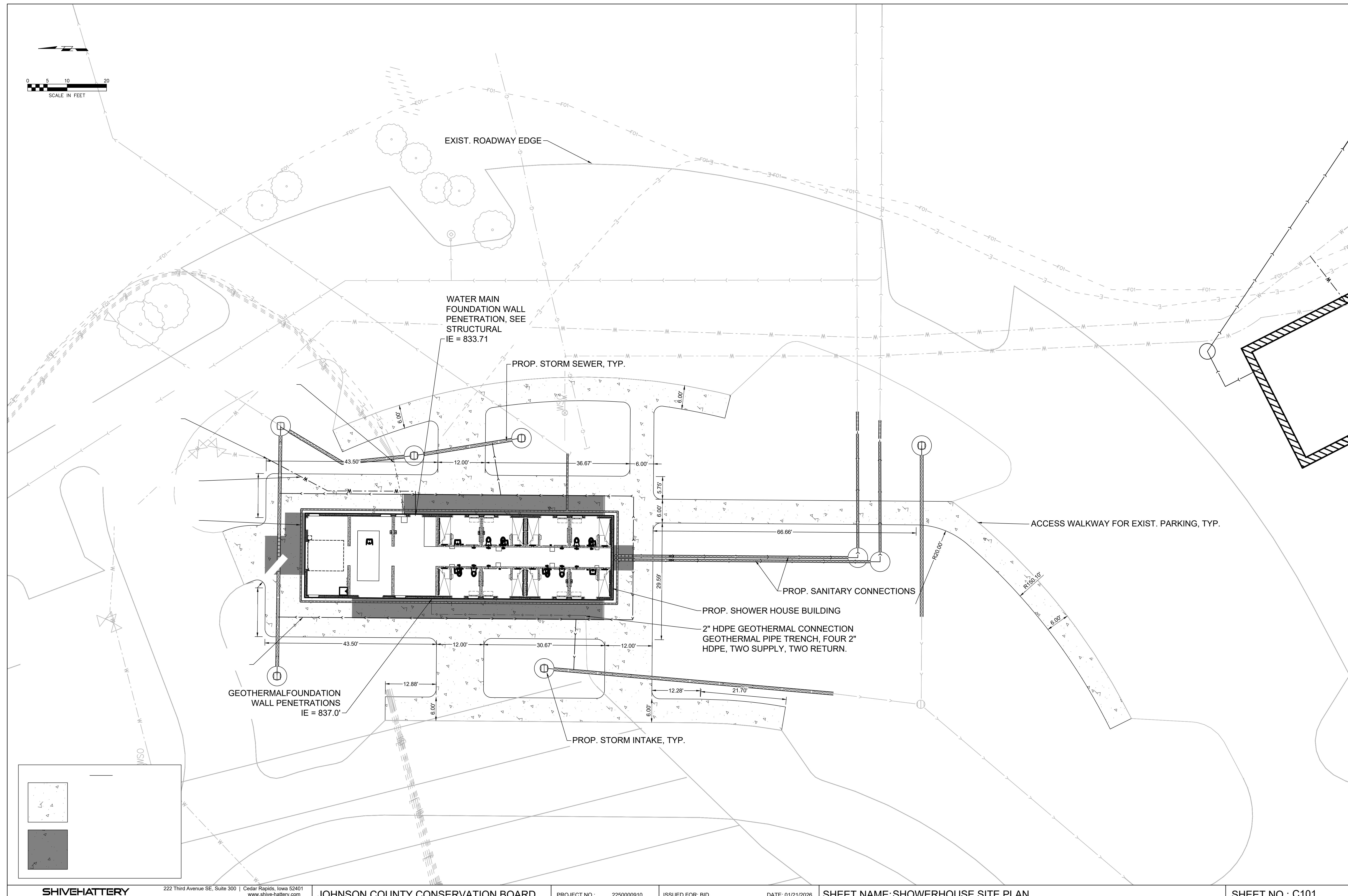
LEGEND	
SURVEY	
PLAN MARK	DESCRIPTION
	BENCH MARK
	BOUND
	IRON ROD - FOUND
	IRON ROD - SET
	MONUMENT FOUND
	MONUMENT SET
	X CUT FOUND
	X CUT SET
	RIGHT OF WAY MARKER
	DRILL HOLE
	STATION MARKER
	SOIL BORING
	PROPERTY CORNER
	SURVEY POINT ELEVATION

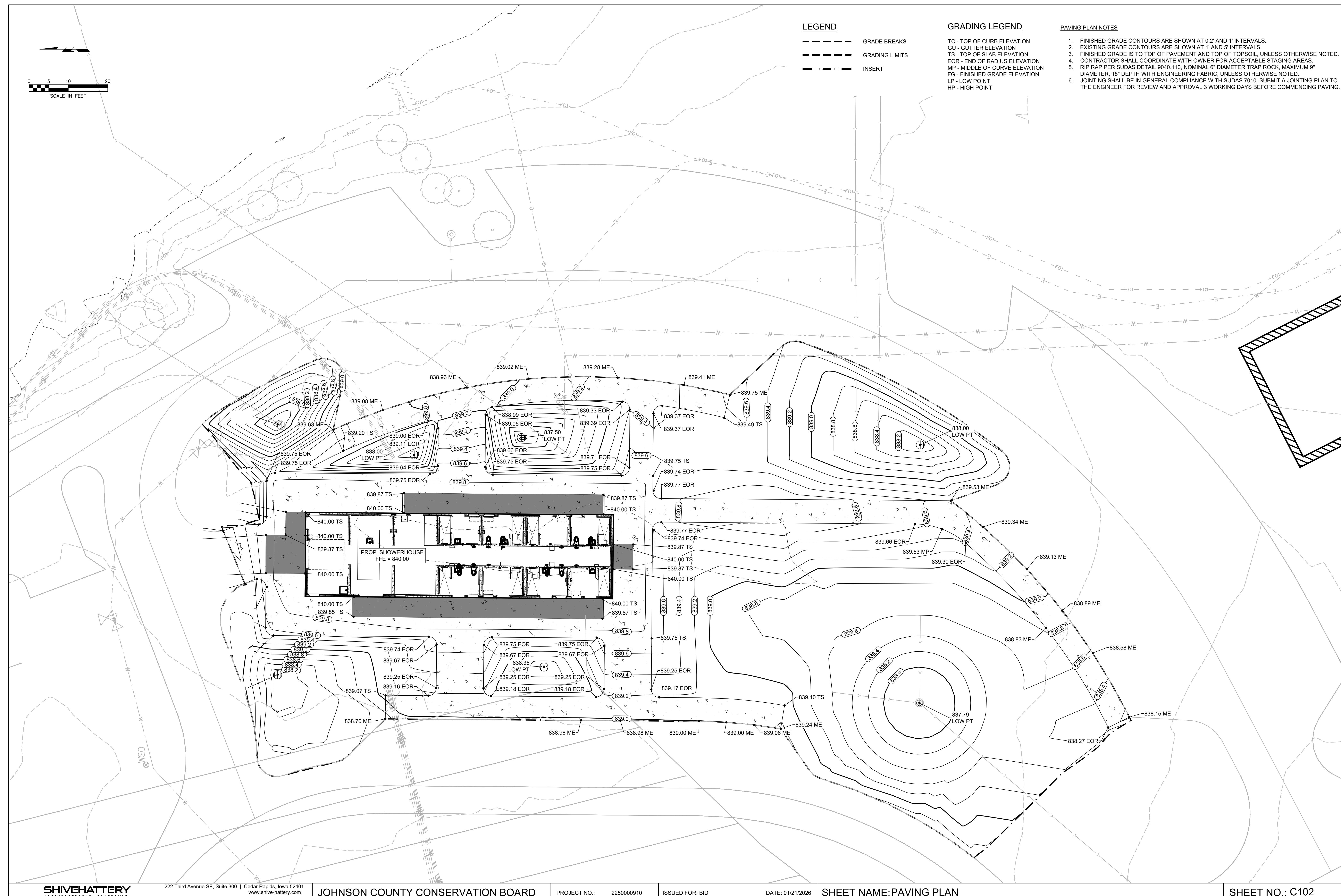
LEGEND	
UTILITIES	
PLAN MARK	DESCRIPTION
	WATER IRRIGATION VALVE
	UTILITY POLE W/TRANSFORMER
	SIREN POLE
	WATER SHUTOFF VALVE
	GUY ANCHOR
	FIRE HYDRANT
	FLARED END SECTION
	VALVE
	CABLE TV PEDESTAL
	CLEANOUT
	JUNCTION BOX
	MANHOLE
	STORM MANHOLE
	ELECTRICAL MANHOLE
	SANITARY MANHOLE
	TELEPHONE MANHOLE
	TELEPHONE PEDESTAL
	Vault Box
	HANDHOLE
	SIGNAL BOX
	GAS METER
	ELECTRIC METER
	WATER METER
	CURB INLET
	INTAKE - CIRCLE
	INTAKE - RECTANGLE
	INTAKE - SQUARE

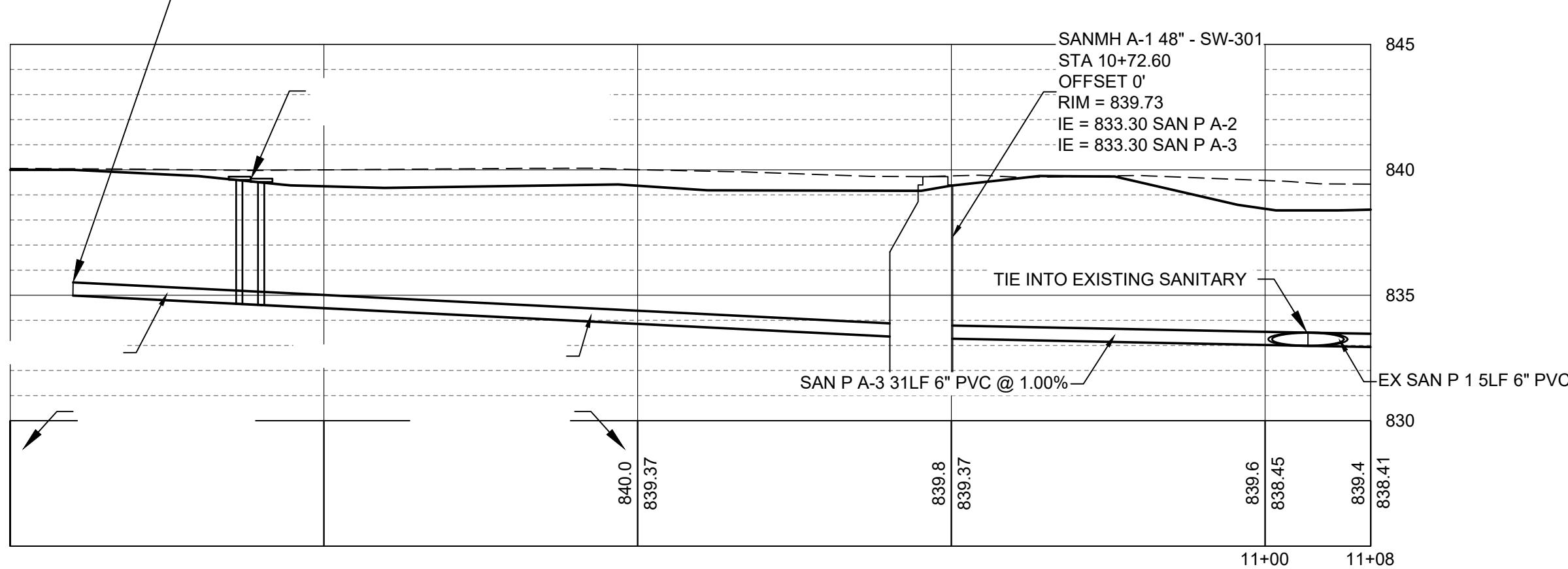
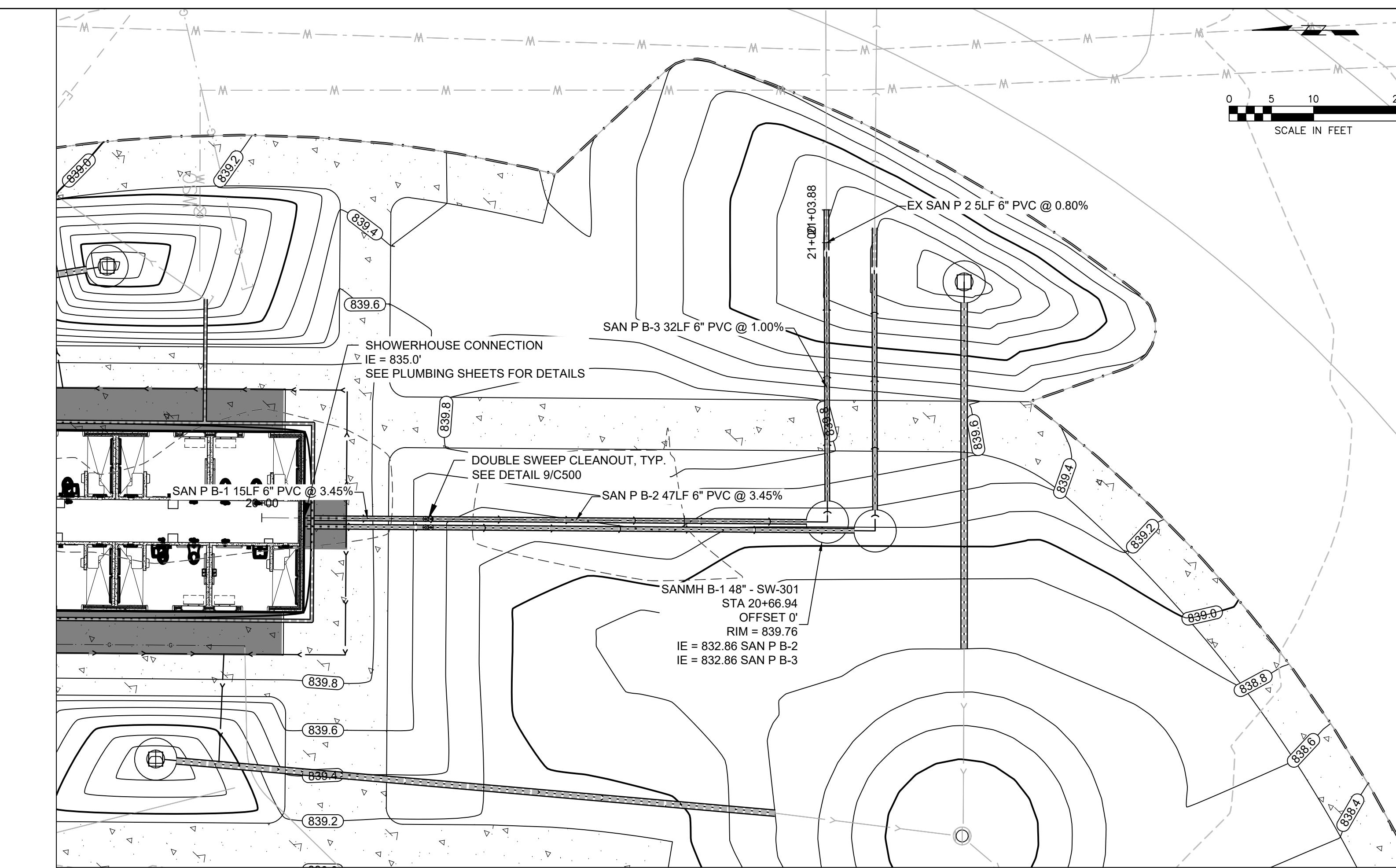
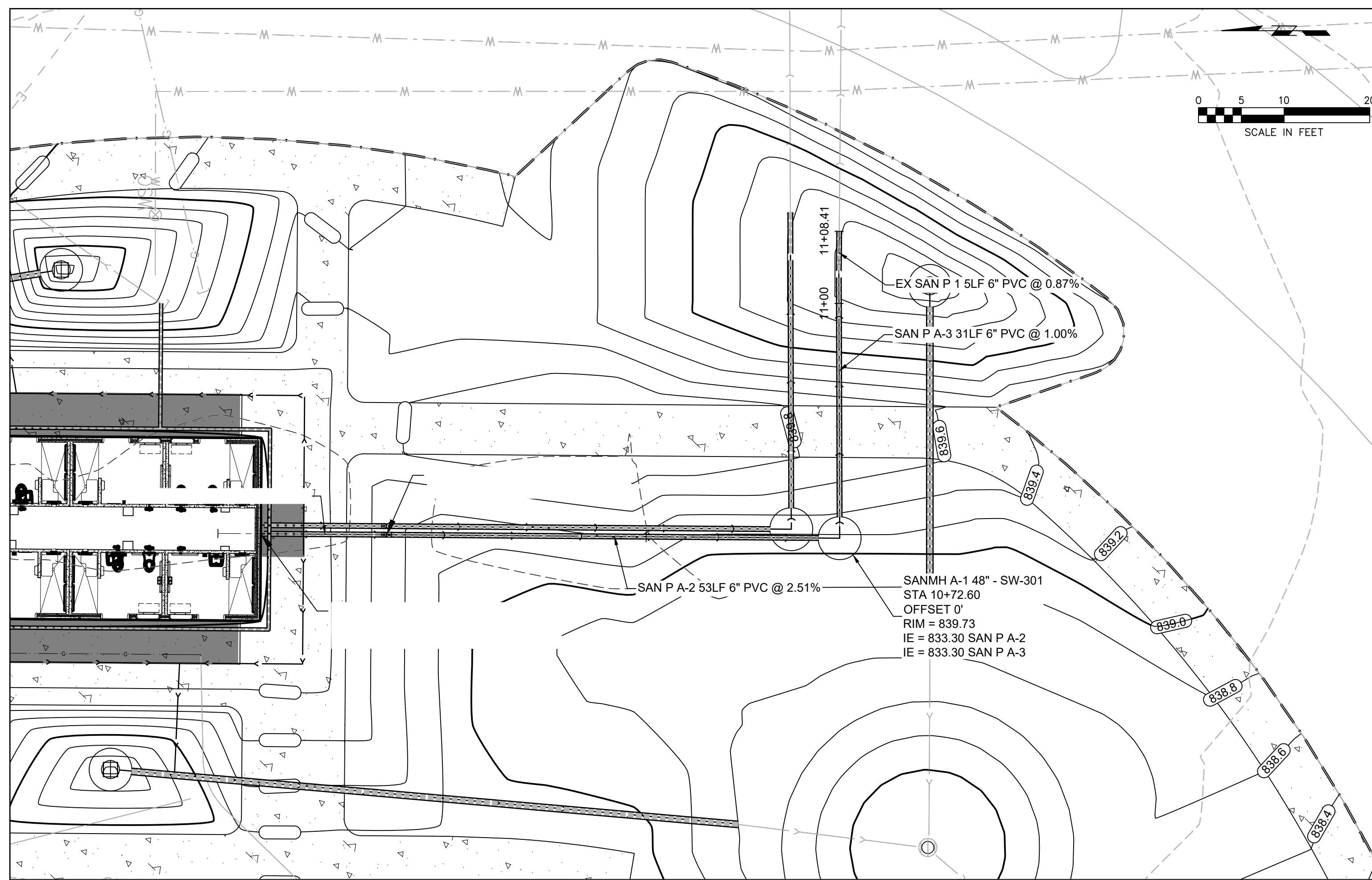
CIVIL QUANTITIES LIST			
	UNITS	SPEC SECTION	
	CY	SUDAS 2010	
	CY	SUDAS 2010	
	SY	SUDAS 7010	
	SY	SUDAS 2010	
	SY	SUDAS 2010	
	LF	SUDAS 4010	
	EA	SUDAS 6010	
	LF	SUDAS 4020	
	EA	SUDAS 6020	
	LF	SUDAS 5010	
	LF	ASTM D3035, SDR 11	
	LF	SEE DETAILS	
	LF	SUDAS 4020	
	LS	SEE LANDSCAPE PLANS AND SPECS	
	LS	SUDAS DIVISION 1	



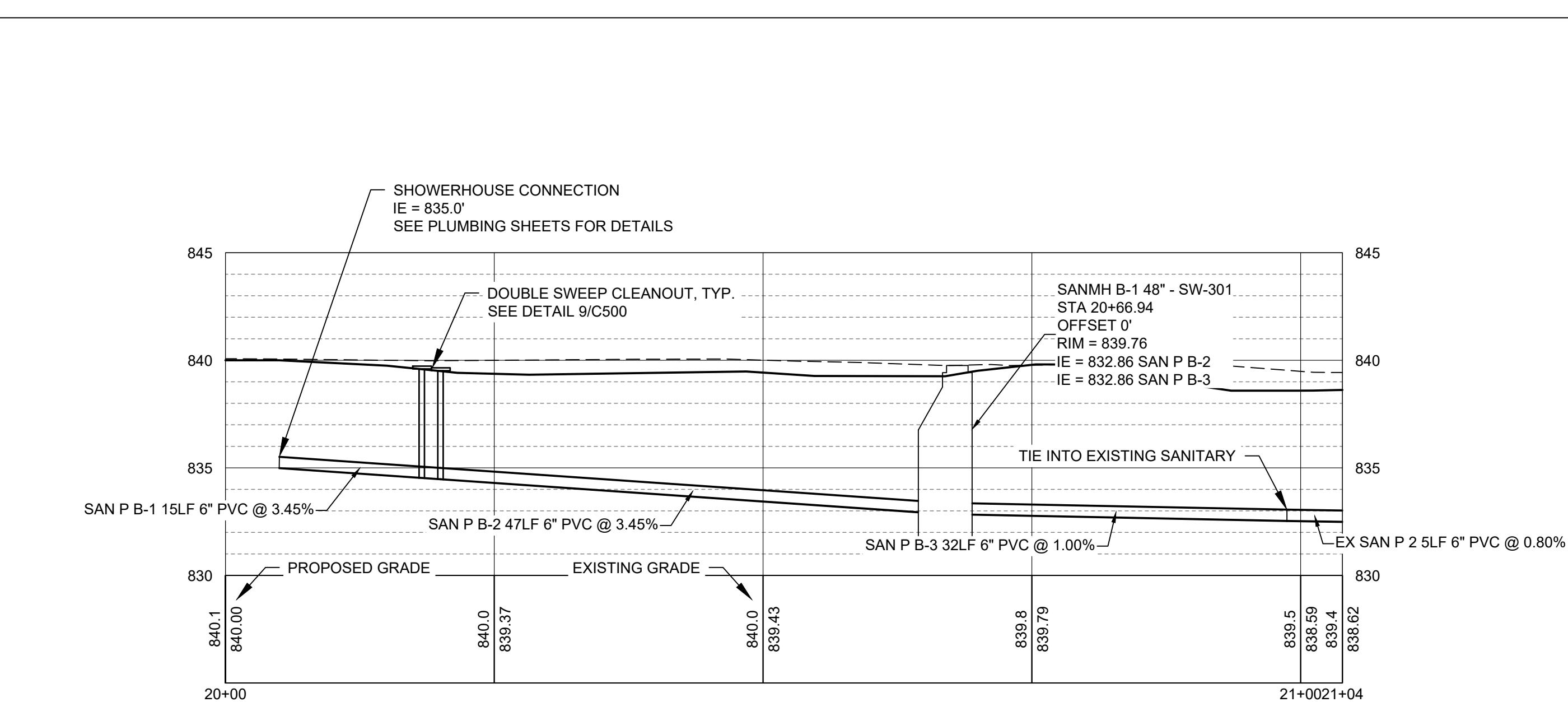






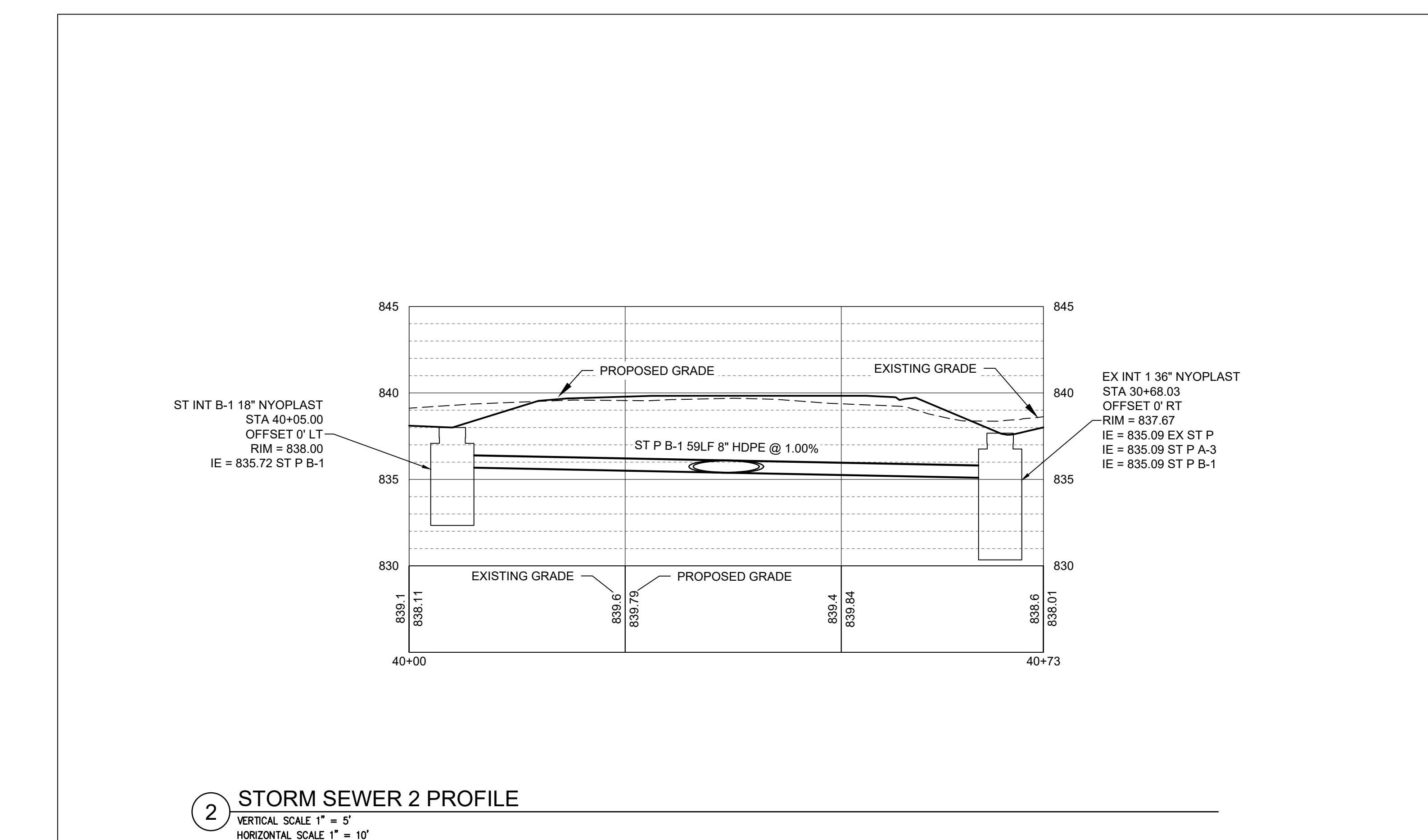
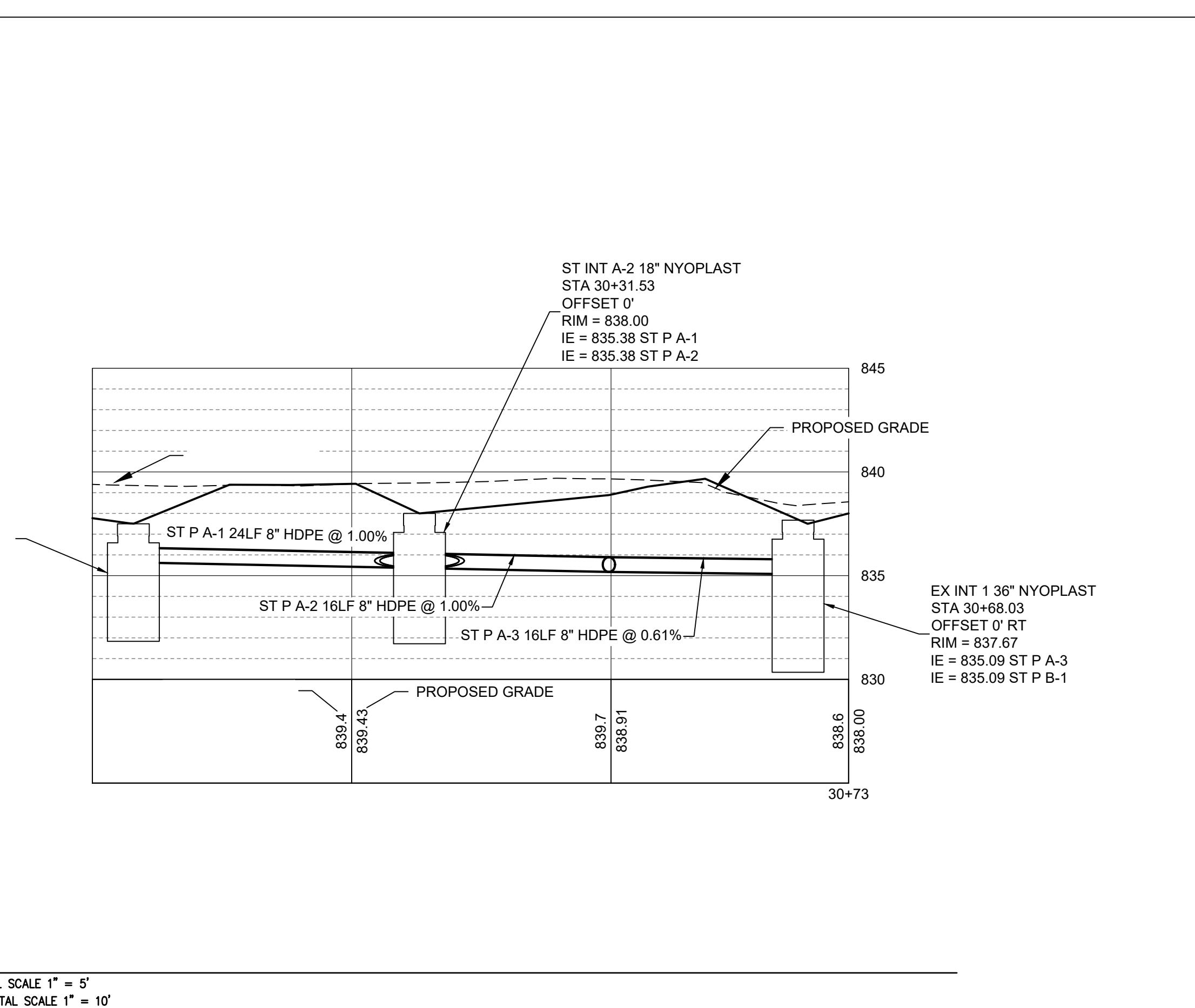
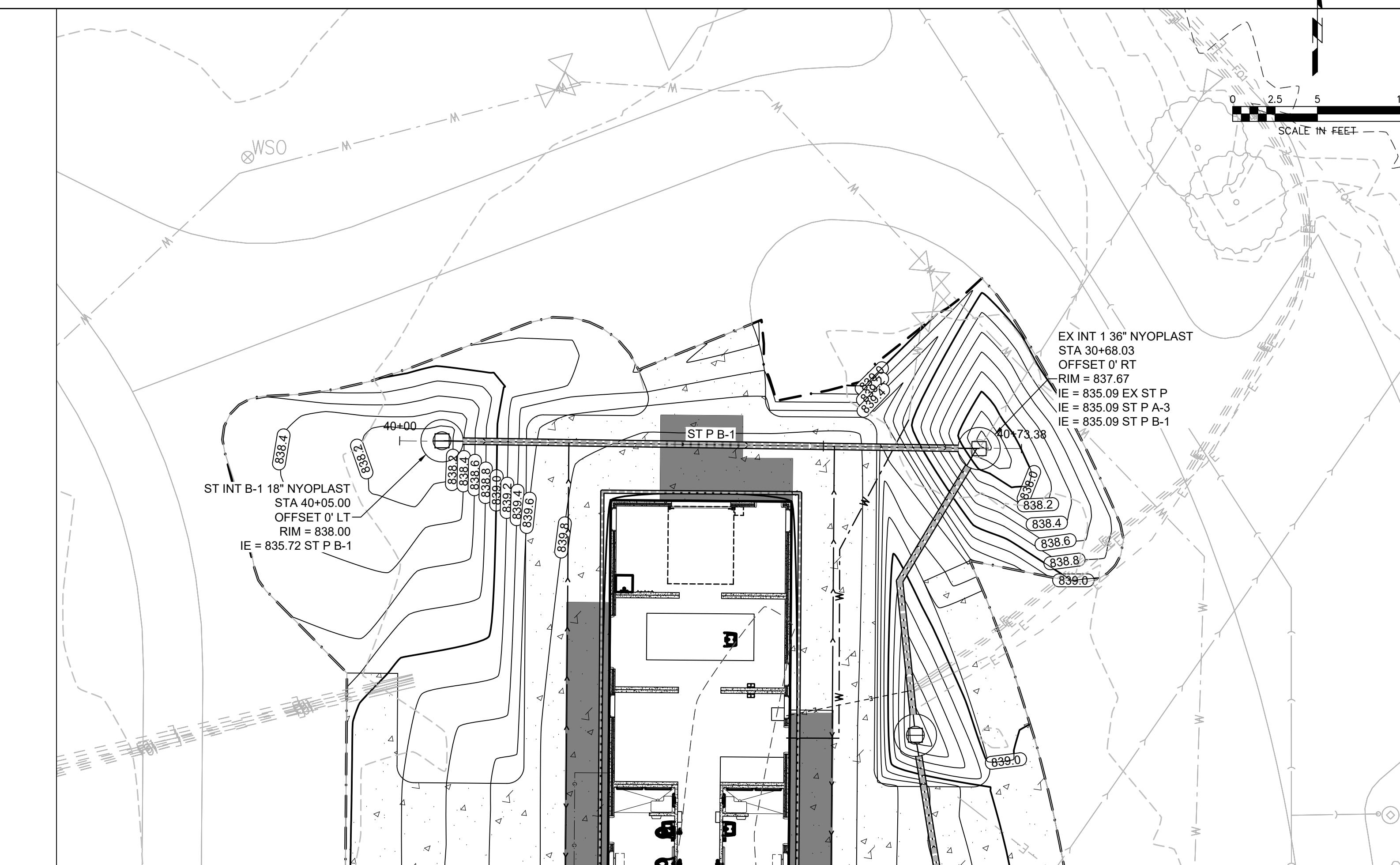
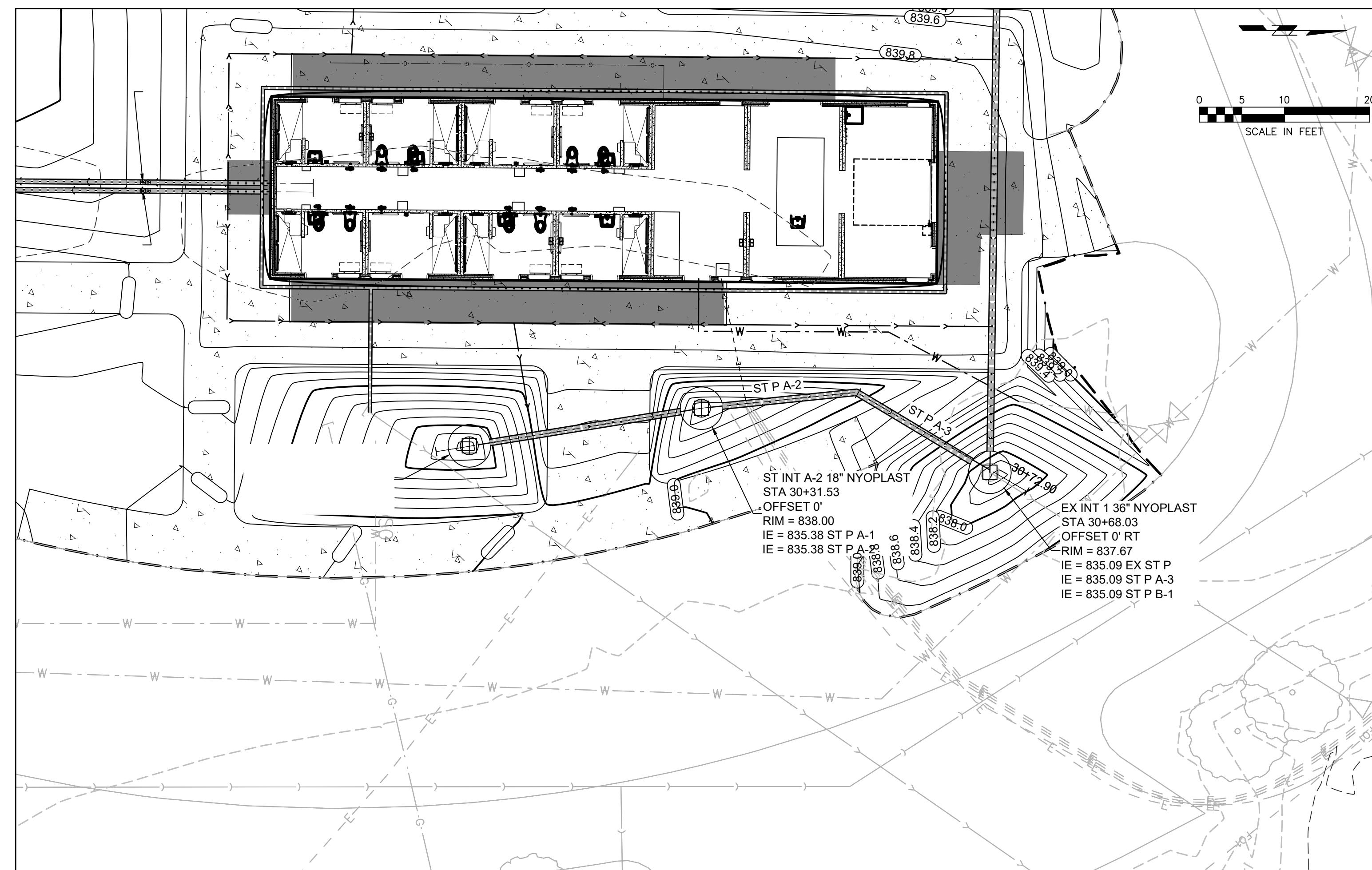


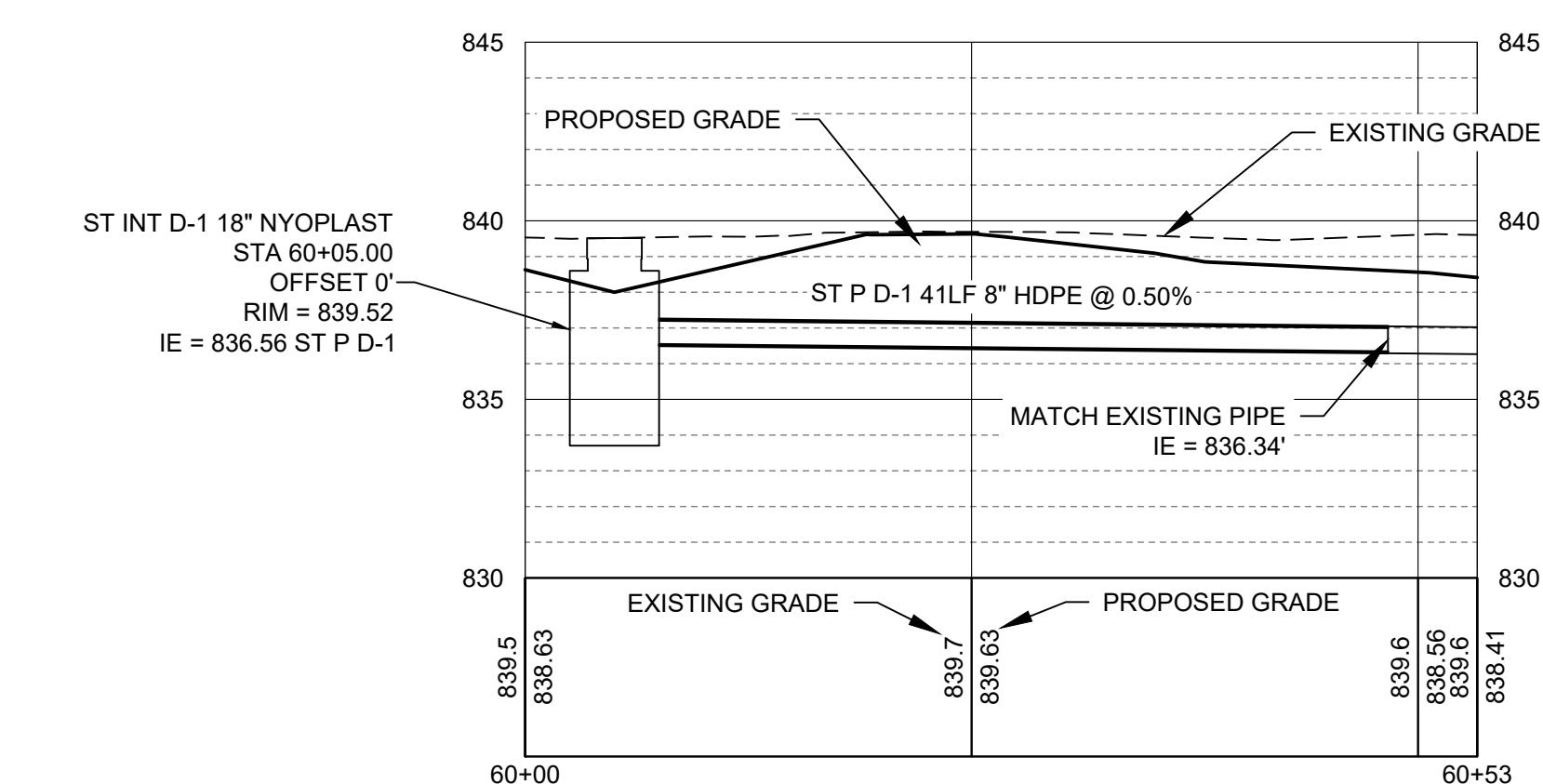
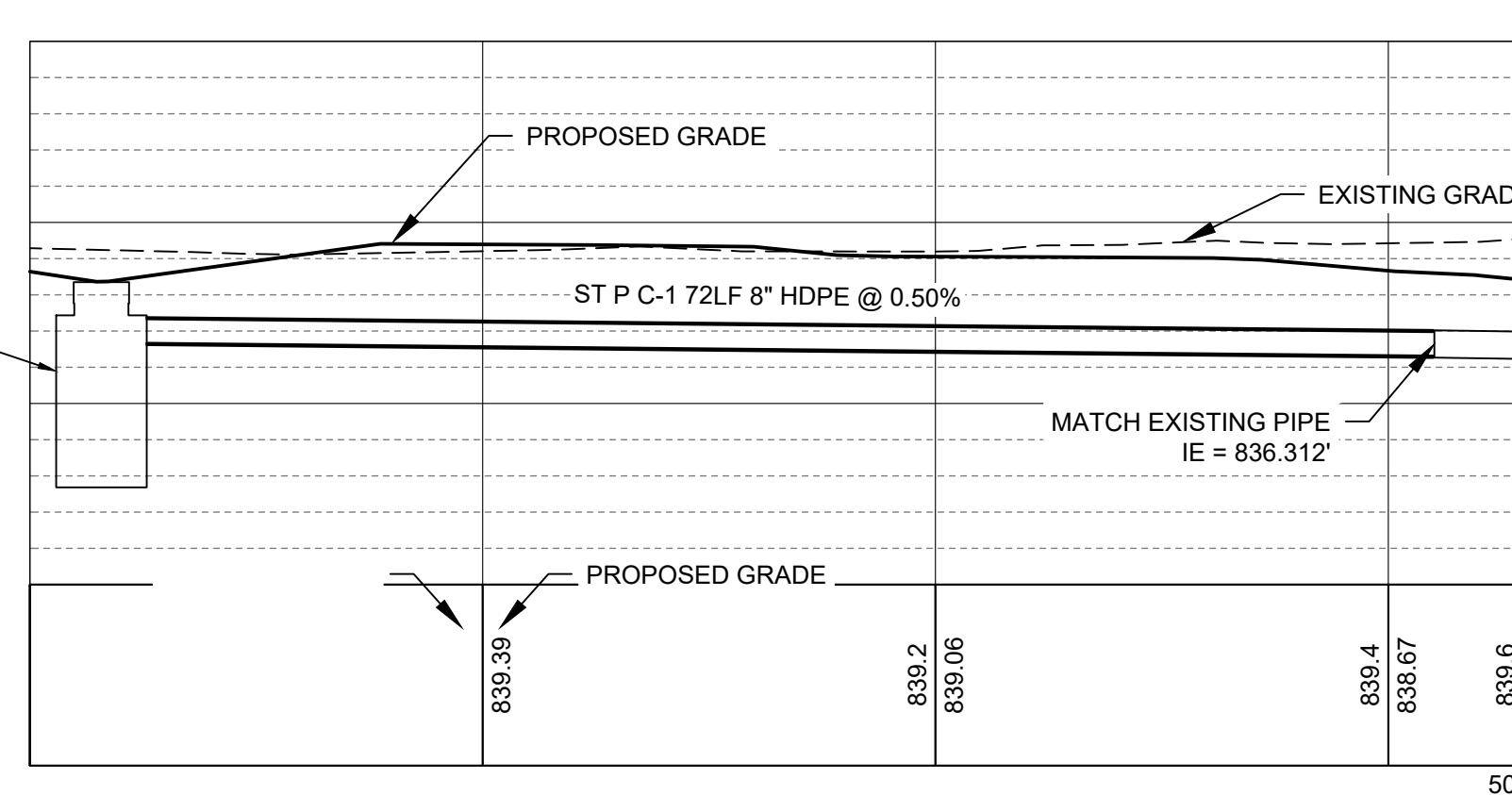
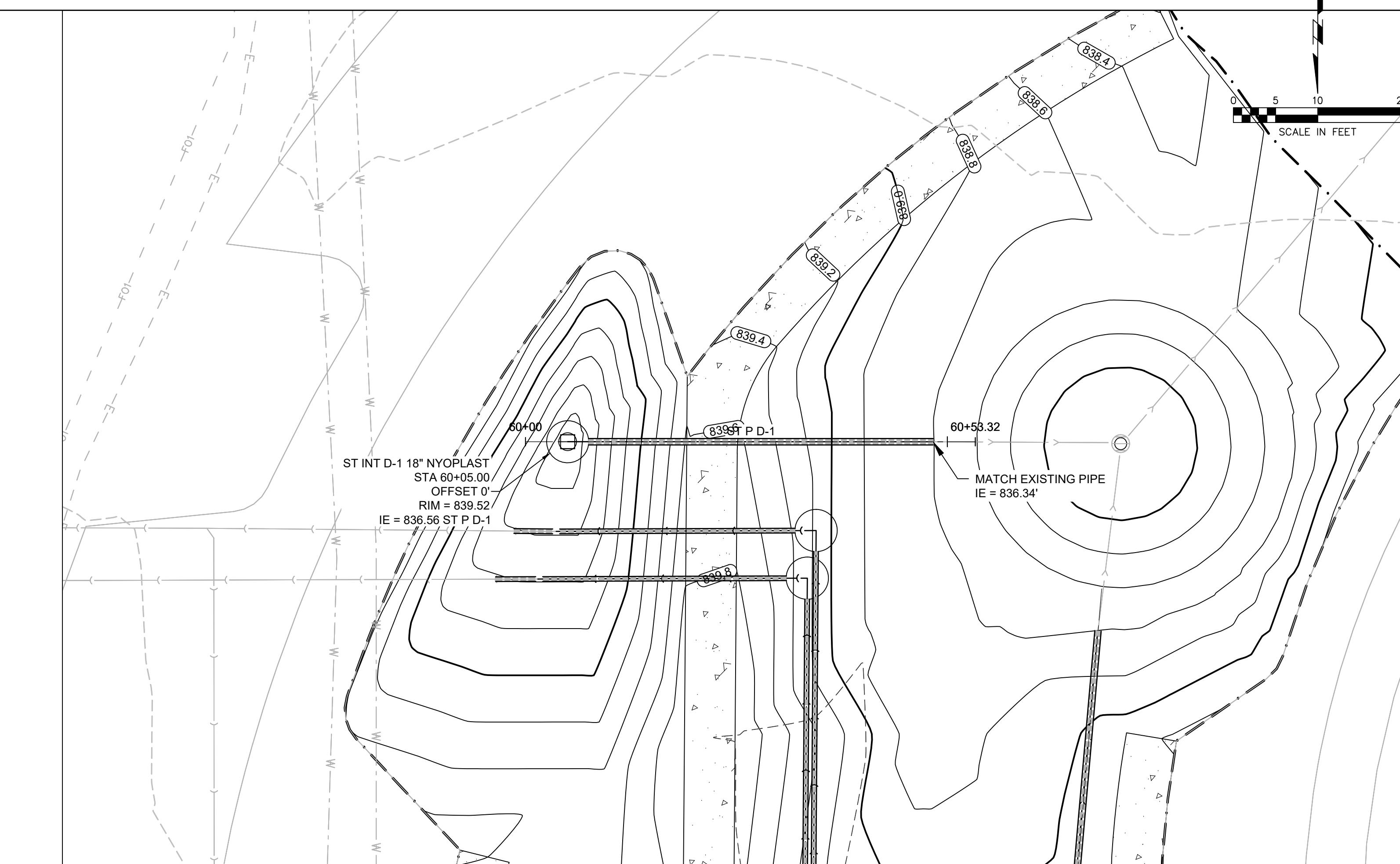
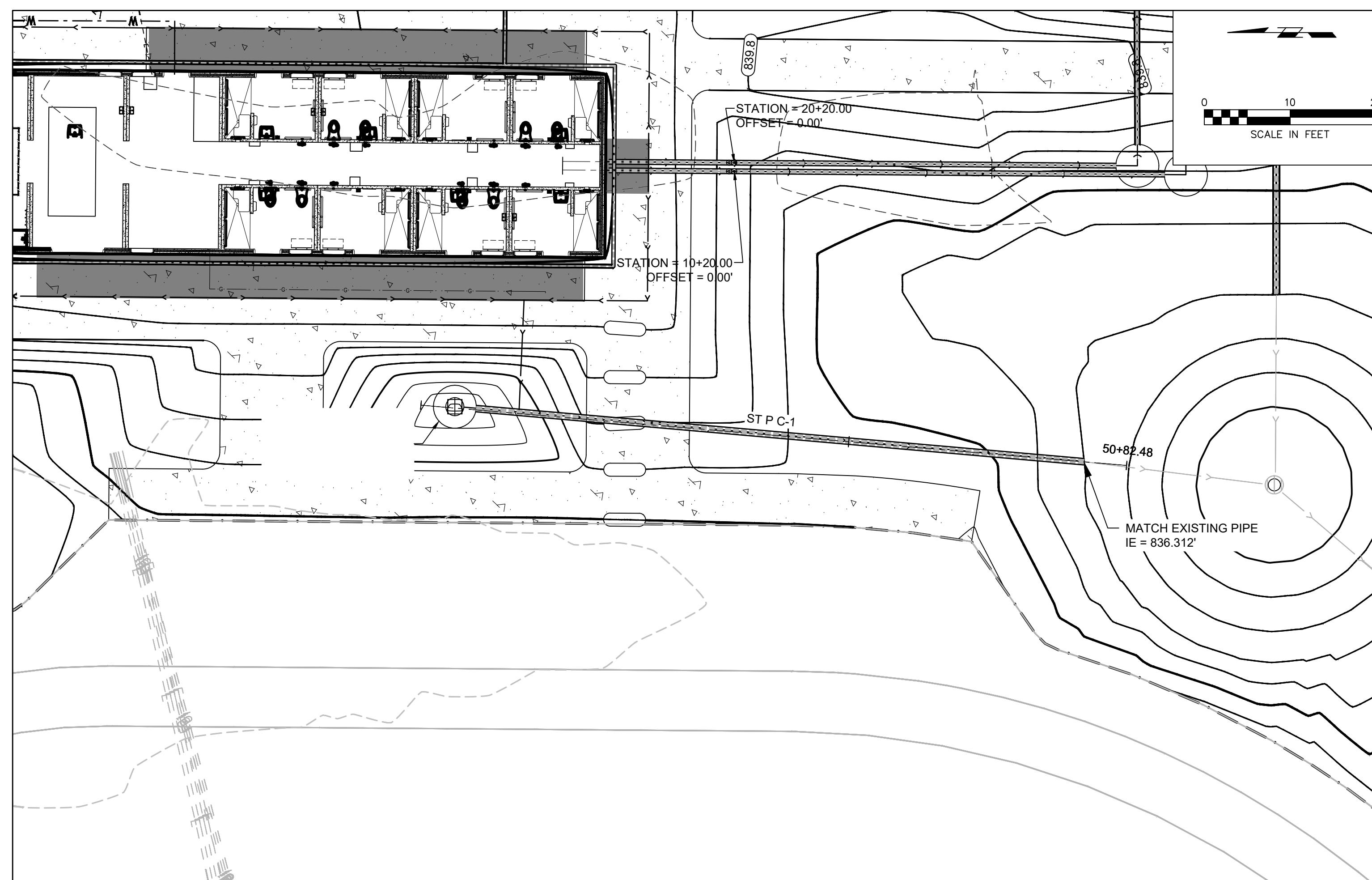
VERTICAL SCALE 1" = 5'
HORIZONTAL SCALE 1" = 10'



2 SANITARY SEWER 2 PROFILE

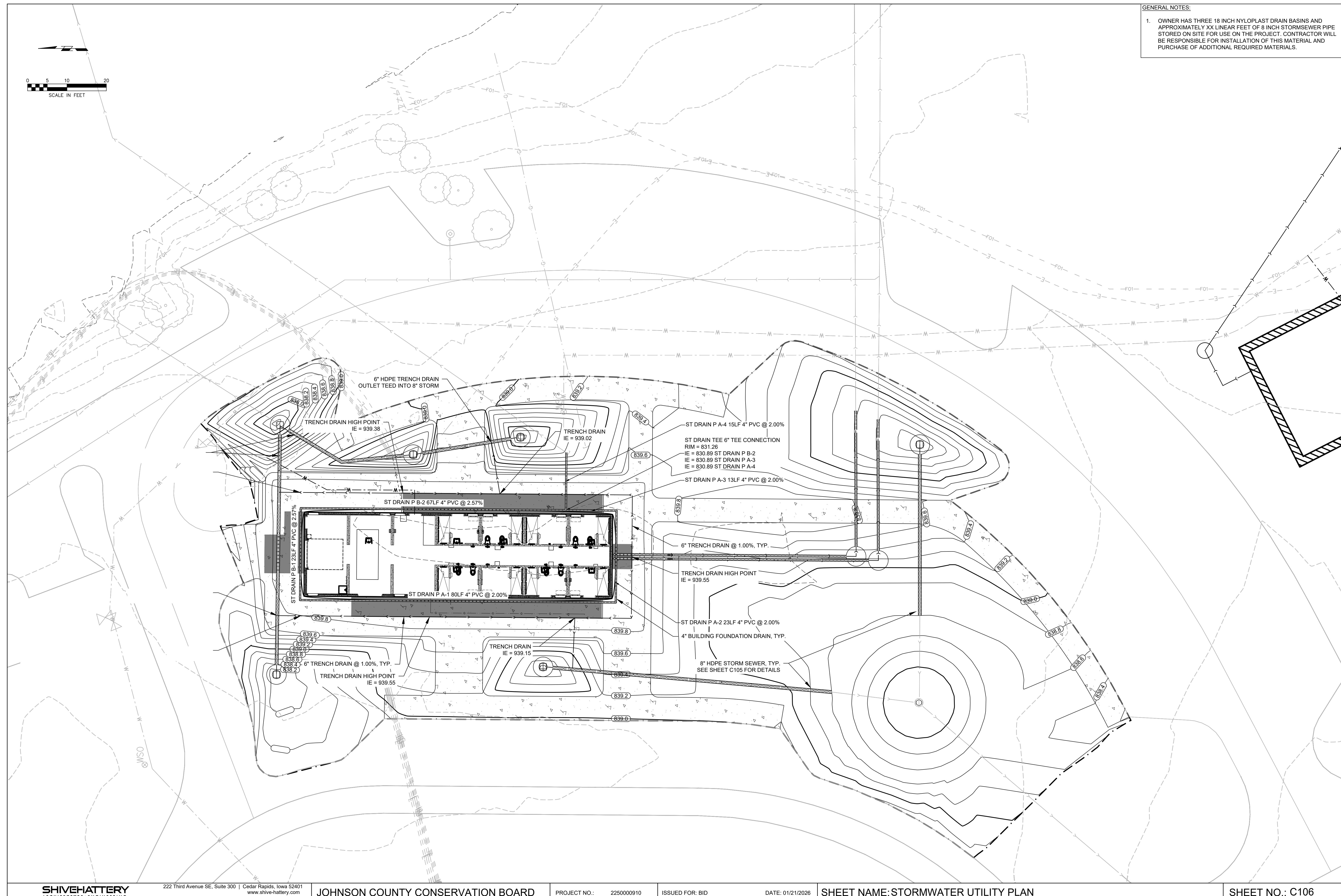
VERTICAL SCALE 1" = 5'
HORIZONTAL SCALE 1" = 10'

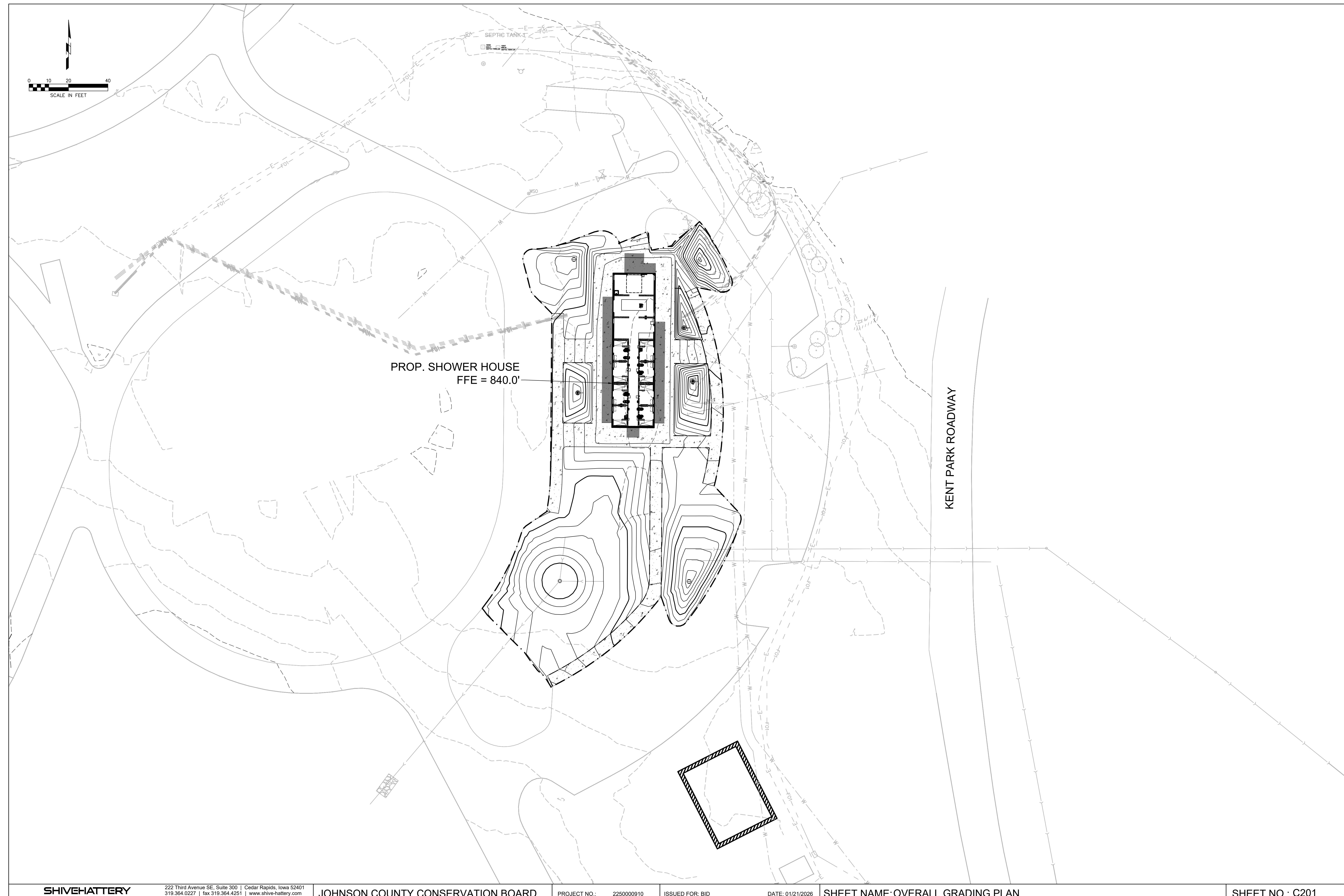


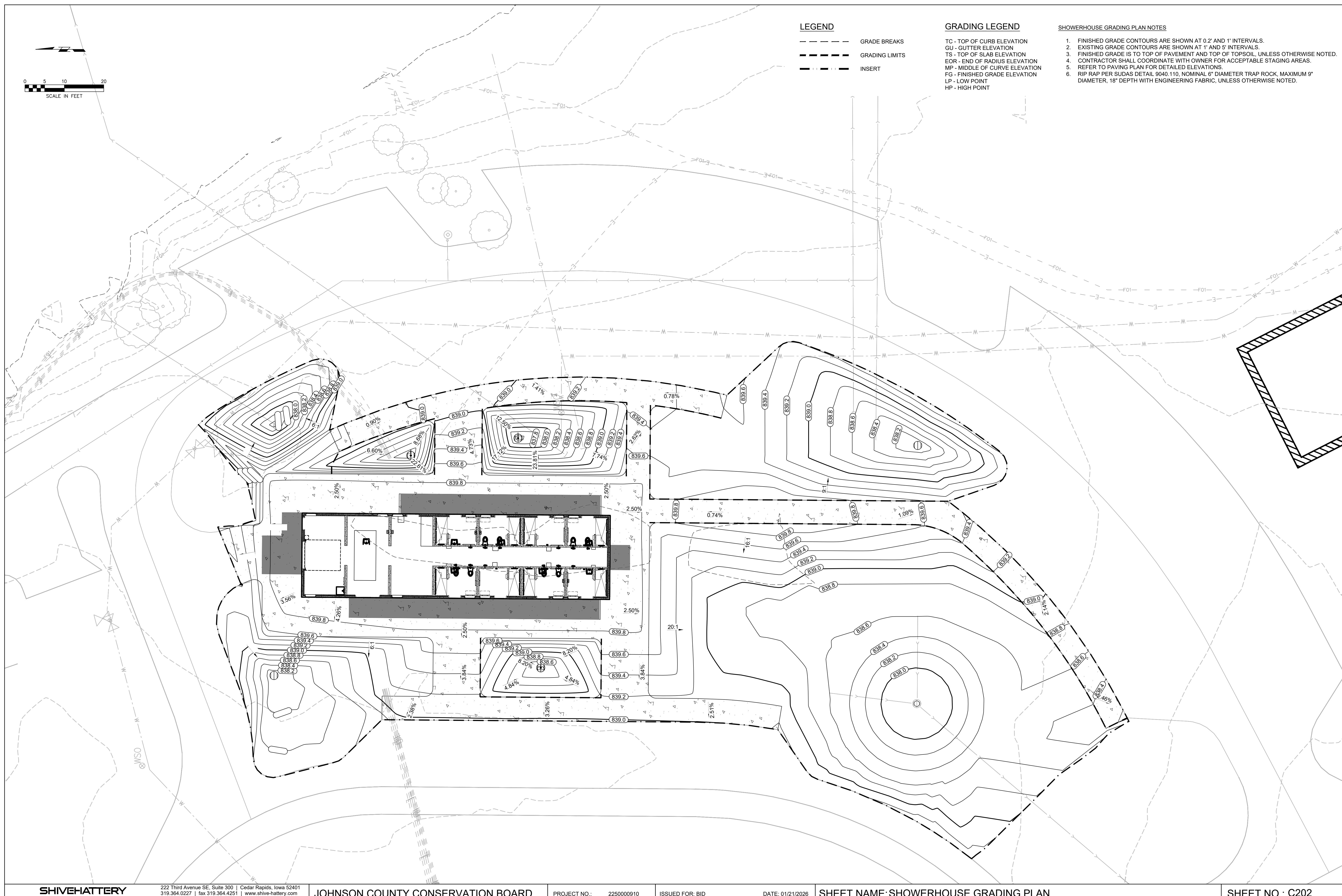


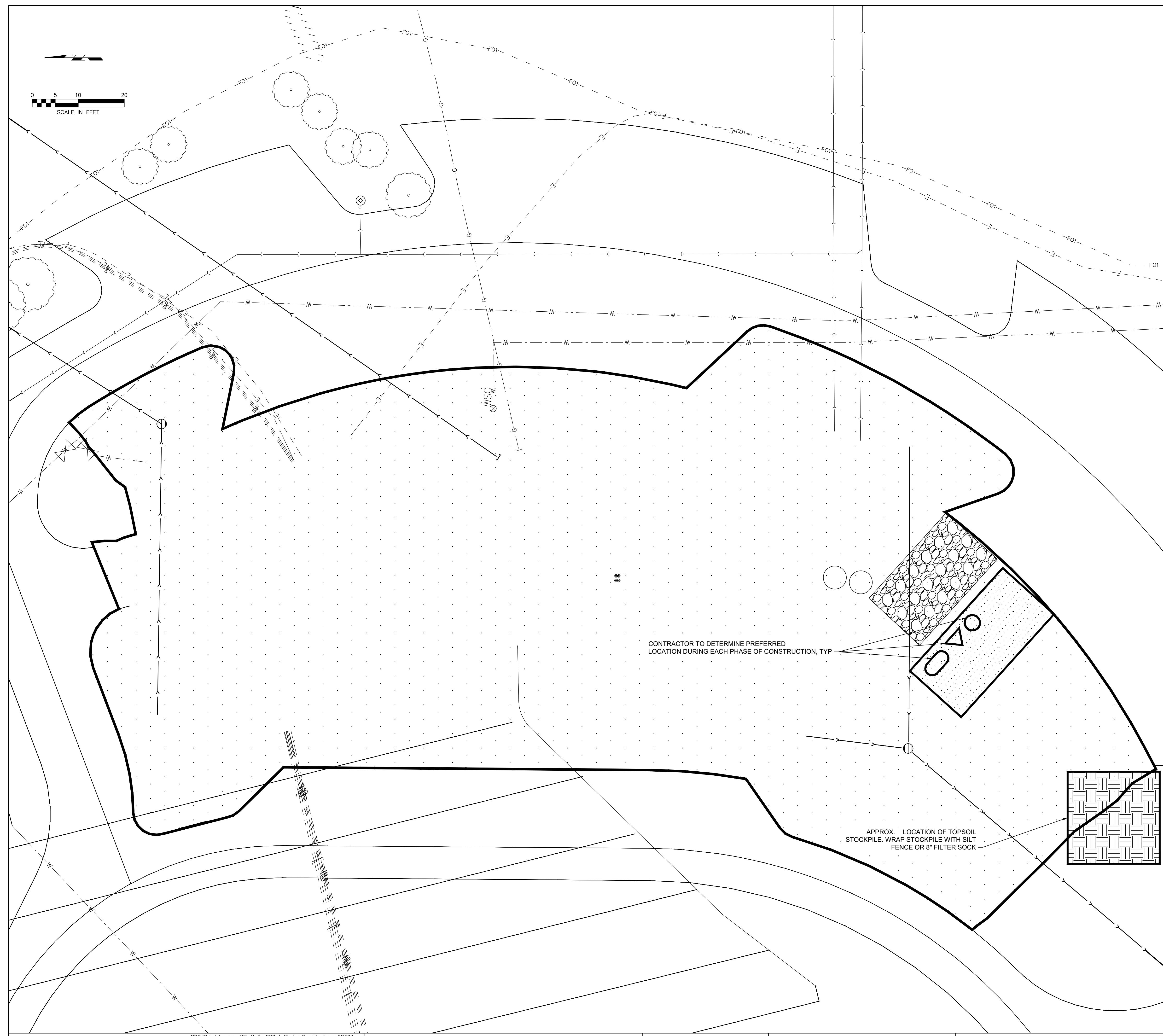
VERTICAL SCALE 1" = 5'
HORIZONTAL SCALE 1" = 10'

2 STORM SEWER 4 PROFILE
VERTICAL SCALE 1" = 5'
HORIZONTAL SCALE 1" = 10'









LEGE



PROJECT SITE/DISTURBED AREA



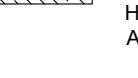
SILT FENCE SUDAS 9040.119

STABILIZED CONSTRUCTION

HAUL OFF WASTE MATERIAL.
SUGGESTED LOCATION.
RELOCATE AS REQUIRED FOR



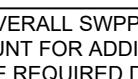
CONTRACTOR STAGING AREA FOR
PORTABLE RESTROOM FACILITIES.  RELOCATED AS REQUIRED FOR
CONSTRUCTION



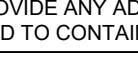
HAZARDOUS CHEMICALS. RELOCATE AS REQUIRED FOR CONSTRUCTION.



TEMPORARY TOPSOIL STOCKPILE 5.73% EXISTING GRADE
0 DIRECTION OF DRAINAGE



RALL SWPPP PLAN DOES NOT
T FOR ADDITIONAL CONTROLS THAT
SITE INFORMATION
PROJECT SITE/DISTURBED AREA: 0.23 AC



IDE ANY ADDITIONAL CONTROLS AS
TO CONTAIN SEDIMENT ON SITE.

NEAREST SURFACE WATER ACCEPTING
SITE DISCHARGE: KENT PARK POND

THE OVERALL SWPPP PLAN DOES NOT ACCOUNT FOR ADDITIONAL CONTROLS THAT MAY BE REQUIRED DUE TO MICRO-PHASING OF WORK. THE CONTRACTOR IS REQUIRED TO PROVIDE ANY ADDITIONAL CONTROLS AS NEEDED TO CONTAIN SEDIMENT ON SITE.

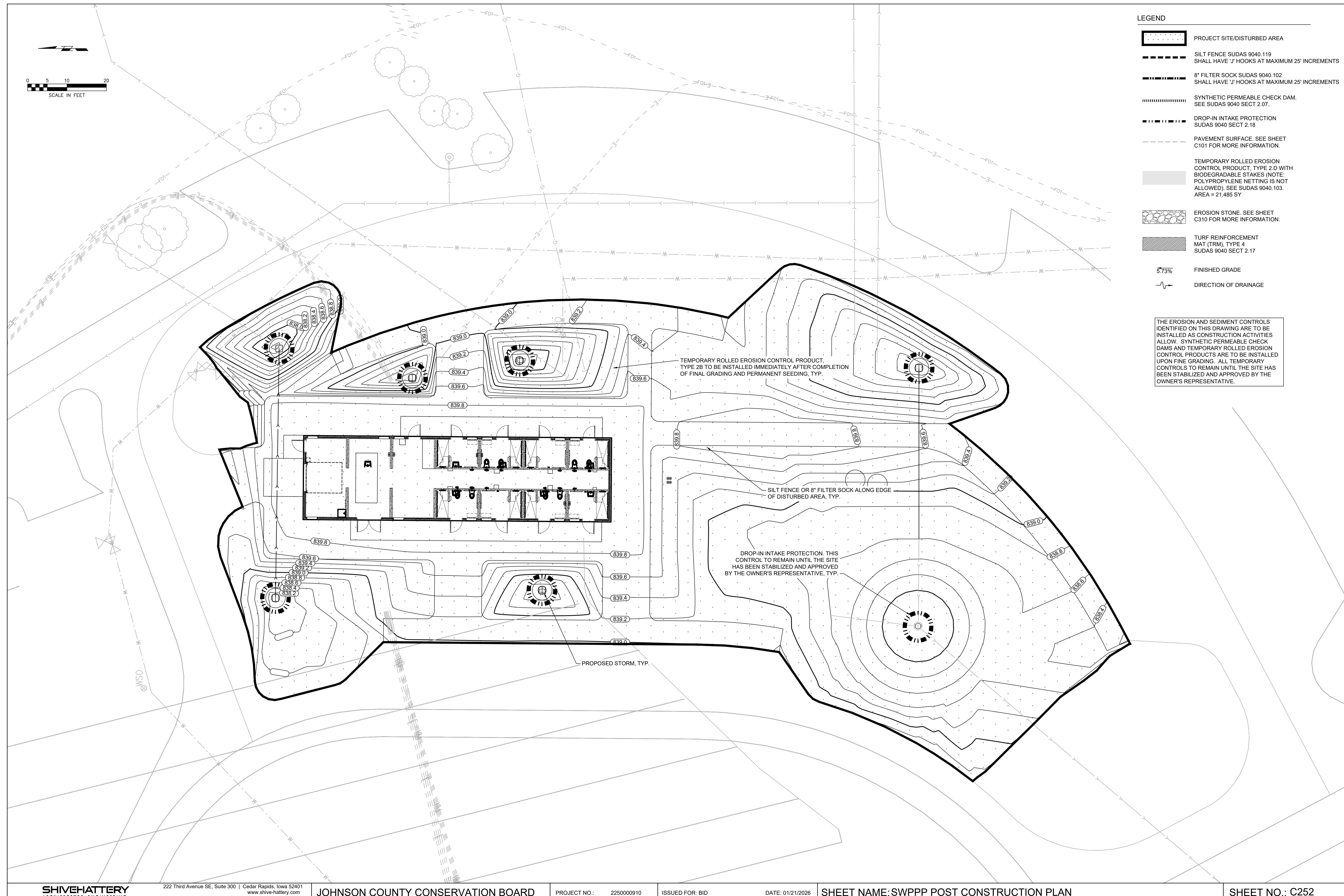
THE CONTRACTOR IS REQUIRED TO INSTALL STABILIZATION CONTROLS ON ALL DISTURBED AREAS OF THE SITE IMMEDIATELY FOLLOWING COMPLETION OF GRADING ACTIVITIES. REFER TO SUDAS 9040 FOR REQUIRED STABILIZATION

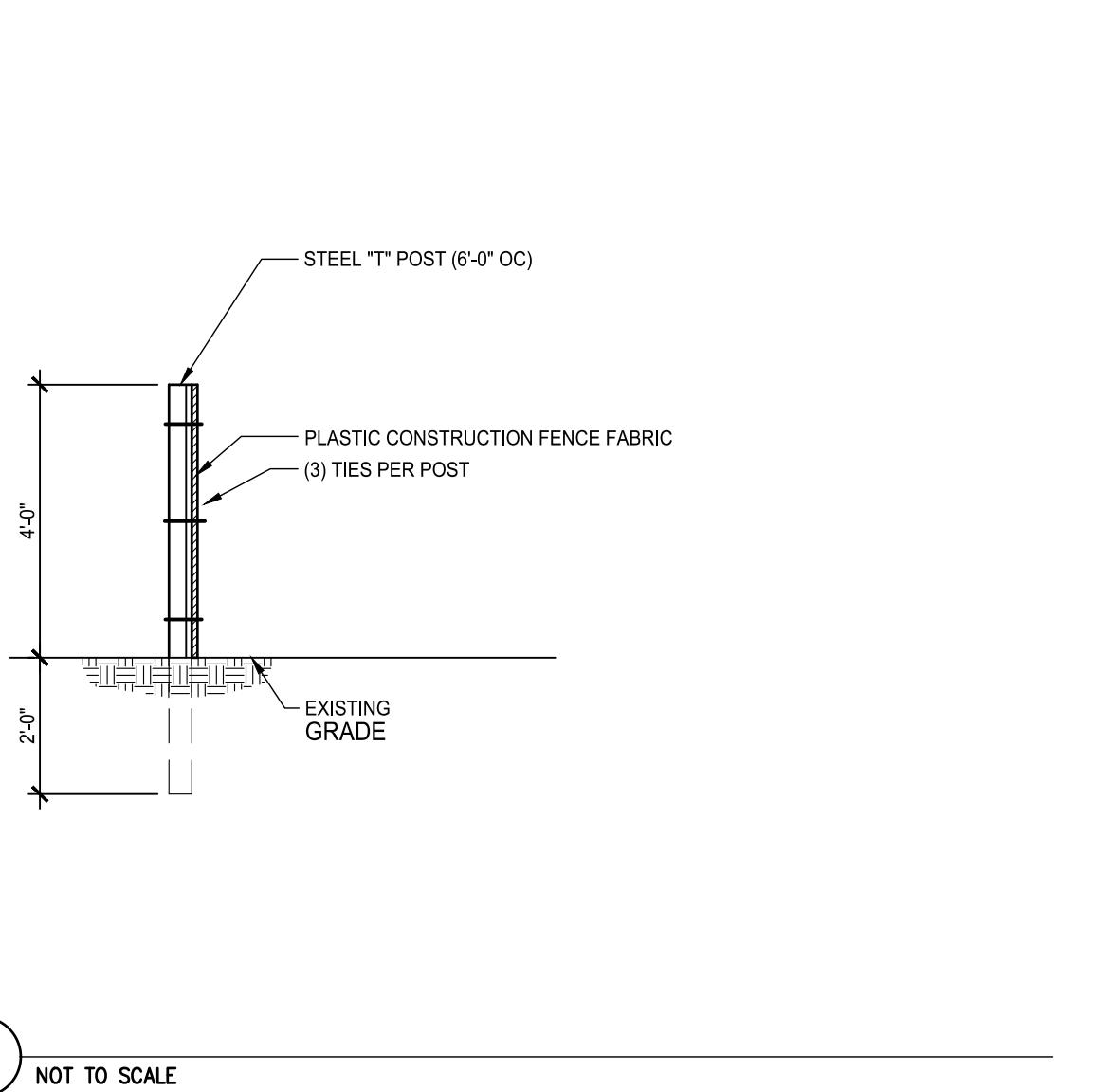
SEQUENCING AND PHASING NOTES

1. THIS PROJECT MAY BE CONSTRUCTED OVER SEVERAL PHASES. EROSION/SEDIMENT CONTROL DEVICES IDENTIFIED ON THE PLAN WILL BE IMPLEMENTED ON A PER PHASE BASIS.
2. INSTALL INTAKE PROTECTION AND DOWN SLOPE AND SIDE SLOPE PERIMETER CONTROLS BEFORE LAND DISTURBING ACTIVITY OCCURS.
3. STRIP EXISTING TOPSOIL WITHIN DISTURBANCE LIMITS AND STOCKPILE. DO NOT MIX TOPSOIL WITH SUBSOIL.
4. GRADE SUBSOIL TO CONFORM WITH THE GRADES, CONTOURS AND LEVELS IDENTIFIED ON THE DRAWINGS.
5. ROUGH GRADE FOR ROADWAY, WALKS, CURBS, GUTTERS, AND LANDSCAPED AREAS.
6. COVER OR STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE.
7. SCARIFY AREAS TO RECEIVE TOPSOIL TO A DEPTH OF 4". REMOVE ALL STONES, WOOD AND OTHER DEBRIS LARGER THAN 1" FROM AREAS TO RECEIVE TOPSOIL. DO NOT COMPACT TOPSOIL.
8. ALL DISTURBED AREAS NOT PAVED, OR HARD SURFACED ON THE SITE SHALL RECEIVE A MINIMUM 6" OF TOPSOIL AND SEED AS IDENTIFIED IN THE DRAWINGS. REFER SUDAS SPECIFICATION SECTION 9010 - SEEDING FOR SITE RESTORATION INFORMATION.
9. UPON COMPLETION OF EACH PHASE AND APPROVAL BY THE OWNER'S REPRESENTATIVE, EROSION/SEDIMENT CONTROL DEVICES MAY BE REMOVED/RELOCATED.

EROSION AND SEDIMENT CONTROL NOTES

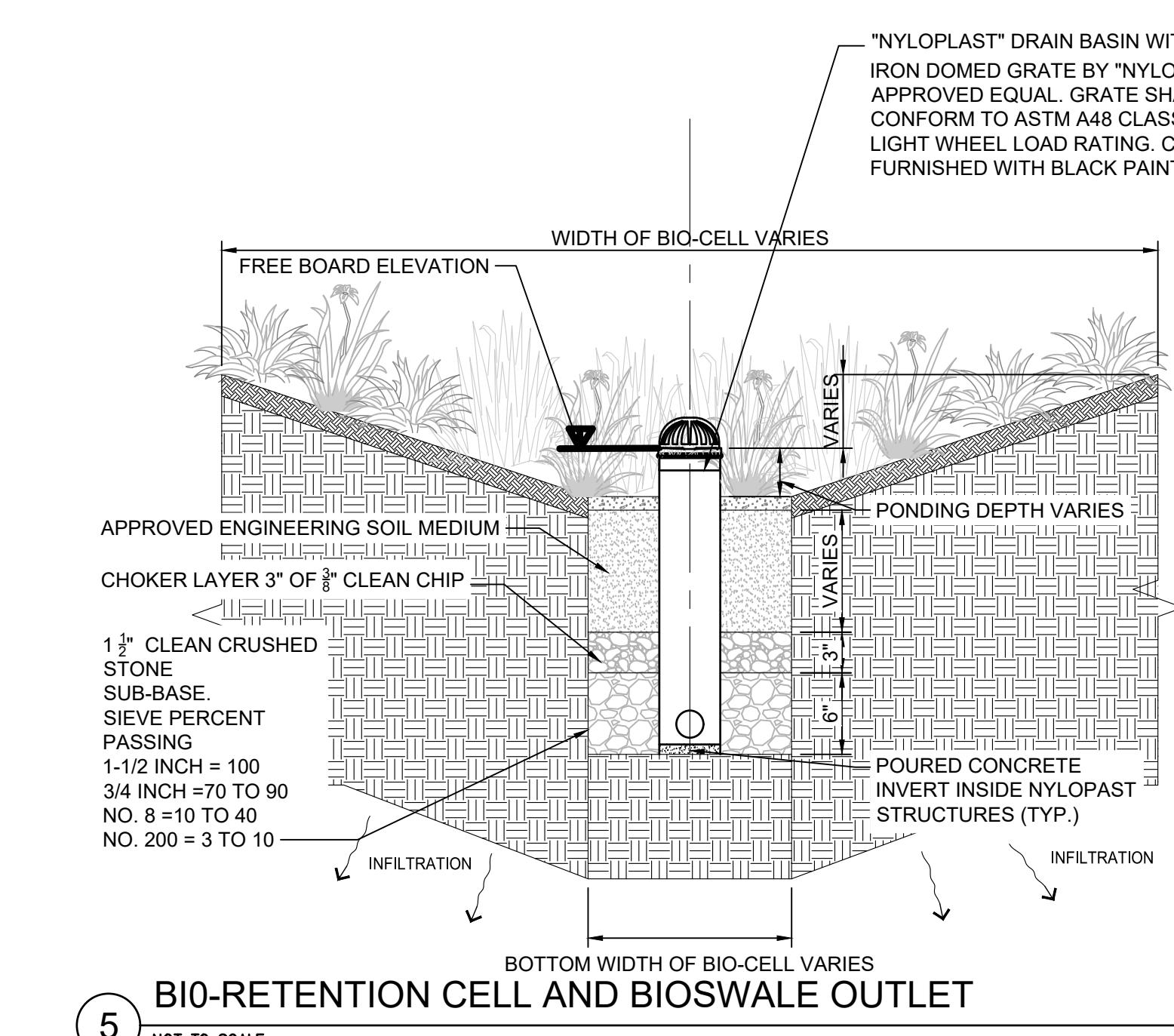
1. EROSION/SEDIMENT CONTROL MEASURES SHOULD BE INSTALLED BEFORE EARTH DISTURBING ACTIVITIES BEGIN AND ARE REQUIRED REGARDLESS OF THE TIME OF YEAR. THIS PLAN AND ITS ASSOCIATED REQUIREMENTS FOR THE PERMIT MUST BE IMPLEMENTED DURING WINTER MONTHS AS WELL. ADDITIONAL INSTALLATION/REMOVAL OF STABILIZATION CONTROLS ASSOCIATED WITH SEEDING OUTSIDE THE SEEDING WINDOW ARE INCIDENTAL TO THE PROJECT.
2. REFER TO SUDAS 9040 FOR STORMWATER POLLUTION PREVENTION PLAN, NPDES GENERAL PERMIT NO.2 SUBMITTAL REQUIREMENTS AND EROSION/SEDIMENT CONTROL TECHNICAL SPECIFICATIONS.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTROL EROSION/SEDIMENT ON THE SITE AT ALL TIMES. THE CONTROL MEASURES SHOWN ON THE PLAN ARE A MINIMUM. THE CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION/SEDIMENT CONTROL MEASURES AS NECESSARY TO FULFILL THIS REQUIREMENT. CONTRACTOR TO INCORPORATE ALL TEMPORARY STABILIZING AND PERMANENT EROSION/SEDIMENT CONTROL FEATURES AT THE EARLIEST TIME PRACTICABLE.
4. THE CONTRACTOR IS REQUIRED TO USE STABILIZATION CONTROLS ON ALL DISTURBED AREAS OF THE SITE REGARDLESS OF THE TIME PERIOD BEFORE THEY WILL BE DISTURBED AGAIN. IN THE EVENT THAT CONSTRUCTION ACTIVITY WITHIN A DISTURBED AREA WILL NOT OCCUR FOR A PERIOD OF 14 OR MORE CALENDAR DAYS, THE CONTRACTOR IS REQUIRED TO INSTALL STABILIZATION MEASURES IMMEDIATELY AFTER CONSTRUCTION ACTIVITY CEASED IN THAT AREA. REFER TO SUDAS 9040 FOR REQUIRED STABILIZATION CONTROLS NOT SHOWN ON THIS PLAN.
5. THE CONTRACTOR SHALL RESTORE DISTURBED AREAS AS SOON AS WORK IS COMPLETED AS INDICATED ON THE PLANS AND PROJECT MANUAL.
6. THE CONTRACTOR SHALL USE CONTROL MEASURES AS REQUIRED TO KEEP SOILS FROM LEAVING THE SITE.
7. CONTRACTOR SHALL IMPLEMENT SITE SPECIFIC BEST MANAGEMENT PRACTICES (BMPS) AS SHOWN AND REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED BY THE CONTRACTOR AS DICTATED BY SITE CONDITIONS OR THE PROJECT GOVERNING AUTHORITIES AT NO ADDITIONAL COST TO THE OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
8. IF AFTER REPEATED FAILURE ON THE PART OF THE CONTRACTOR TO PROPERLY CONTROL SOIL EROSION, SEDIMENT AND/OR POLLUTION FROM THE PROJECT SITE, THE GOVERNING AUTHORITIES RESERVE THE RIGHT TO EFFECT NECESSARY CORRECTIVE MEASURES AND CHARGE ANY COSTS TO THE CONTRACTOR.
9. ALL BMPS AND CONTROLS SHALL CONFORM TO THE APPLICABLE FEDERAL, STATE, OR LOCAL REQUIREMENTS, STANDARDS, AND SPECIFICATIONS OR MANUAL OF PRACTICE.
10. ALL BMPS AND CONTROLS INSTALLED ON GREEN INFRASTRUCTURE SHALL REMAIN UNTIL THE SITE HAS STABILIZATION AND BEEN APPROVED BUT THE OWNER'S REPRESENTATIVE.
11. IN THE EVENT THAT SOILS LEAVE THE SITE, CLEANUP OF ALL SURROUNDING ROADS, DRIVES, AND PARKING LOTS SHALL BE PERFORMED ON A DAILY BASIS AT A MINIMUM AND UPON REQUEST BY OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST. PAVEMENT IS TO BE SCRAPED OF DEBRIS AND MUD AND BROOMED CLEAN. MUD TRACKS ARE TO BE REMOVED AS THEY ARE CREATED.
12. IF DURING CONSTRUCTION OPERATIONS ANY LOOSE MATERIALS ARE DEPOSITED IN THE FLOW LINE OF GUTTERS, DRAINAGE STRUCTURES, OR DITCHES SUCH THAT THE NATURAL FLOW LINE OF WATER IS OBSTRUCTED, THIS LOOSE MATERIAL SHALL BE REMOVED.
13. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY EXISTING STORM DRAINAGE SYSTEMS BY THE USE OF INLET PROTECTION OR OTHER APPROVED FUNCTIONAL METHODS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING SEDIMENT RESULTING FROM CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT.
14. CONSTRUCTION ACCESS POINTS TO THE SITE SHALL BE PROTECTED IN SUCH A WAY AS TO PREVENT TRACKING OF MUD OR SOIL ONTO PUBLIC THOROUGHFARES. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
15. CLEAN SILT FROM FILTER SOCKS/SILT FENCE ON A REGULAR BASIS AS PER THE STANDARD SPECIFICATIONS. FILTER SOCKS MUST BE CLEANED OUT WHEN THEY ARE 33% FULL.
16. CONTRACTOR TO LOCATE/ RELOCATE FILTER SOCKS/SILT FENCE AS NECESSARY THROUGHOUT THE PROJECT TO CONTROL EROSION/SEDIMENT. FILTER SOCK INSTALLATION IS TO FOLLOW SUDAS 9040.102.
17. REMOVE ALL TEMPORARY EROSION/SEDIMENT CONTROLS, NOT CALLED OUT TO REMAIN, AFTER SITE HAS BEEN STABILIZED AND APPROVED BY THE OWNER'S REPRESENTATIVE.
18. WHERE WATER IS PUMPED FROM EXCAVATIONS ON SITE, PROVISIONS SHALL BE MADE TO REMOVE SEDIMENT FROM THE WATER BEFORE IT IS RELEASED. REFER TO SUDAS 3010 SECT 3.04 FOR DEWATERING GUIDANCE.
19. WHERE WATER IS RELEASED FROM A DEWATERING SYSTEM, PRECAUTIONS SHALL BE TAKEN TO ENSURE THAT EROSION GULLIES DO NOT FORM. WATER MUST BE FILTERED THROUGH AN APPROPRIATE FILTER DEVICE BEFORE DISCHARGING.
20. ALL EXISTING AND PROPOSED STORM INTAKES, WITHIN AND ADJACENT TO THE PROJECT AREA, MUST BE PROTECTED THROUGHOUT THE DURATION OF THE PROJECT AS IDENTIFIED ON THE DRAWINGS. INTAKES SHALL BE FREE OF DIRT, DEBRIS AND ROCK AT COMPLETION OF WORK.
21. BIODEGRADABLE EROSION CONTROL BLANKETS SHALL BE USED AT ALL LOCATIONS IDENTIFIED ON THE DRAWINGS. POLYPROPYLENE (PLASTIC) NETTING IS NOT ALLOWED. BIODEGRADABLE STAKES SHALL BE USED IN LIEU OF 'U' STAPLES.
22. SANITARY WASTE DISPOSAL: ALL LOCATIONS OF PORTABLE RESTROOM FACILITIES MUST BE IDENTIFIED ON THE PLAN. IN THE EVENT THAT PORTABLE RESTROOM FACILITIES ARE USED ON-SITE, THE CONTRACTOR IS REQUIRED TO INSTALL AN 8" FILTER SOCK AROUND THE FACILITY TO MINIMIZE THE RADIUS OF THE Affected ZONE IN THE EVENT OF A SPILL. WASTES SHALL BE COLLECTED AND DISPOSED OF IN COMPLETE COMPLIANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. PORTABLE RESTROOM FACILITIES MUST NOT BE LOCATED NEAR DRAINAGE WAYS. RELOCATE AS REQUIRED FOR CONSTRUCTION.
23. IDENTIFICATION OF ALLOWABLE NON-STORMWATER DISCHARGES: DURING CONSTRUCTION THE NON-STORMWATER DISCHARGES, WHICH INCLUDE WATER FLUSHED FROM WATER LINES, PAVEMENT WASHING (WHERE NO SPILLS OR LEAKS HAVE OCCURRED, UNLESS THE SPILLED MATERIAL HAS BEEN CLEANED UP), VEHICLE WASHING, AND GROUNDWATER (DEWATERING), SHOULD BE DIRECTED AS MUCH AS POSSIBLE TOWARDS VEGETATED AREAS AND AWAY FROM DRAINAGE WAYS. REFER TO THE IDNR NPDES GENERAL PERMIT NO. 2 FOR ALLOWABLE NON-STORMWATER DISCHARGES.
24. POLLUTION AND SPILL PREVENTION PLANNING: POTENTIALLY HAZARDOUS MATERIALS ON THE CONSTRUCTION SITE INCLUDE FUEL, LUBRICANTS, CURING COMPOUNDS, FERTILIZERS, GREASE AND CLEANING SOLVENTS. THE CONTRACTOR STAGING AREA FOR PORTABLE RESTROOM FACILITIES, TEMPORARY FUEL TANKS, WASTE CONTAINERS AND OTHER HAZARDOUS CHEMICALS MUST BE PROTECTED BY AN 8" FILTER SOCK AT ALL TIMES. ALL REASONABLE PRECAUTIONS WILL BE TAKEN TO PREVENT SPILLS. ANY SPILLED MATERIAL WILL IMMEDIATELY BE DIRECTED AWAY FROM STORMWATER INTAKES, DETENTION BASINS, OR DRAINAGE WAYS. SPILLED MATERIALS WILL BE CLEANED AND, IF NECESSARY, SOIL REMEDIATION PRACTICES WILL BE USED. A RECORD OF SPILLS WILL BE MAINTAINED BY THE PRIME CONTRACTOR. RELOCATE AS REQUIRED FOR CONSTRUCTION.
25. CONCRETE, PAINT AND GROUT WASHOUT AREA: THE WASHOUT AREA SHOULD BE AN APPROVED CONCRETE WASHOUT CONTAINER, COLLECTION BAG, OR WASHOUT BOX PER SUDAS 11,050. PROTECT WITH AN EROSION CONTROL DEVICE (IF USING FILTER SOCKS, STACK TWO (2) TALL). CONTRACTOR TO HAUL OFF ALL WASTE MATERIAL. ALL LOCATIONS OF CONCRETE, PAINT AND GROUT WASHOUT AREAS MUST BE PROVIDED BY THE CONTRACTOR AND IDENTIFIED ON THE PLAN (RELOCATE AS REQUIRED FOR CONSTRUCTION). THE CONTRACTOR IS REQUIRED TO INSTALL A SIGN THAT DESIGNATES THE WASHOUT AREA.
26. CONCRETE SLURRY AND DUST FROM SAWCUTTING ACTIVITIES IS PROHIBITED FROM ENTERING THE STORM SEWER SYSTEM. ALL STORM INTAKES LOCATED NEAR SAWCUTTING ACTIVITIES ARE REQUIRED TO BE PROTECTED. SAWCUT SLURRY AND DUST MUST BE CONTAINED, CLEANED UP, AND DISPOSED OF OFF-SITE.
27. SPILL KIT: THE LOCATION OF THE SPILL KIT MUST BE IDENTIFIED ON THE PLAN. THE SPILL KIT SHALL CONTAIN, BUT NOT BE LIMITED TO THE FOLLOWING ITEMS: A GARBAGE CAN, GLOVES, SAFETY GOOGLES, BROOM AND DUST PAN AND OIL ABSORBENT CLAY CHIPS OR PADS. THE SPILL KIT SHALL BE RESTOCKED AS SUPPLIES ARE USED. THE CONTRACTOR SHALL INSTALL A SIGN THAT DESIGNATES THE SPILL KIT. RELOCATE AS REQUIRED FOR CONSTRUCTION. THE SPILL KIT SHOULD BE DESIGNED TO DEAL WITH ANY HAZARDOUS MATERIALS ON-SITE.
28. DUST CONTROL: THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL MEASURES WHERE DUST IS GENERATED. FREQUENT WATERING OF THE SITE, SPRINKLED, VEGETATIVE COVER, MULCH, WINDBREAKS, TILLAGE, STONE AND SPRAY-ON CHEMICAL SOIL TREATMENTS (PALLIATIVES) ARE POSSIBLE DUST CONTROL MEASURES. IF THE DUST CONTROL IS NOT ACCEPTABLE IT SHALL BE CHANGED AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
29. STOCKPILED MATERIALS: CONTRACTOR TO IDENTIFY ALL LOCATIONS OF STOCKPILED MATERIALS ON THE STORMWATER POLLUTION PREVENTION PLAN. CONTRACTOR SHALL PROVIDE ALL EROSION/SEDIMENT CONTROLS AS REQUIRED TO CONTAIN MATERIALS ON-SITE. AT A MINIMUM, THE CONTRACTOR IS REQUIRED TO PROVIDE FILTER SOCKS AROUND STOCKPILED SOILS BEFORE STOCKPILE IS RE-SPREAD. IF STOCKPILE SOILS WILL REMAIN INACTIVE FOR 14 DAYS OR MORE, THEY SHALL BE STABILIZED IMMEDIATELY BY THE CONTRACTOR.



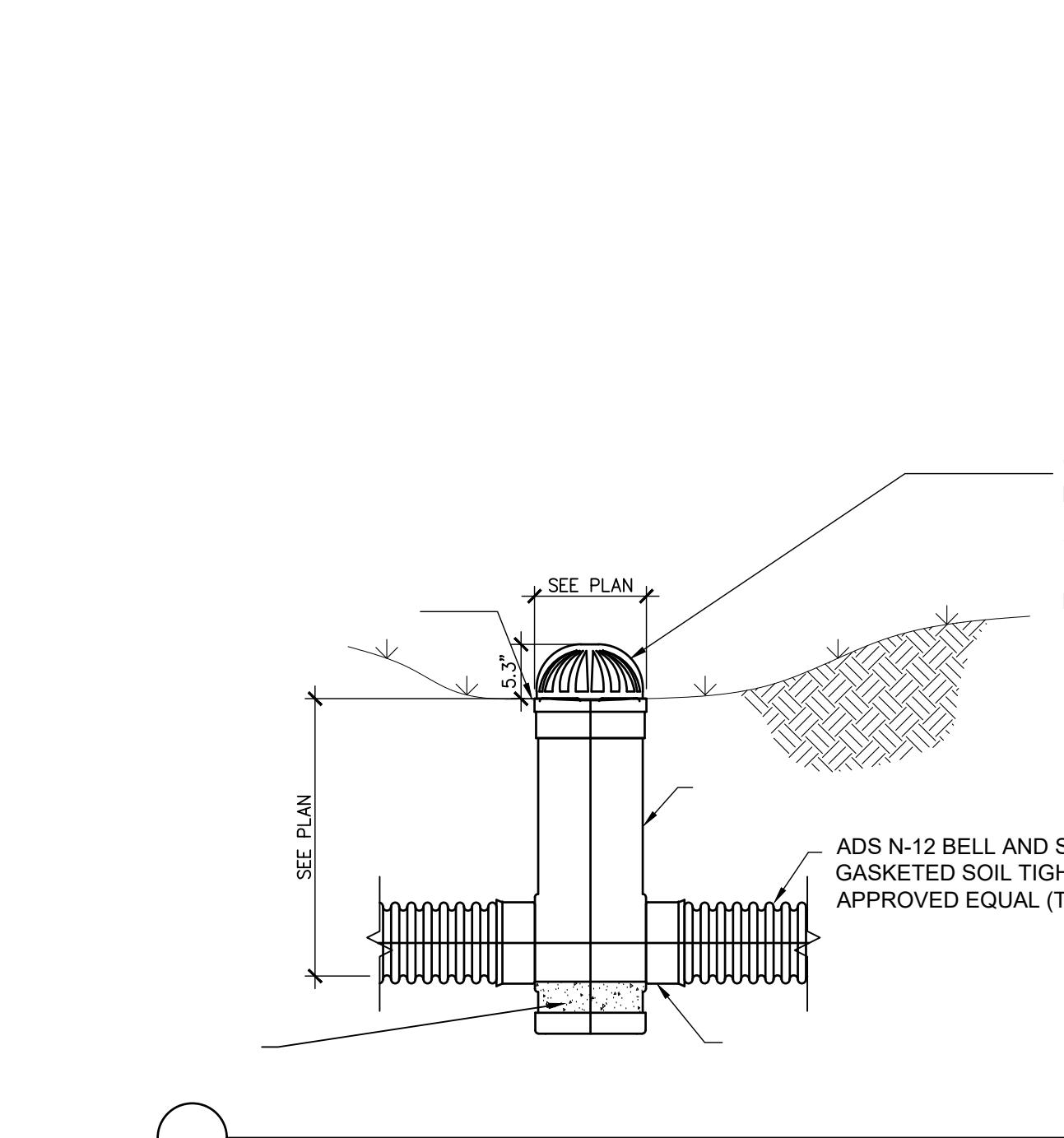


② COMPOST FILTER SOCK DETAIL

NOT TO SCALE

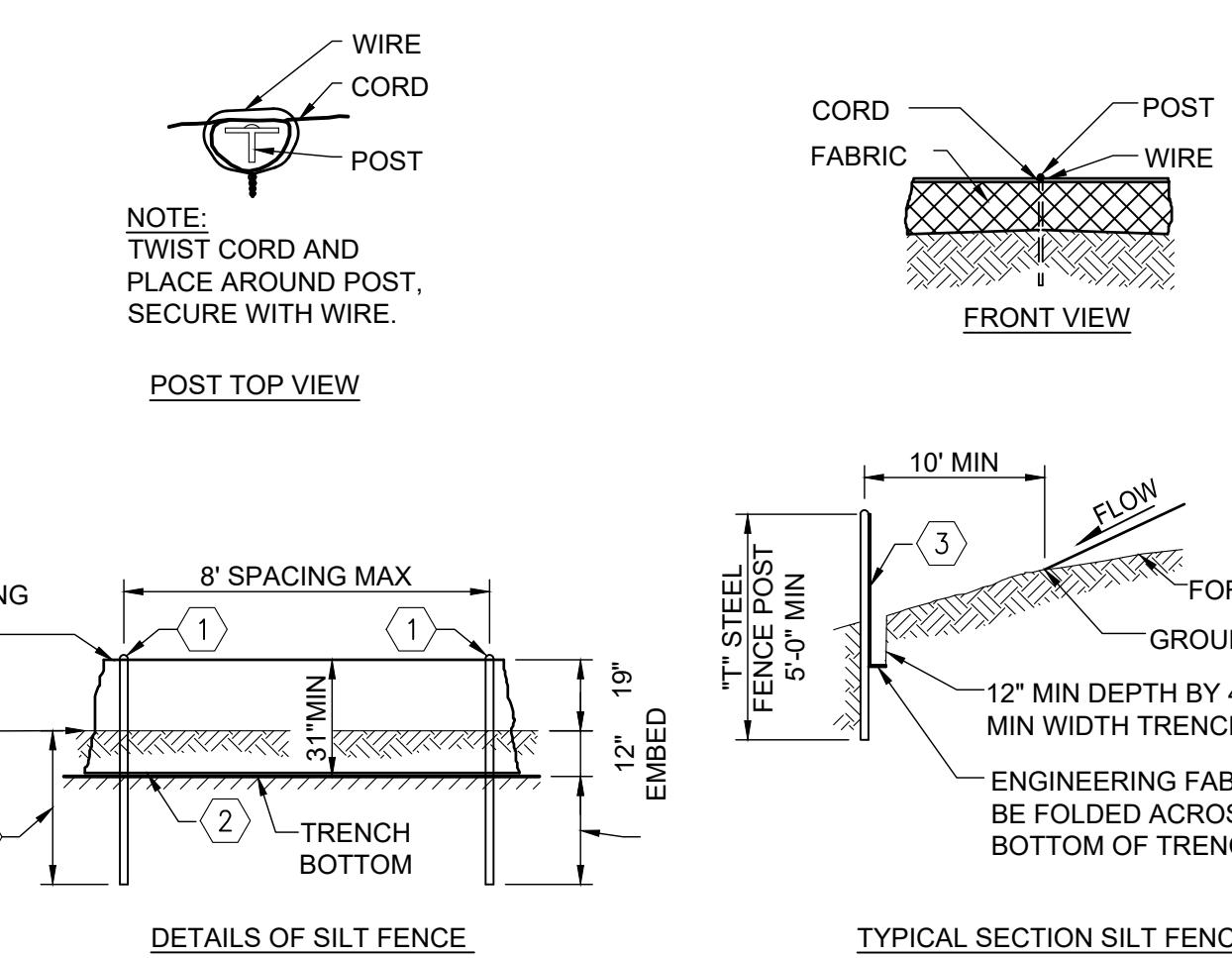


⑤ BIO-RETENTION CELL AND BIOSWALE OUTLET



⑧ PCC SIDEWALK SECTION

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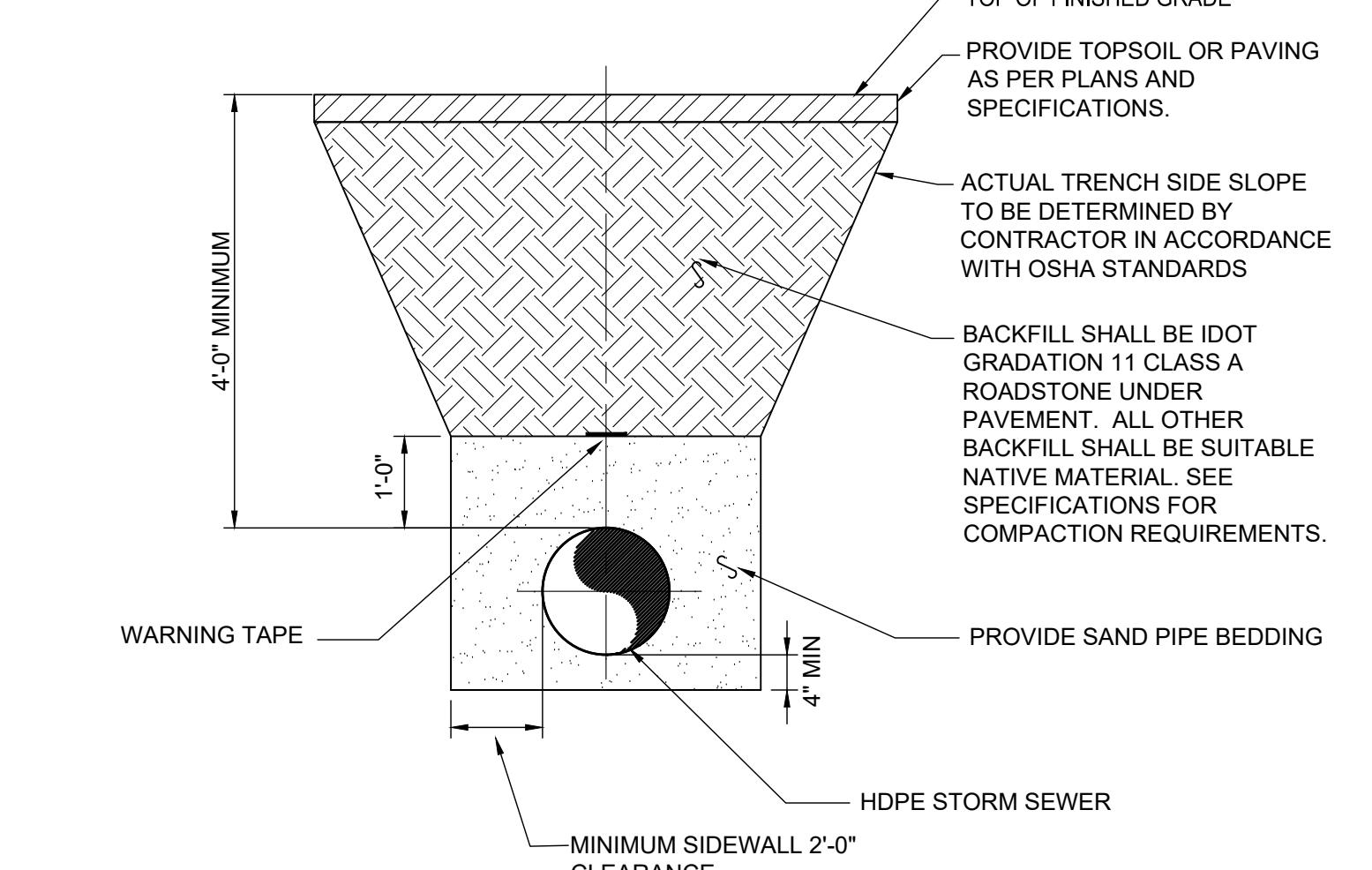


③ SILT FENCE DETAIL

NOT TO SCALE

APPROVED ENGINEERING SOIL MEDIUM NOTES:

1. THE BIORETENTION FACILITY MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.
2. COMPOST MEDIUM SHALL BE WELL MIXED ON SITE AND SHALL CONSIST OF:
 - A. 60% CONSTRUCTION SAND
 - B. 30% ORGANIC COMPOST
 - C. 10% QUALITY TOPSOIL W/ LESS THAN 5% MAX CLAY CONTENT
3. ALL COSTS FOR MATERIALS, DELIVERY TO SITE, AND REQUIRED TEST ANALYSIS TO BE PAID FOR BY THE CONTRACTOR.
4. ENGINEERED COMPOST MEDIUM SHALL BE FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE BIORETENTION AREA THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SHALL BE FREE OF NOXIOUS WEEDS.
5. FINALLY ENGINEERED COMPOST MEDIUM SHALL MEET THE FOLLOWING CRITERIA:
 - A. PH RANGE : 5.2-7.0
 - B. ORGANIC MATTER 5-10%
 - C. SOLUBLE SALTS NOT TO EXCEED 500 PPM
6. CONTRACTOR SHALL PROVIDE TEST RESULTS FOR MATERIAL FOR APPROVAL.

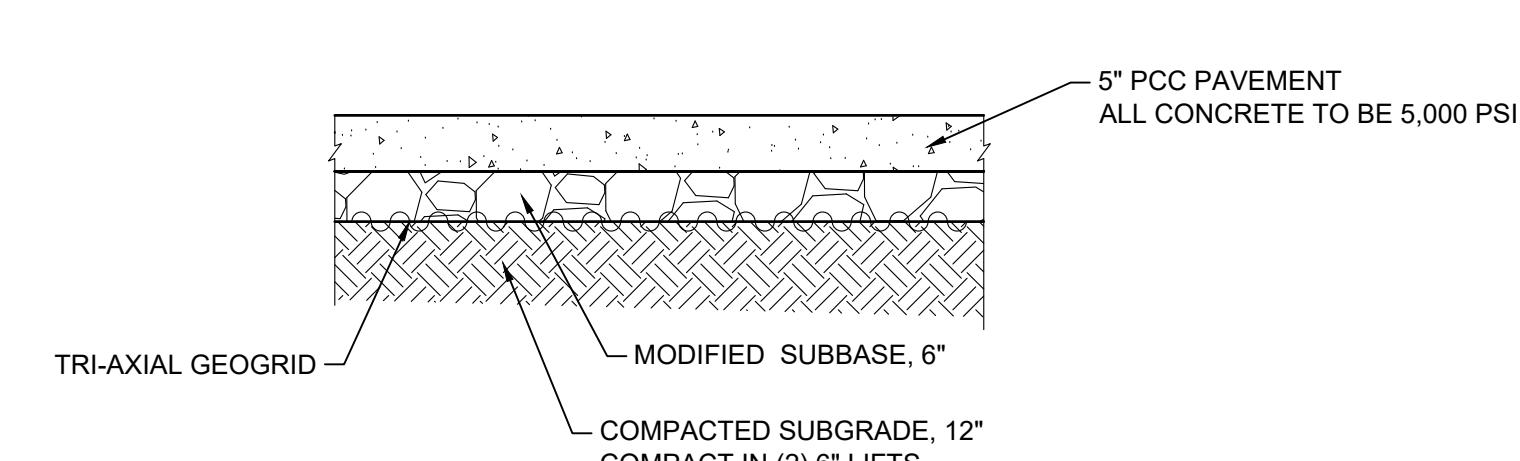


NOTE:

1. PIPING DIAMETER AS CALLED OUT ON PLANS. PIPING SHALL BE NORTH AMERICAN SPECIALTY PRODUCTS CERTA-FLO GREENLINE SDR 21 OR EQUAL.
2. GRAVITY SEWER MAINS SHALL BE SEPARATED FROM WATER MAINS BY A HORIZONTAL DISTANCE OF AT LEAST 10 FEET UNLESS:
 - 1) THE TOP OF A STORM MAIN IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN, AND,
 - 2) THE SEWER IS PLACED IN A SEPARATE TRENCH OR IN THE SAME TRENCH ON A BENCH OF UNDISTURBED EARTH AT A MINIMUM HORIZONTAL SEPARATION OF 3 FEET FROM THE WATER MAIN.

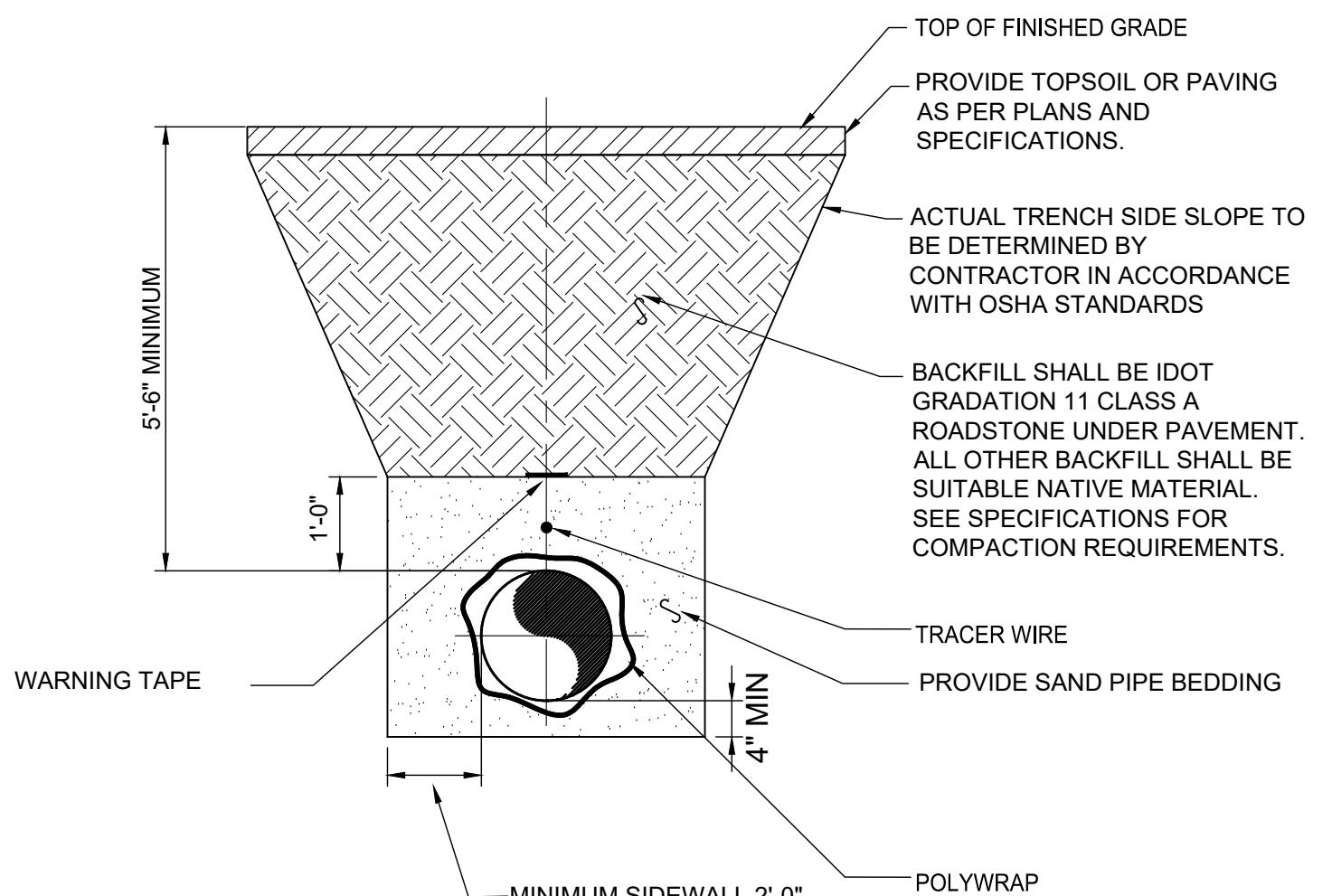
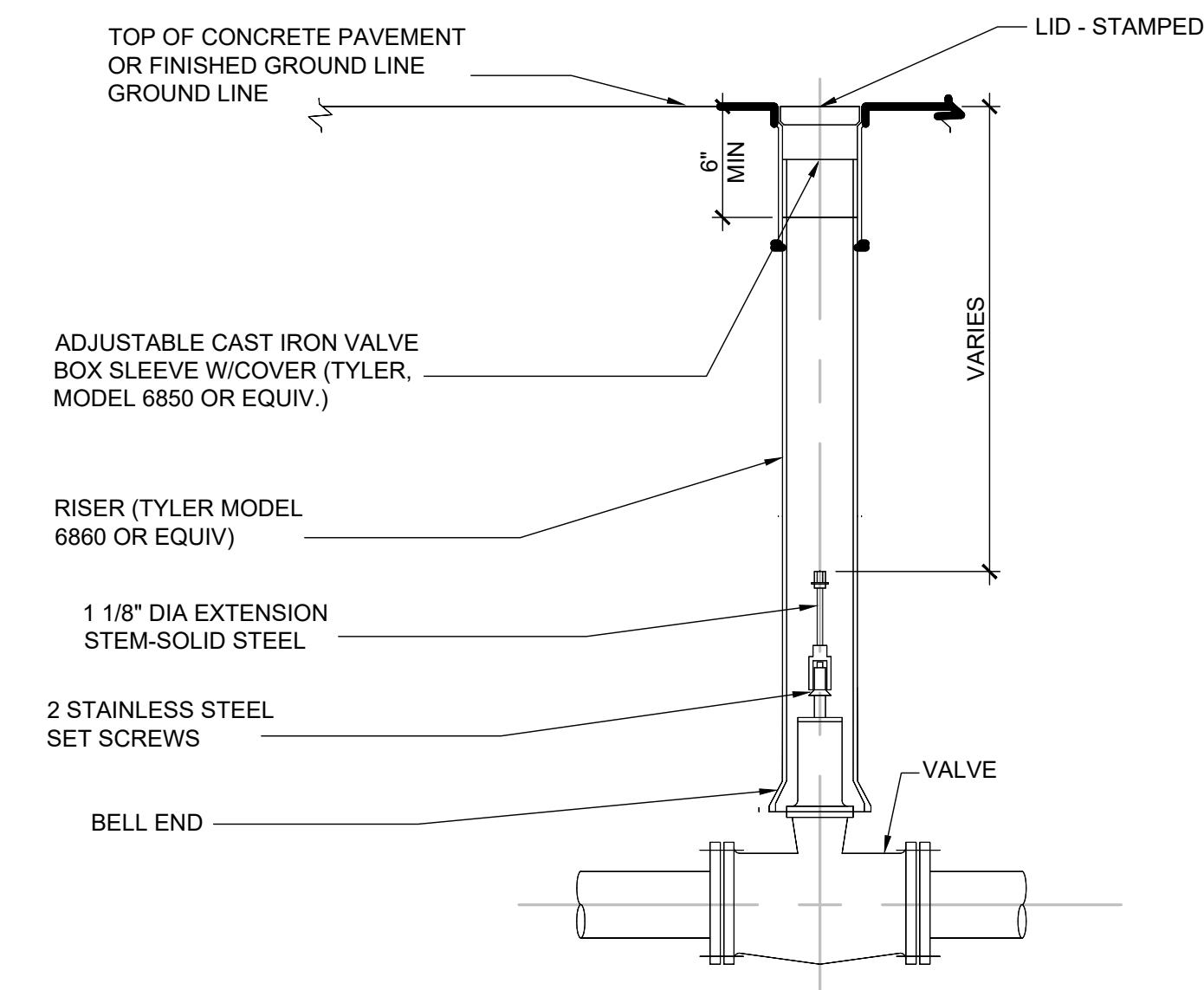
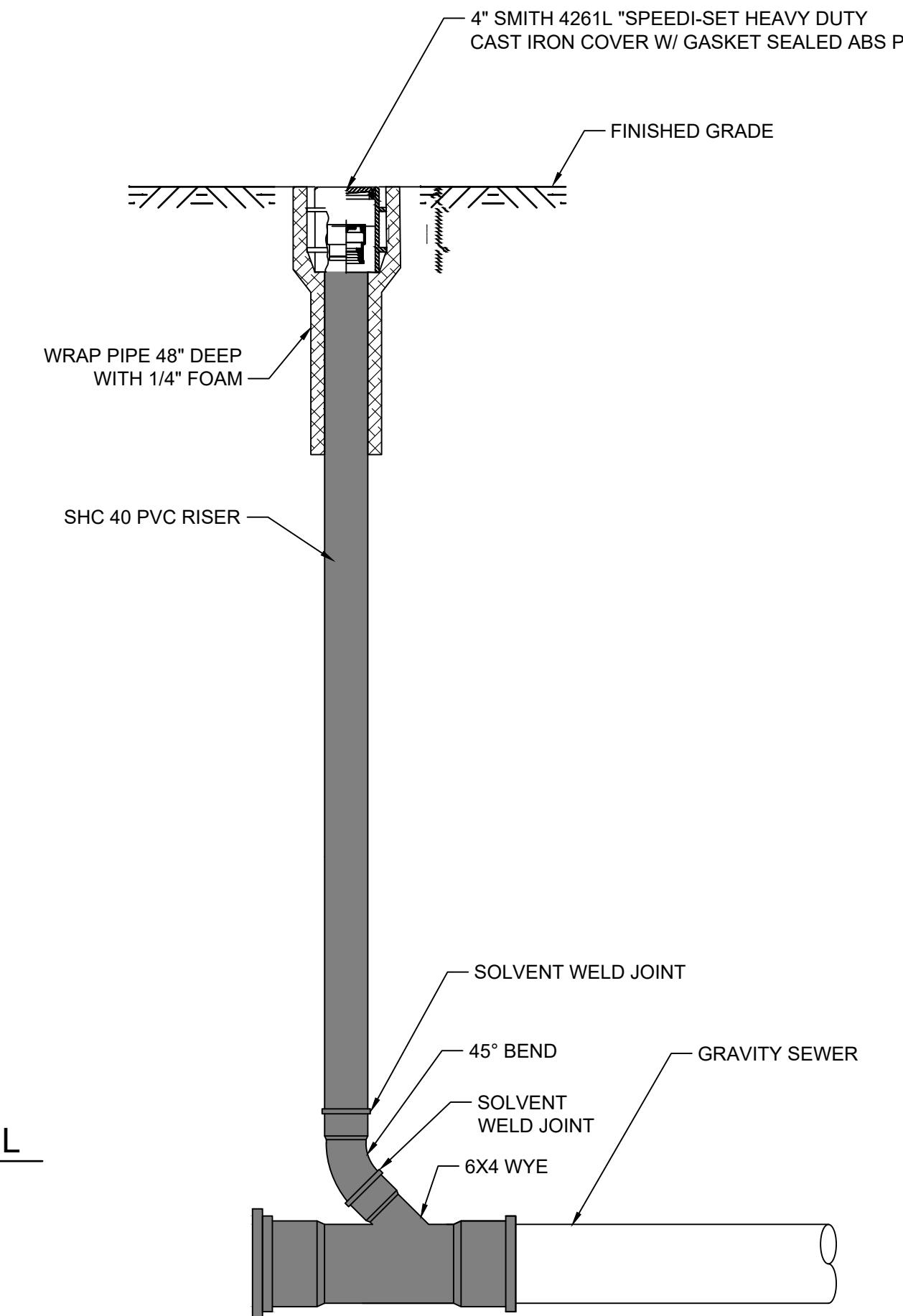
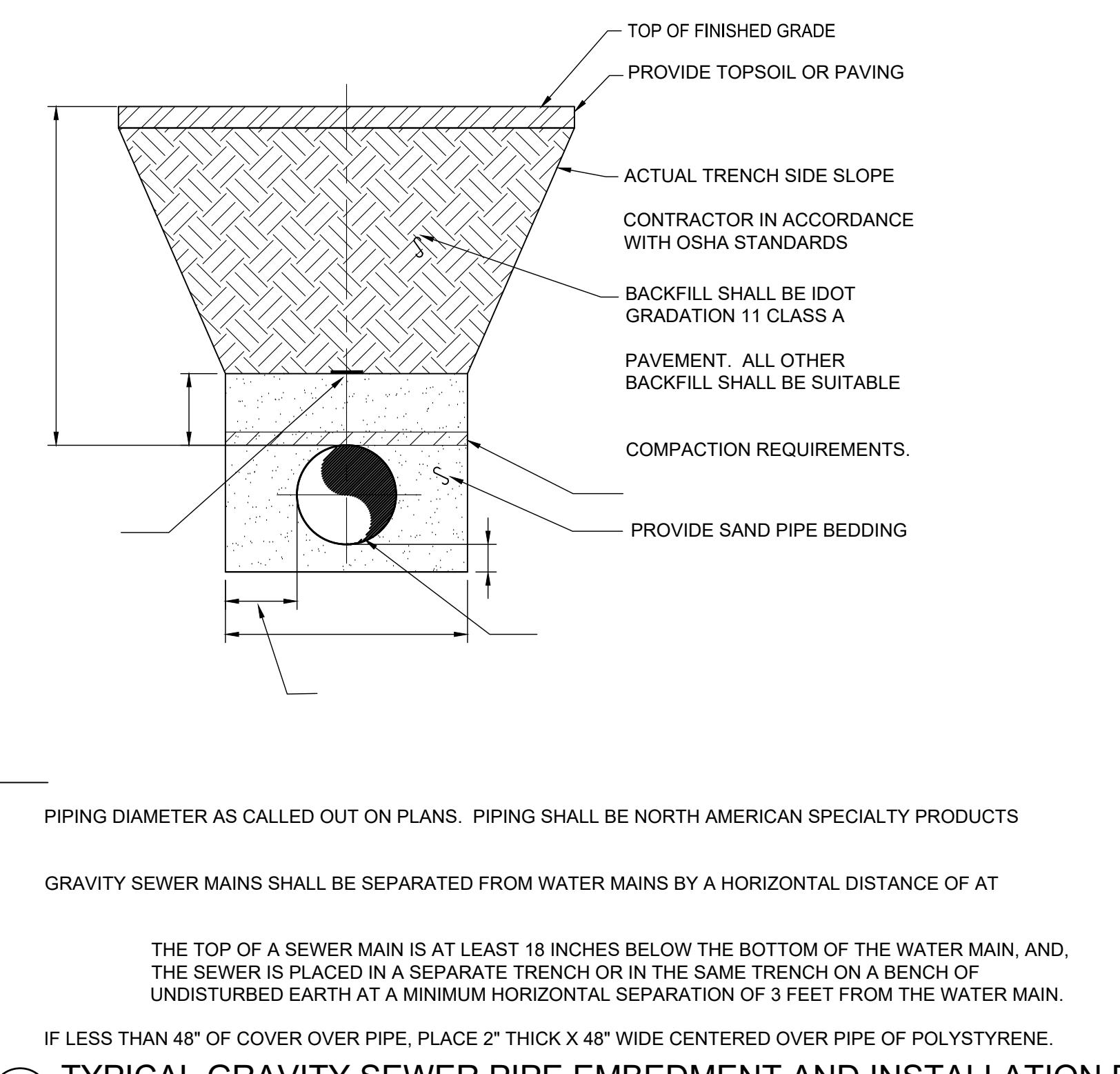
⑥ TYPICAL GRAVITY STORM PIPE EMBEDMENT AND INSTALLATION DETAIL

NOT TO SCALE



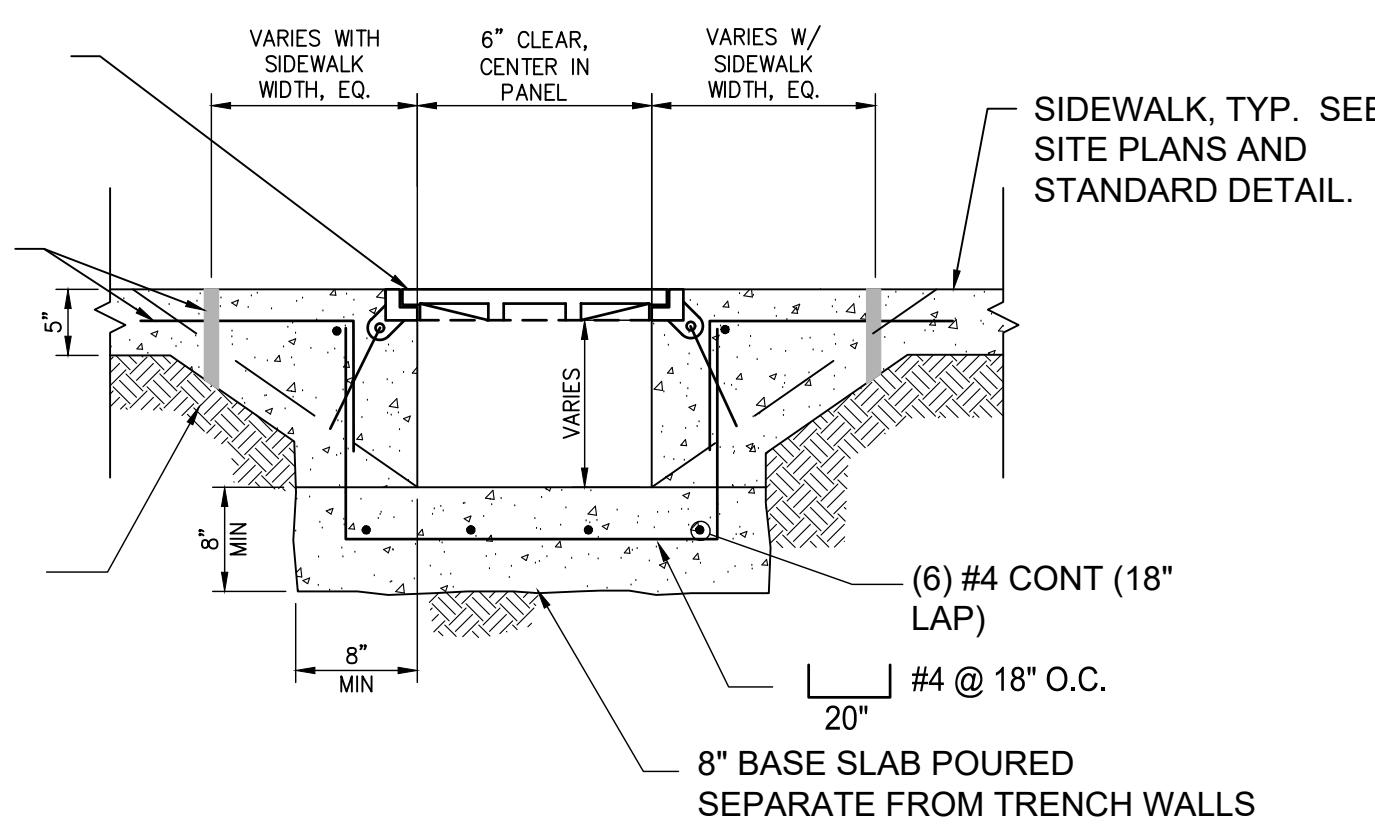
⑨ DOUBLE SANITARY SEWER CLEANOUT

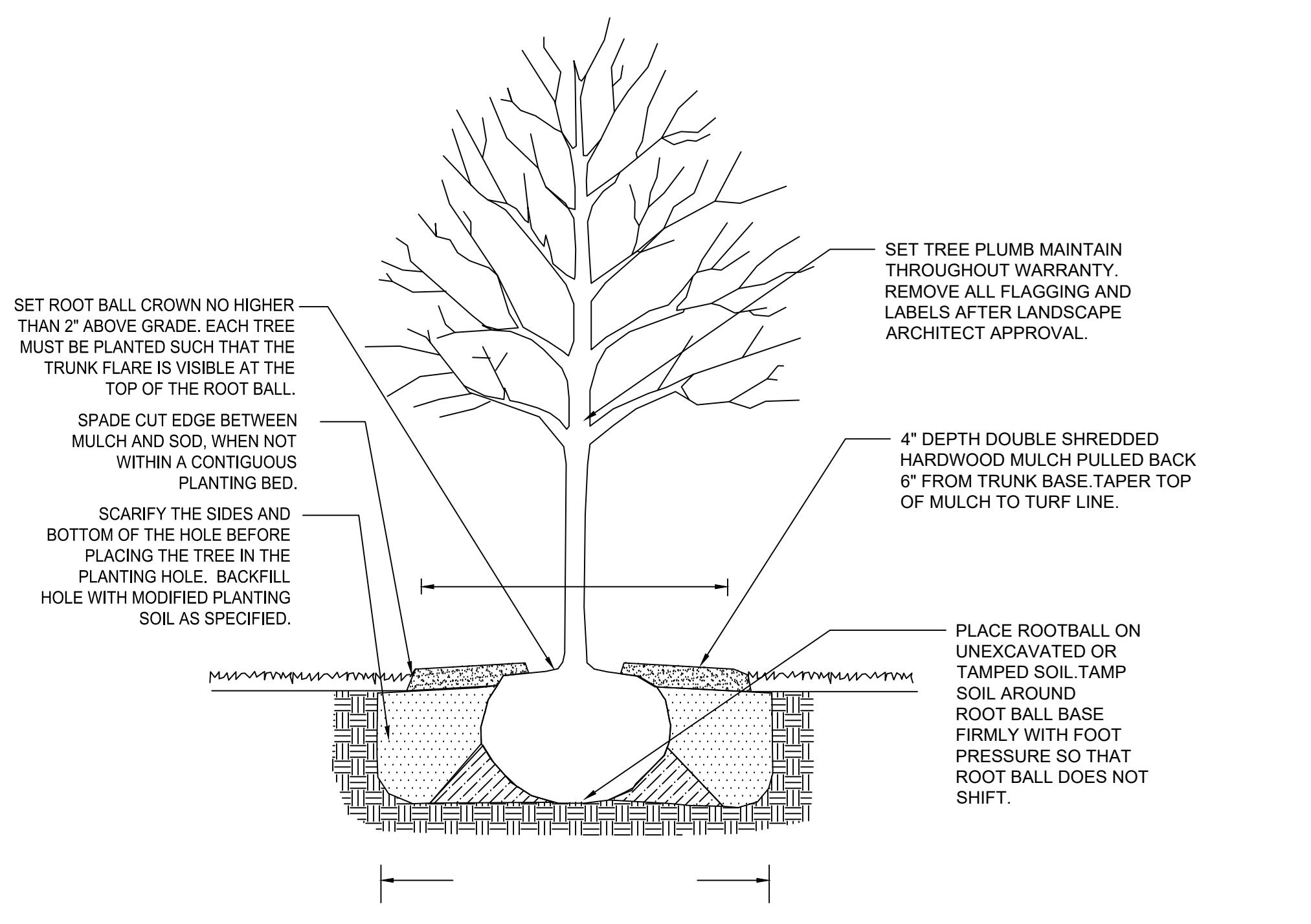
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TYPICAL WATER PIPE EMBEDMENT AND INSTALLATION DETAIL

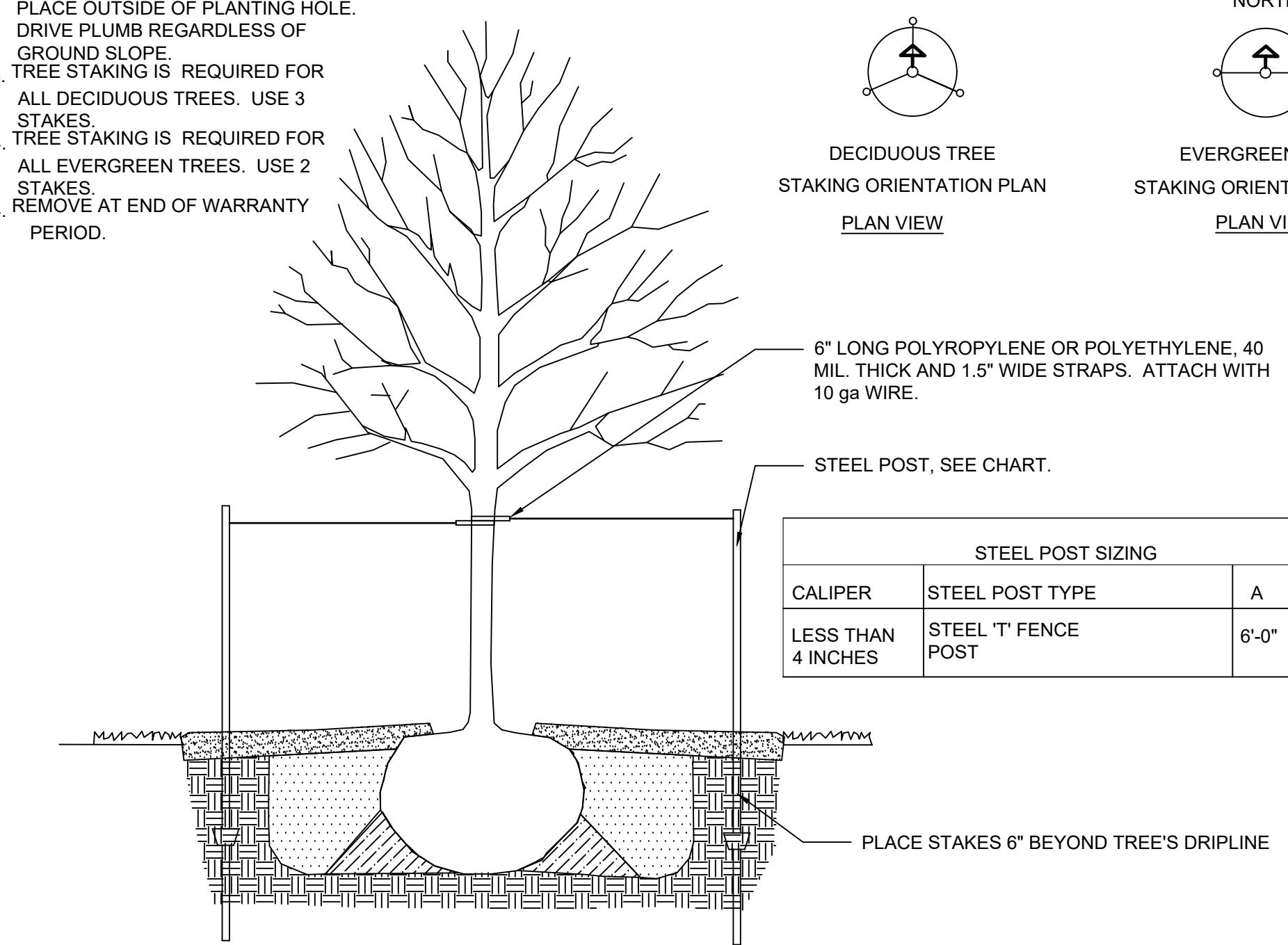
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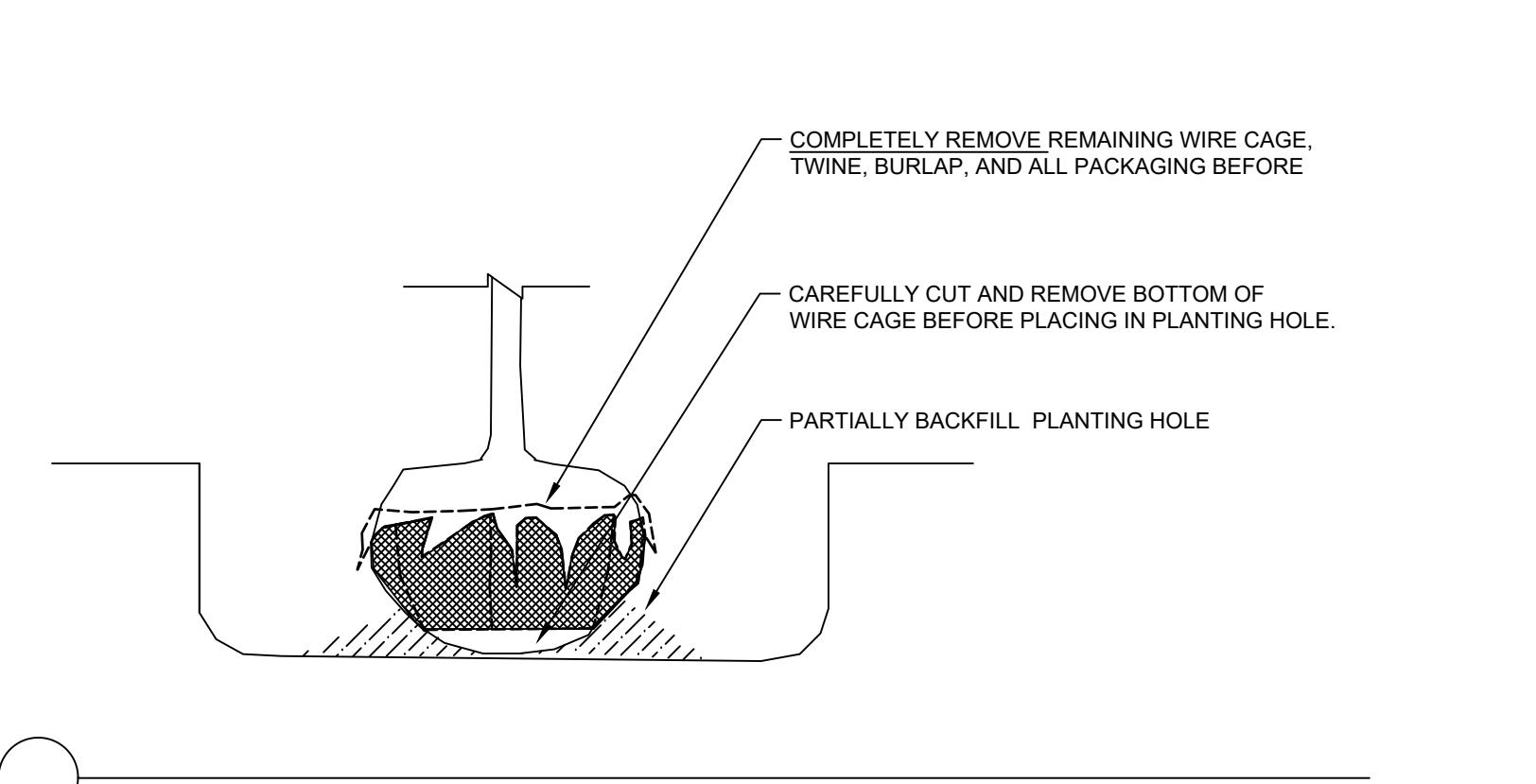


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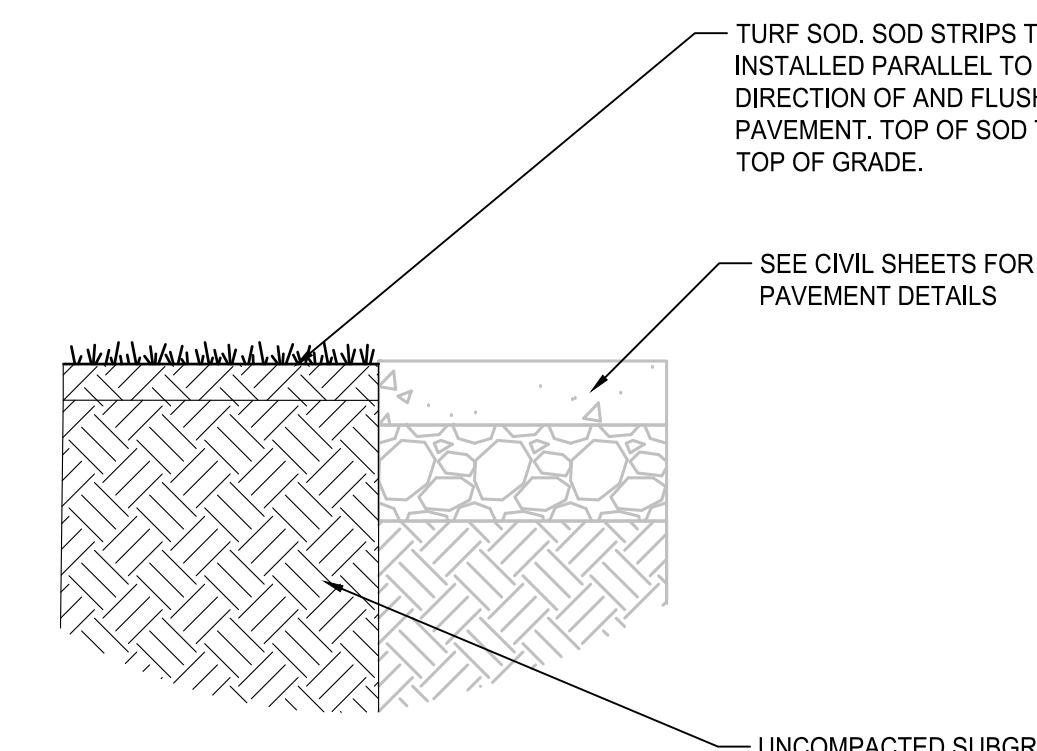
NOTES:
 1. STEEL POSTS TO BE NOTCHED OR DRILLED TO RETAIN GUY WIRES. PLACE OUTSIDE OF PLANTING HOLE. DRIVE PLUMB REGARDLESS OF GROUND SLOPE.
 3. TREE STAKING IS REQUIRED FOR ALL DECIDUOUS TREES. USE 3 STAKES.
 4. TREE STAKING IS REQUIRED FOR ALL EVERGREEN TREES. USE 2 STAKES.
 4. REMOVE AT END OF WARRANTY PERIOD.



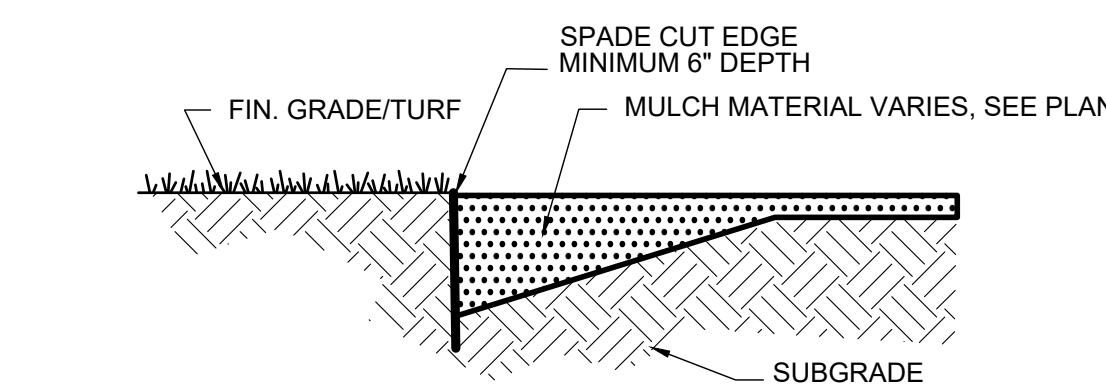
(D2) TREE STAKING DETAIL
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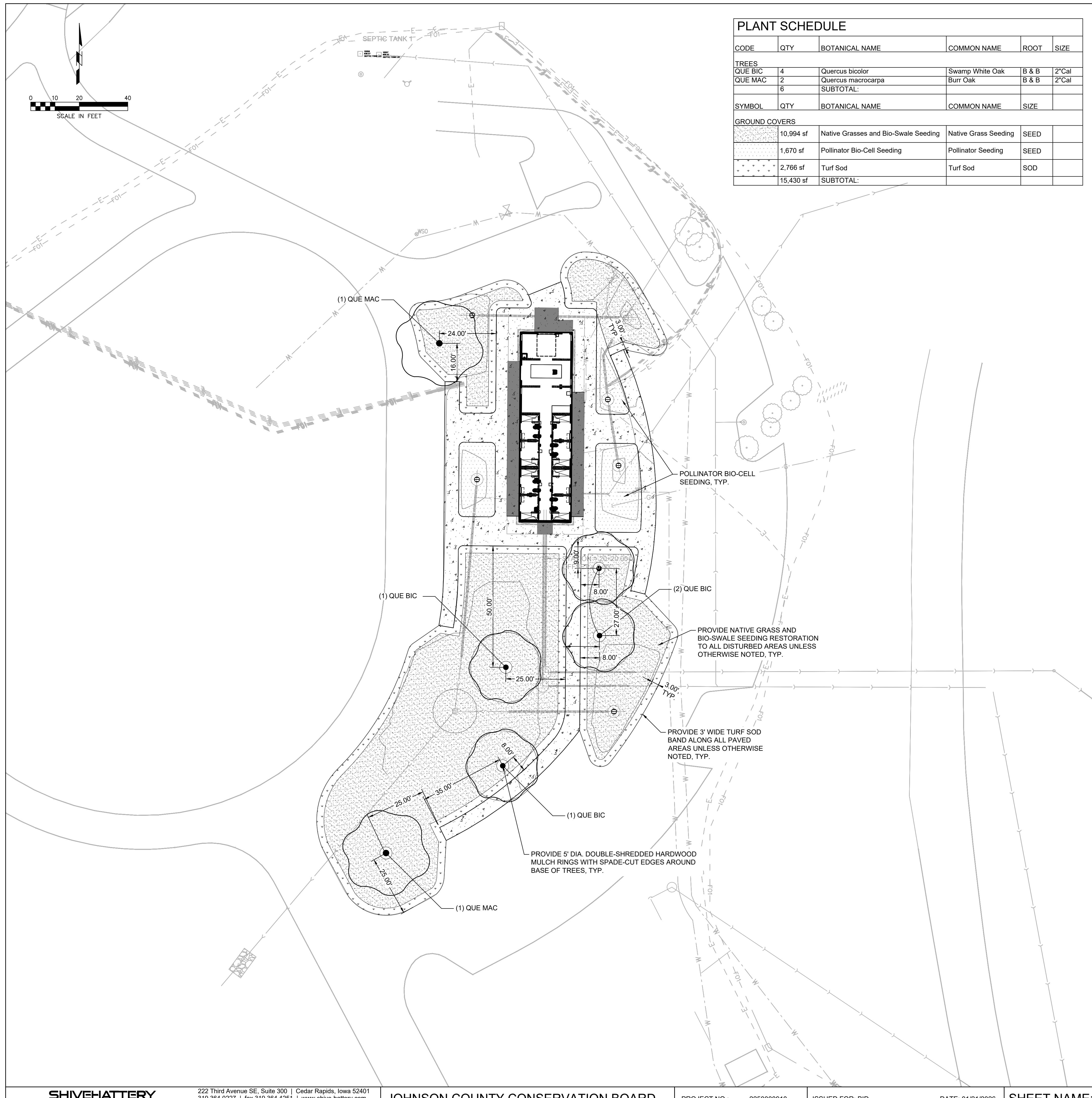
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(E4) TURF ABUTTING PAVEMENT
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(A4) TYPICAL SPADE-CUT EDGE DETAIL
NOT TO SCALE



GENERAL NOTES

- THE GENERAL STRUCTURAL NOTES ARE INTENDED TO SUPPLEMENT THE DRAWINGS AND SPECIFICATIONS. SHOULD CONFLICTS EXIST BETWEEN THESE DRAWINGS AND THE SPECIFICATIONS NOTIFY THE ENGINEER OF ANY SUCH CONFLICTS.
- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ALL PROJECT DRAWINGS AND SPECIFICATIONS. REFER TO ALL DRAWINGS FOR THE COORDINATION OF THE WORK IN THIS PROJECT.
- THE INTENT OF THESE PLANS AND NOTES IS TO PRESENT THE PROJECT REQUIREMENTS. MAJOR DETAILS HAVE BEEN SHOWN ON THE DRAWINGS. HOWEVER, CERTAIN MINOR DETAILS MUST BE WORKED OUT IN THE FIELD OR SHOP DRAWING PROCESS BY THE CONTRACTOR.
- UNLESS NOTED OTHERWISE, DETAILS SHOWN ON DRAWINGS ARE TO BE CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS.
- THE STRUCTURE IS DESIGNED TO BE STABLE AND SELF-SUPPORTING AFTER THE BUILDING IS FULLY ERECTED AND ALL CONNECTIONS ARE COMPLETED. UNLESS NOTED OTHERWISE, THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURE AND SEQUENCING TO ENSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES THE ADDITION OF TEMPORARY BRACING, GUYS AND TIE-DOWNS NECESSARY FOR THE ERECTION PROCESS.
- IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW THE APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION.
- CONTRACTOR'S CONSTRUCTION AND ERECTION SEQUENCE SHALL CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF THE STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.
- EXISTING CONDITIONS:
 - THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS RELATING TO EXISTING CONSTRUCTION AND EXISTING SERVICES ON SITE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING COLUMNS, WALLS, OPENINGS, ETC, WITH THE ARCHITECTURAL DRAWINGS PRIOR TO PROCEEDING WITH THE WORK. ANY DISCREPANCIES WITH THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE Affected PART OF THE WORK.
 - DURING CONSTRUCTION THE CONTRACTOR MAY ENCOUNTER EXISTING CONDITIONS WHICH ARE NOT KNOWN OR ARE AT VARIANCE WITH PROJECT DOCUMENTATION (DISCOVERY). SUCH CONDITIONS MAY INTERFERE WITH THE NEW CONSTRUCTION OR REQUIRE PROTECTION AND/OR SUPPORT OF EXISTING WORK DURING CONSTRUCTION. IT MAY ALSO CONSIST OF DAMAGED OR DETERIORATION OF STRUCTURAL MATERIALS OR COMPONENTS WHICH COULD JEOPARDIZE THE STRUCTURAL INTEGRITY OF THE BUILDING(S). THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ALL DISCOVERIES WHICH MAY INTERFERE WITH THE PROPER EXECUTION OF THE WORK OR JEOPARDIZE THE STRUCTURAL INTEGRITY OF THE BUILDING(S) PRIOR TO PROCEEDING WITH THE WORK RELATED TO SUCH DISCOVERIES.
 - DURING THE CONSTRUCTION PROCESS, IT SHALL BE SOLELY THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE INTEGRITY OF THE EXISTING STRUCTURE AND TO PROTECT IT FROM DAMAGE ANY PORTIONS THAT ARE TO REMAIN.
- CONTRACTOR SHALL INVESTIGATE THE SITE DURING EARTHWORK OPERATIONS FOR FILL MATERIAL OR BURIED STRUCTURES. IMMEDIATELY, NOTIFY THE ENGINEER IF ANY SUCH MATERIALS OR STRUCTURES ARE DISCOVERED.
- STRUCTURAL COORDINATION
 - MECHANICAL, ELECTRICAL OR PLUMBING LOADS, OPENINGS AND SUPPORT FRAMING ARE SHOWN FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL OBTAIN APPROVAL OF THE MECHANICAL, ELECTRICAL OR PLUMBING CONTRACTOR BEFORE PROCEEDING WITH SUCH PORTION OF THE WORK.
 - THE CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL OPENINGS, HOLES AND SLEEVES THROUGH FOUNDATIONS AND OTHER STRUCTURAL ELEMENTS WITH THE MECHANICAL, ELECTRICAL AND PLUMBING CONTRACTORS. NO OPENINGS SHALL PASS THROUGH STRUCTURAL MEMBERS UNLESS SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER.
 - EXCESS COST DUE TO VARIATION IN THE STRUCTURE TO ACCOMMODATE A SUBSTITUTION OR ALTERNATE MANUFACTURER(S) FROM THE LISTED BASIS OF DESIGN SHALL BE BORNE BY THE CONTRACTOR.
- BEFORE SUBMITTING A BID, EACH BIDDER SHALL VISIT THE SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS, CONSTRUCTION REQUIREMENTS, RESTRICTIONS, QUANTITIES AND EQUIPMENT NECESSARY TO COMPLETE THE WORK. THE BID SHALL INCLUDE ALL ITEMS REQUIRED TO COMPLETE THE WORK WITHIN THE EXISTING CONDITIONS. DISRUPTION OF THE OWNERS NORMAL ACTIVITIES AROUND THE CONSTRUCTION SITE SHALL BE KEPT TO A MINIMUM.
- THE COST OF ADDITIONAL DESIGN WORK DUE TO ERRORS AND OMISSIONS BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE BORNE BY THE RESPONSIBLE CONTRACTOR.
- ANY ENGINEERING DESIGN PROVIDED BY OTHER AND SUBMITTED FOR REVIEW OR RECORD SHALL BEAR THE STAMP AND SIGNATURE OF A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT EXISTS.
- CONTRACTOR SHALL COORDINATE WORK SCHEDULES WITH THE OWNER TO ESTABLISH CONSTRUCTION SEQUENCING AROUND ANY OCCUPIED AREAS. CONTRACTOR SHALL NOT PROCEED TO OCCUPIED AREAS UNTIL AUTHORIZED BY THE OWNER.
- ALL ELEMENTS AND SURFACES DAMAGED BY DEMOLITION, BUT NOT SCHEDULED FOR REMOVAL SHALL BE REPAIRED AND REFINISHED TO MATCH THE ADJACENT SURFACES AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL REMOVE ALL DEBRIS AND WASTE MATERIALS RESULTING FROM CONSTRUCTION FROM THE SITE, UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL MINIMIZE CREATION OF DUST, DIRT AND WINDBORNE DEBRIS FROM BLOWING ACROSS THE SITE AND ONTO ADJACENT SITES.
- CONTRACTOR SHALL COVER ANY EXTERIOR OPENING WITH TEMPORARY CLOSURES WHEN NOT WORKING ON SITE TO PROTECT THE INTERIOR SPACES FROM WEATHER, INSECTS, RODENTS AND INTRUDERS.

DESIGN INFORMATION

- CODES:
 - INTERNATIONAL BUILDING CODE (IBC) 2024
 - AMERICAN CONCRETE INSTITUTE - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318)
 - THE MASONRY SOCIETY - BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES (402/602)
 - AMERICAN INSTITUTE OF STEEL CONSTRUCTION - SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (AISC 360) ALLOWABLE STRENGTH DESIGN (ASD)
 - AMERICAN SOCIETY OF CIVIL ENGINEERS AND STRUCTURAL ENGINEERING INSTITUTE (ASCE/SEI 7) - MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
 - AMERICAN WELDING SOCIETY D1.1
 - AMERICAN IRON AND STEEL INSTITUTE (AISI S100) SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS
 - AMERICAN FOREST & PAPER ASSOCIATION (AF&PA) NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS)
- DESIGN LOADS PER THE 2024 IBC (RISK CATEGORY II)

A. DEAD LOADS STRUCTURE SELF WEIGHT AS SHOWN CEILING, MEP & FP PRE-MANUFACTURED SHOWER BLDG	5 PSF
B. LIVE LOADS TYPICAL ROOF LIVE LOAD - 20 PSF LIGHT STORAGE (UNREDUCIBLE)	125 PSF
C. ROOF SNOW LOAD GROUND SNOW LOAD, P_g FLAT ROOF SNOW LOAD, P_f MINIMUM ROOF SNOW LOAD, P_m SNOW EXPOSURE FACTOR, C_e SNOW IMPORTANCE FACTOR, I_s THERMAL FACTOR, C_t UNBALANCED SNOW LOAD: REFER TO DIAGRAM	49 PSF 41 PSF 30 PSF 1.0 1.0 1.2
D. WIND PRESSURE (ASCE 7-22) WIND SPEED, V_{ult} NOMINAL DESIGN WIND SPEED, V_{asd} WIND EXPOSURE INTERNAL PRESSURE COEFFICIENT	109 MPH 84 MPH C +/-0.18
E. SEISMIC DESIGN DATA SEISMIC IMPORTANCE FACTOR MAPPED SPECTRAL RESPONSE ACCELERATIONS, S_s MAPPED SPECTRAL RESPONSE ACCELERATIONS, S_1 SITE CLASS SPECTRAL RESPONSE COEFFICIENTS, S_{ds} SPECTRAL RESPONSE COEFFICIENTS, S_{d1} SEISMIC DESIGN CATEGORY	1.0 0.11 0.066 D 0.11 0.096 B
- SOILS INFORMATION BASED ON GEOTECHNICAL REPORT PREPARED BY TEAM SERVICES, REPORT NO. 1-3658, DATED JANUARY 27, 2015.

NET ALLOWABLE SOIL BEARING PRESSURES: SPREAD FOOTINGS CONTINUOUS WALL FOOTINGS	1500 PSF 1500 PSF
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- MINIMUM FROST PROTECTION DEPTH MEASURED FROM GRADE
EXTERIOR FOOTING ADJACENT TO HEATED AREA
EXTERIOR FOOTING AT UNHEATED AREA
(-3'-6")
(-3'-6")

SUBMITTALS

- CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL THE FOLLOWING SUBMITTALS FOR EACH MATERIAL INDICATED BELOW.
- CONCRETE REINFORCING
 - SUBMIT CONCRETE REINFORCEMENT SHOP DRAWINGS IN ACCORDANCE WITH ACI 315 FOR APPROVAL.
 - DETAIL BARS IN ACCORDANCE WITH "ACI DETAILING MANUAL", PUBLICATION SP-66 AND THE LATEST EDITION OF ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
- CONCRETE REINFORCING
 - SUBMIT CONCRETE MIX DESIGNS FOR EACH APPLICATION LOCATION INDICATED IN THE DRAWINGS
 - SUBMIT SHOP DRAWING OF EMBEDDED STEEL ELEMENTS AND CONNECTION
- PRECAST CONCRETE - SHOWER BUILDING
 - REFER TO SPECIFICATION SECTION 13 4345 "PREFABRICATED CONCRETE STRUCTURES" FOR REQUIRED SUBMITTALS

CAST-IN-PLACE CONCRETE

- ALL CONCRETE SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE AMERICAN CONCRETE INSTITUTES PUBLICATIONS: ACI 301, ACI 305.1, ACI 306.1, ACI 315, AND ACI 318 UNLESS NOTED OTHERWISE.
- CONCRETE COMPRESSIVE STRENGTH (28 DAY) (F'_c)

FOOTINGS	5000 PSI
FOUNDATION WALLS AND PIERS	5000 PSI
SLAB ON GRADE	5000 PSI
- CONCRETE REINFORCEMENT STANDARDS:

DEFORMED BARS	ASTM A615	Fy = 60 KSI
WELDED WIRE REINFORCEMENT (WWR)	ASTM A1084	Fy = 65 KSI
WELDABLE REINFORCING BARS	ASTM A706	Fy = 60 KSI
SYNTHETIC MACRO FIBER REINFORCING EPOXY COATED REINFORCING	ASTM C1116	Fy = 60 KSI
	ASTM A775	
- ALL CONCRETE SHALL BE STONE AGGREGATE UNLESS NOTED OTHERWISE. SUBMIT MIX DESIGN AND DOCUMENTATION FOR APPROVAL PER ACI 318.
- REINFORCEMENT PROTECTION
 - CONCRETE PLACED AGAINST EARTH - 3"
 - CONCRETE PLACED IN FORMS BUT EXPOSED TO WEATHER OR EARTH:
 - BARS #5 AND SMALLER - 1 1/2"
 - BARS LARGER THAN #5 - 2"
 - CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
 - SLABS, WALLS, AND JOISTS - 3/4"
 - BEAMS, COLUMNS - 1 1/2"
- WHERE REQUIRED, DOWELS SHALL MATCH THE SIZE, NUMBER AND SPACING OF THE MAIN REINFORCING UNLESS NOTED OTHERWISE.
- ALL SPLICES, STANDARD HOOKS, AND DEVELOPMENT LENGTHS TO BE PER THE REFERENCED EDITION OF ACI 318. MAKE BARS CONTINUOUS AROUND CORNERS. ALL SPLICES SHALL BE BY CONTACT LAP.
- ALL SPLICES SHALL BE A CLASS "B" TENSION SPLICE AS DEFINED IN ACI 318. PROVIDE LAP SPLICES LENGTHS AS FOLLOWS:

4000 PSI		
BAR SIZE	TYPICAL	TOP BARS
#3	19"	25"
#4	25"	33"
#5	31"	41"
#6	37"	49"
#7	54"	71"
#8	62"	81"
#9	70"	91"
#10	79"	102"
#11	87"	114"

LAP SPLICE LENGTHS GIVEN, ASSUME CLEAR SPACING BETWEEN BARS OF 2 BAR DIAMETERS, AND A MINIMUM CLEAR COVER OF 1 BAR DIAMETER. TOP BARS ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 12" ON FRESH CONCRETE BEHIND THE BARS.

- WALLS AND GRADE BEAMS SHALL NOT HAVE JOINTS IN A HORIZONTAL PLANE, UNLESS APPROVED BY THE ENGINEER.
- CONSTRUCTION JOINTS IN STRUCTURAL CONCRETE WORK MUST BE MADE AT CENTER OF SPAN OR AT CENTER OF SUPPORT WITH VERTICAL BULKHEADS AND HORIZONTAL KEYS, UNLESS OTHERWISE SHOWN.
- THERE SHALL BE NO ADDITIONAL OPENINGS LARGER THAN 10" IN CONCRETE WALLS AND SLABS NOT SHOWN. REFER TO CONCRETE OPENING DETAIL FOR ADDITIONAL REINFORCEMENT AROUND OPENINGS.
- REINFORCING STEEL SHALL BE SECURELY FASTENED INTO FORMS PRIOR TO POURING CONCRETE. WET SETTING OF REINFORCING STEEL WILL NOT BE ACCEPTED PER ACI.

- CONCRETE MIX - FOUNDATIONS

COARSE AGGREGATE	100% PASSING 1" SIEVE
FINE AGGREGATE	100% PASSING 3/8" SIEVE
WATER/CEMENT RATIO	0.45
SLUMP (NO WATER REDUCER)	4" +/- 1"
SLUMP (WITH WATER REDUCER)	4" TO 8"
AIR CONTENT	6% +/- 1.5%

- GRADE BEAM TOP BARS SHALL BE CONTINUOUS OVER THE SUPPORTS. REINFORCEMENT SHALL BE SPLICED WITH TOP BARS SPliced AT MIDSPAN AND BOTTOM BARS SPliced OVER THE SUPPORT POINTS.
- IF GRADE BEAM IS A SINGLE SIMPLE SPAN THEN TOP BARS SHALL BE CONTINUOUS FULL LENGTH OF BEAM WITH STANDARD HOOKS AT EACH END AND BOTTOM BARS SHALL BE CONTINUOUS BETWEEN SUPPORTS.

- CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY IF THE EXISTING FOUNDATIONS VARY FROM THAT SHOWN ON THE DRAWINGS.
- CONTRACTOR SHALL VERIFY OPENINGS AND SLEEVES THROUGH FOUNDATION WALLS WITH THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL REQUIREMENTS. CHANGES IN SIZE, LOCATION AND NUMBER SHALL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL BY THE ENGINEER.
- CONTINUOUS WALL FOOTING REINFORCING SHALL EXTEND THROUGH COLUMN SPREAD FOOTINGS UNLESS NOTED OTHERWISE.

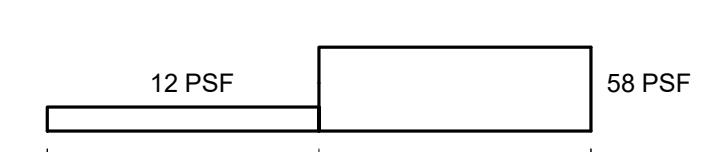
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FOUNDATIONS

- ALL EXCAVATIONS SHALL BE PROPERLY AND SAFELY BACKFILLED. DO NOT PLACE BACKFILL BEHIND BASEMENT WALLS OR RETAINING WALLS UNTIL CONCRETE HAS ATTAINED THE SPECIFIED COMPRESSIVE STRENGTH. BASEMENT WALLS SHALL NOT BE BACKFILLED UNTIL SUPPORTING FLOOR IS COMPLETED AND ATTAINED FULL STRENGTH. CONTRACTOR SHALL PROTECT ALL BELOW GRADE WALLS FROM LATERAL EARTH PRESSURES UNTIL SUPPORTING FLOOR STRUCTURE IS COMPLETED. CONTRACTOR PROVIDE FOR DESIGN, PERMITS AND INSTALLATION OF LATERAL SHORING TO BRACE WALLS IN LIEU OF WAITING FOR FLOOR SLAB COMPLETION.
- FOOTING SHALL BE CENTERED UNDER WALLS AND COLUMNS UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL ACCOUNT FOR PUMPING OF WATER FROM THE EXCAVATION DUE TO SURFACE WATER, GROUND WATER AND SEEPAGE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL SHEETING, SHORING AND CRIBBING REQUIRED TO SAFELY RETAIN THE EARTH BANK AROUND THE EXCAVATIONS.
- ALL FOOTINGS SHALL BE PLACED ONTO FIRM UNDISTurbed SOIL OR ACCEPTABLE COMPACTED BACKFILL AS OUTLINED IN THE SOIL REPORT AND PROJECT SPECIFICATIONS.
- FOOTING ELEVATIONS SHOWN DESIGNATE THE MINIMUM DEPTH OF THE FOOTING WHERE THE ALLOWABLE SOIL BEARING IS EXPECTED. LOCALIZED AREAS OF UNACCEPTABLE SOILS OR POOR COMPACTION MAY BE DISCOVERED DURING THE EXCAVATION PROCESS REQUIRING OVEREXCAVATION AND BACKFILL WITH ACCEPTABLE FILL. FOOTING EXCAVATIONS SHALL BE LOWERED TO REACH SOIL MEETS THE DESIGN BEARING PRESSURE AND APPROVED BY THE GEOTECHNICAL SPECIAL INSPECTION AGENCY.
- ACCEPTABLE BACKFILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED EIGHT (8) INCHES IN LOOSE THICKNESS.
- FOR FOOTING AND FOUNDATIONS, THE SUBGRADE OR FILL MATERIAL SHALL BE COMPACTED AND VERIFIED TO MEET 98% STANDARD PROCTOR MAXIMUM DRY DENSITY ACCORDING WITH ASTM D698. FOR RELATIVE COHESIONLESS GRANULAR FILL WHICH HAS A PERCENT PASSING THE #200 SIEVE TEST, THE 10 POUNDS PER CUBE HAS A SLIGHTLY LOWER MOISTURE CHANGES COMPACTATION SHALL BE 75% PERCENT RELATIVE DENSITY IN ACCORDANCE WITH ASTM D4253 AND D4254. IF COMPACTATION DOES NOT COMPLY, CONTRACTOR SHALL RECOMPACT AREA AND UNTIL TEST RESULTS ARE PASSING. AN AREA EXHIBITING WEAKNESS SUCH AS RUTTING OR PUMPING SHALL BE REMOVED AND REPLACED WITH COMPACTED GRANULAR FILL.
- FOOTING EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL SPECIAL INSPECTION AGENCY BEFORE CONCRETE IS PLACED. CONTRACTOR SHALL NOTIFY INSPECTION AGENCY WHEN EXCAVATION IS READY FOR TESTING. INSPECTION AGENCY SHALL PROVIDE A WRITTEN REPORT OF TEST RESULTS AND COMPLIANCE TO THE OWNER.
- ACCEPTABLE SOIL SHALL BE DEFINED AS MEETING ASTM D2487 SOIL CLASSIFICATION GROUPS GW, GP, GM, SW, SP, SM OR A COMBINATION OF THESE TYPES.
- UNACCEPTABLE SOILS SHALL BE DEFINED AS MEETING ASTM D2487 SOIL CLASSIFICATION GROUPS GC, SC, ML, MH, CL, CH, OL, OH, PT OR A COMBINATION OF THESE TYPES. GROUPS CL AND ML MAY BE ACCEPTABLE IF THE LIQUID LIMIT IS LESS THAN 45 AND THE PLASTICITY INDEX IS LESS THAN 20.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PREVENT ANY FROST OR ICE FROM PENETRATING ANY FOOTING OR SLAB SUBGRADES BEFORE AND AFTER PLACING THE CONCRETE AND UNTIL SUCH SUBGRADE IS FULLY PROTECTED BY THE PERMANENT BUILDING ENCLOSURE AND THE SPACE IS CONDITIONED TO REMAIN ABOVE FREEZING.
- CONCRETE FOOTINGS AND SLABS SHALL NOT BE PLACED ON OR AGAINST SUBGRADES CONTAINING FROST, SNOW OR ICE. FROZEN SUBGRADES SHALL BE COMPLETELY THAWED AND RECONDITIONED BEFORE CONCRETE MAY BE PLACED.
- REPEATED HEAVY CONSTRUCTION TRAFFIC OVER EXPOSED SUBGRADE WILL CAUSE RUTTING AND PLUMPING WHEN SOIL IS ABOVE THE OPTIMUM MOISTURE CONTENT. AVOID EXCESS CONSTRUCTION ACTIVITY ON WET SOILS. IF SUBGRADE IS ABOVE THE OPTIMUM MOISTURE CONTENT DURING CONSTRUCTION, THEN DRYING OF THE SOIL SHALL BE CONDUCTED BY DISKING, SCARIFICATION, AND AERATION.
- SOILS WITH A MOISTURE CONTENT ABOVE THE OPTIMUM LEVEL SHALL BE REMOVED AND REPLACED WITH COMPACTED GRANULAR FILL.
- CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER OF ANY UNUSUAL SOIL CONDITIONS THAT ARE IN VARIANCE WITH THE SOIL REPORT.
- CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY IF THE EXISTING FOUNDATIONS VARY FROM THAT SHOWN ON THE DRAWINGS.
- CONTRACTOR SHALL VERIFY OPENINGS AND SLEEVES THROUGH FOUNDATION WALLS WITH THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL REQUIREMENTS. CHANGES IN SIZE, LOCATION AND NUMBER SHALL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL BY THE ENGINEER.
- CONTINUOUS WALL FOOTING REINFORCING SHALL EXTEND THROUGH COLUMN SPREAD FOOTINGS UNLESS NOTED OTHERWISE.
- GRADE BEAM TOP BARS SHALL BE CONTINUOUS OVER THE SUPPORTS. REINFORCEMENT SHALL BE SPLICED WITH TOP BARS SPliced AT MIDSPAN AND BOTTOM BARS SPliced OVER THE SUPPORT POINTS.
- IF GRADE BEAM IS A SINGLE SIMPLE SPAN THEN TOP BARS SHALL BE CONTINUOUS FULL LENGTH OF BEAM WITH STANDARD HOOKS AT EACH END AND BOTTOM BARS SHALL BE CONTINUOUS BETWEEN SUPPORTS.

UNBALANCE SNOW LOAD - SHOWERHOUSE



BUILDING ELEVATION TABLE

BUILDING NAME	ACTUAL ELEVATION	REFERENCE ELEVATION
SHOWER HOUSE	840.00'	100'-0"

STATEMENT OF SPECIAL INSPECTIONS

THIS STATEMENT OF SPECIAL INSPECTIONS IS SUBMITTED AS A CONDITION FOR PERMIT ISSUANCE IN ACCORDANCE WITH THE SPECIAL INSPECTION AND STRUCTURAL TESTING REQUIREMENTS OF THE BUILDING CODE. IT INCLUDES A SCHEDULE OF SPECIAL INSPECTION SERVICES APPLICABLE TO THE STRUCTURAL COMPONENTS OF THIS PROJECT. IF APPLICABLE, IT INCLUDES REQUIREMENTS FOR SEISMIC RESISTANCE AND/OR REQUIREMENTS FOR WIND RESISTANCE. THIS STATEMENT OF SPECIAL INSPECTIONS ENCOMPASSES THE FOLLOWING DISCIPLINES:

STRUCTURAL MECHANICAL / ELECTRICAL / PLUMBING
 ARCHITECTURAL OTHER

GENERAL: THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED BELOW IN ACCORDANCE WITH THE [2021 INTERNATIONAL BUILDING CODE (IBC 2021) CHAPTER 17 "STRUCTURAL TESTS AND SPECIAL INSPECTIONS"]. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE TO THE SATISFACTION OF THE BUILDING OFFICIAL. FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION, THESE INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS SPECIFIED IN THE INDIVIDUAL TECHNICAL SPECIFICATIONS.

APPROVED AGENCY: AN APPROVED AGENCY SHALL PROVIDE ALL INFORMATION AS NECESSARY FOR THE BUILDING OFFICIAL TO DETERMINE THAT THE AGENCY MEETS THE APPLICABLE REQUIREMENTS.

THE SPECIAL INSPECTION COORDINATOR SHALL KEEP RECORDS OF ALL INSPECTIONS AND SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. DISCOVERED DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF SUCH DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. THE SPECIAL INSPECTION PROGRAM DOES NOT RELIEVE THE CONTRACTOR OF HIS OR HER RESPONSIBILITIES.

INTERIM REPORTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. A FINAL REPORT OF SPECIAL INSPECTIONS DOCUMENTING COMPLETION OF ALL REQUIRED SPECIAL INSPECTIONS, TESTING AND CORRECTIONS OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED PRIOR TO ISSUANCE OF A CERTIFICATE OF USE AND OCCUPANCY. JOB SITE SAFETY AND MEANS AND METHODS OF CONSTRUCTION ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

QUALIFICATIONS OF INSPECTORS AND TESTING TECHNICIANS

THE QUALIFICATIONS OF ALL PERSONNEL PERFORMING SPECIAL INSPECTION AND TESTING ACTIVITIES ARE SUBJECT TO THE APPROVAL OF THE BUILDING OFFICIAL. THE CREDENTIALS OF ALL INSPECTORS AND TESTING TECHNICIANS SHALL BE PROVIDED IF REQUESTED.

KEY FOR MINIMUM QUALIFICATIONS OF INSPECTION AGENTS:

WHEN THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE DEEMS IT APPROPRIATE THAT THE INDIVIDUAL PERFORMING A STIPULATED TEST OR INSPECTION HAVE A SPECIFIC CERTIFICATION OR LICENSE AS INDICATED BELOW, SUCH DESIGNATIONS SHALL APPEAR BELOW THE AGENT ON THE SCHEDULE.

PE/SE STRUCTURAL ENGINEER - A LICENSED SE OR PE SPECIALIZING IN THE DESIGN OF BUILDING STRUCTURE
 PE/GE GEOTECHNICAL ENGINEER - A LICENSED PE SPECIALIZING IN SOIL MECHANICS AND FOUNDATIONS
 EIT ENGINEER-IN-TRAINING - A GRADUATE ENGINEER WHO HAS PASSED THE FUNDAMENTS OF ENGINEERING EXAMINATION

AMERICAN CONCRETE INSTITUTE (ACI) CERTIFICATION
 ACI-CFTT CONCRETE FIELD TESTING TECHNICIAN - GRADE 1
 ACI-CCI CONCRETE CONSTRUCTION INSPECTOR
 ACI-LTT LABORATORY TESTING TECHNICIAN - GRADE 1 & 2
 ACI-STT STRENGTH TESTING TECHNICIAN

AMERICAN WELDING SOCIETY (AWS) CERTIFICATION
 AWS-CWI CERTIFIED WELDING INSPECTOR
 AWS/AISC-SSI CERTIFIED STRUCTURAL STEEL INSPECTOR

AMERICAN SOCIETY OF NON-DESTRUCTIVE TESTING (ASNT) INSPECTION
 ASNT NON-DESTRUCTIVE TESTING TECHNICIAN - LEVEL II OR III

INTERNATIONAL CODE COUNCIL (ICC) CERTIFICATION
 ICC-SMSI STRUCTURAL MASONRY SPECIAL INSPECTOR
 ICC-SFSI SPRAY-APPLIED FIREPROOFING SPECIAL INSPECTOR
 ICC-SFSI REINFORCED CONCRETE SPECIAL INSPECTOR
 ICC-SWSI STRUCTURAL STEEL AND WELDING SPECIAL INSPECTOR
 ICC-PCSI PRESTRESSED CONCRETE SPECIAL INSPECTOR

NATIONAL INSTITUTE OF CERTIFICATION IN ENGINEERING TECHNOLOGIES (NICET)
 "NICET-CT CONCRETE TECHNICIAN - LEVELS I, II, III, & IV"
 "NICET-ST SOILS TECHNICIAN - LEVELS I, II, III & IV"
 "NICET-GET GEOTECHNICAL ENGINEERING TECHNICIAN - LEVEL I, II, III & IV"

EXTERIOR DESIGN INSTITUTE (EDI) CERTIFICATION
 EDI-EIFS EIFS THIRD PARTY INSPECTOR

QUALITY ASSURANCE PLAN

QUALITY ASSURANCE FOR SEISMIC RESISTANCE:

1. SEISMIC DESIGN CATEGORY:
2. STATEMENT OF SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE REQUIRED (Y/N):
3. DESCRIPTION OF SEISMIC-FORCE RESISTING SYSTEM SUBJECT TO SPECIAL INSPECTION AND TESTING FOR SEISMIC RESISTANCE:
4. DESCRIPTION OF DESIGNATED SEISMIC SYSTEMS SUBJECT TO SPECIAL INSPECTIONS AND TESTING FOR SEISMIC RESISTANCE:
5. DESCRIPTION OF ADDITIONAL SEISMIC SYSTEMS AND COMPONENTS REQUIRING SPECIAL INSPECTIONS AND TESTING:
6. EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION AND FABRICATION OF A SYSTEM OR COMPONENT DESCRIBED ABOVE MUST SUBMIT A STATEMENT OF RESPONSIBILITY.

QUALITY ASSURANCE PLAN FOR WIND REQUIREMENTS:

1. NOMINAL DESIGN WIND SPEED, V_{ASD}
2. WIND EXPOSURE CATEGORY:
3. STATEMENT FOR SPECIAL INSPECTION FOR WIND RESISTANCE REQUIRED (Y/N):
4. DESCRIPTION OF MAIN WIND-FORCE-RESISTING SYSTEM SUBJECT TO SPECIAL INSPECTION FOR WIND RESISTANCE:
5. DESCRIPTION OF WIND-FORCE-RESISTING COMPONENTS SUBJECT TO SPECIAL INSPECTION FOR WIND RESISTANCE:
6. EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OR FABRICATION OF A SYSTEM OR COMPONENT DESCRIBED ABOVE MUST SUBMIT A STATEMENT OF RESPONSIBILITY.

CONTRACTOR'S RESPONSIBILITY REGARDING INSPECTIONS

1. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION MEETING (SCHEDULED AT LEAST 5 BUSINESS DAYS BEFORE START OF CONSTRUCTION). MEETING SHOULD INCLUDE ALL RESPONSIBLE PARTIES (A/E, S/I, FIELD INSPECTOR). MEETING IS FOR ENTIRE PROJECT, NOT PHASE OF WORK.
2. PRE-CONSTRUCTION MEETING IS CONDUCTED BY THE CONTRACTOR WITH MEETING MINUTES TO BE TAKEN AND DISTRIBUTED TO ALL MEMBERS ATTENDING. MEETING MINUTES TO INCLUDE A SIGN-IN SHEET FOR ALL PARTIES.
3. THE CONTRACTOR IS RESPONSIBLE FOR SCHEDULING INSPECTIONS AND TESTS. SUFFICIENT NOTICE AND LEAD TIME MUST BE ALLOWED FOR THE INSPECTION AND TESTING TO BE PERFORMED WITHOUT IMPENDING CONSTRUCTION OPERATIONS.
4. THE CONTRACTOR MUST COOPERATE WITH THE INSPECTIONS AND TESTING AGENCIES. SAFE ACCESS MUST BE PROVIDED TO ALL INSPECTION AND TEST TO BE PERFORMED. THIS MAY REQUIRE THE CONTRACTOR TO PROVIDE SCAFFOLDING, LADDERS OR LIFTS.
5. WHEN DEFICIENCIES ARE IDENTIFIED, THE CONTRACTOR MUST TAKE CORRECTIVE ACTIONS TO COMPLY WITH THE CONTRACT DOCUMENTS OR REMEDY THE DEFICIENCIES AS DIRECTED BY THE REGISTERED DESIGN PROFESSIONAL.
6. THE SPECIAL INSPECTION AND QUALITY ASSURANCE PROGRAM DOES NOT RELIEVE THE CONTRACTOR OF HIS OR HER RESPONSIBILITY TO PERFORM QUALITY CONTROL.
7. THE CONTRACTOR IS RESPONSIBLE FOR TESTING SERVICES THAT ARE REQUIRED FOR MATERIAL SUBMITTALS AND THAT NOT PART OF THE SPECIAL INSPECTIONS PROGRAM (E.G. AGGREGATE TESTS, CONCRETE MIX DESIGNS, TESTING OF CONTROLLED FILL, MATERIALS, ETC.).

SOILS

SOILS	SERVICE	EXTENT	AGENT
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	FIELD INSPECTION	PERIODIC	PE/GE/EIT
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	FIELD INSPECTION	PERIODIC	PE/GE/EIT
3. PERFORM SIEVE TESTS (ASTM D422 & D1140) AND MODIFIED PROCTOR TESTS (ASTM D1567) OF EACH SOURCE OF FILL MATERIAL	FIELD INSPECTION	PERIODIC	PE/GE/EIT
5. PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	FIELD INSPECTION	PERIODIC	PE/GE/EIT

CONCRETE CONSTRUCTION

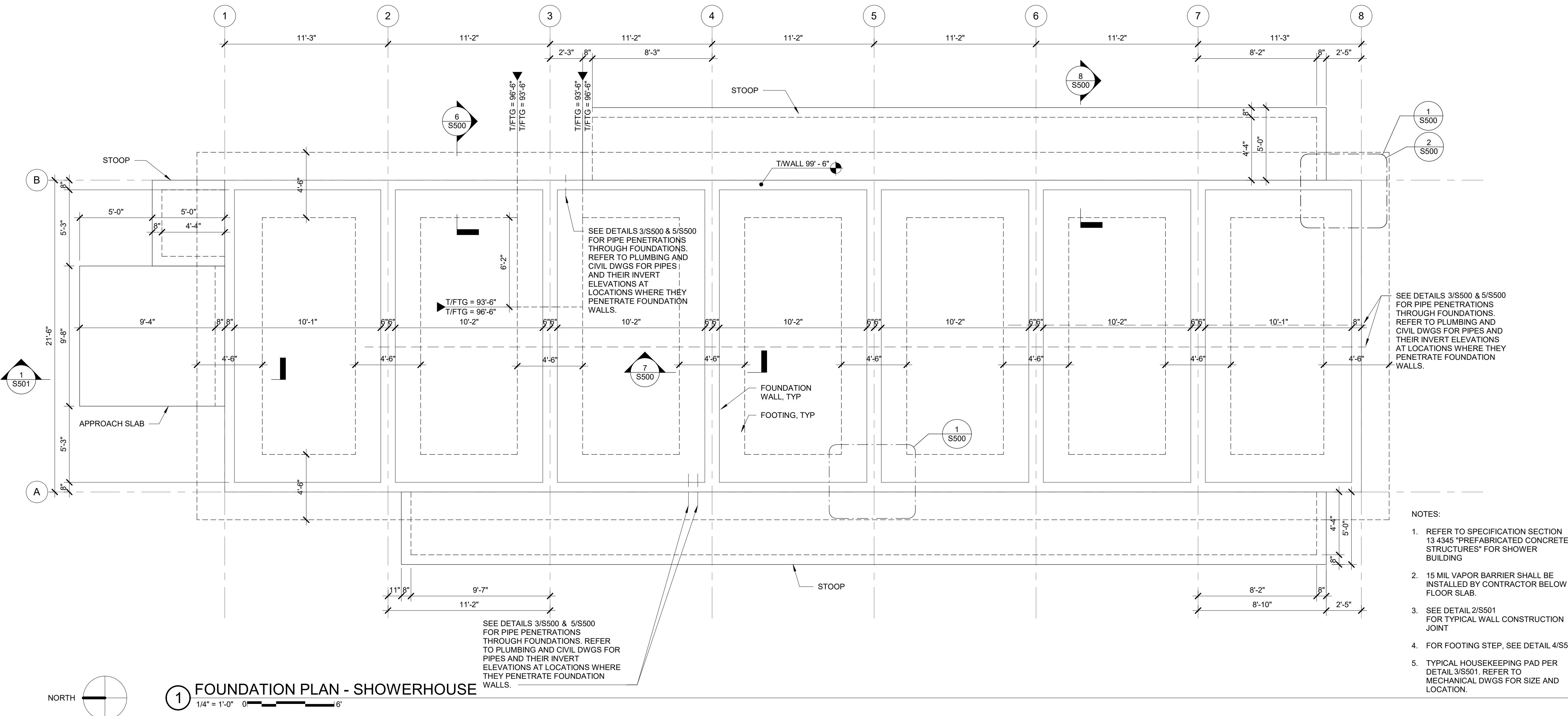
CONCRETE CONSTRUCTION	SERVICE	EXTENT	AGENT
1. INSPECT SIZE, SPACING, COVER, POSITIONING AND GRADE OF REINFORCING STEEL. VERIFY THAT REINFORCING BARS ARE FREE OF FORM OIL OR OTHER DELETERIOUS MATERIALS. INSPECT BAR LAPS AND MECHANICAL SPLICES. VERIFY THAT BARS ARE ADEQUATELY TIED AND SUPPORTED ON CHAIRS OR BOLSTERS	FIELD INSPECTION	PERIODIC	ACI-CCI ICC-RCSI
2. REINFORCING STEEL WELDING	FIELD INSPECTION		
A. VERIFICATION OF WELDABILITY OF STEEL OTHER THAN ASTM A707		PERIODIC	
B. INSPECTION TASKS DURING WELDING (OBSERVE OR PERFORM FOR EACH WELDED JOINT OR MEMBER, THE QA TASKS LISTED IN AISC 360, TABLE N5.4-2)		CONTINUOUS	
C. SHEAR REINFORCEMENT		CONTINUOUS	
3. INSPECT SIZE, POSITIONING AND EMBEDMENT OF ANCHOR RODS. INSPECT CONCRETE PLACEMENT AND CONSOLIDATION AROUND ANCHORS	FIELD INSPECTION	PERIODIC	
4. INSPECTION OF ANCHORS AND REINFORCING STEEL POST-INSTALLED IN HARDENED CONCRETE PER RESEARCH REPORTS INCLUDING VERIFICATION OF ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE DIMENSIONS, HOLE CLEANING PROCEDURES, ANCHOR SPACING, EDGE DISTANCES, CONCRETE MINIMUM THICKNESS, ANCHOR EMBEDMENT AND TIGHTENING TORQUE	FIELD INSPECTION	PERIODIC OR AS REQUIRED BY THE RESEARCH REPORT ISSUED BY AN APPROVED SOURCE	ACI-CCI ICC-RCSI
5. REVIEW CONCRETE BATCH TICKETS AND VERIFY COMPLIANCE WITH APPROVED MIX DESIGN. VERIFY THAT WATER ADDED AT THE SITE DOES NOT EXCEED THAT ALLOWED BY THE MIX DESIGN	FIELD INSPECTION	PERIODIC	ACI-CCI ICC-RCSI
6. TEST CONCRETE COMPRESSIVE STRENGTH (ASTM C31 & C39), SLUMP (ASTM C143), AIR-CONTENT (ASTM C231 OR C173) AND TEMPERATURE (ASTM C1064)	FIELD INSPECTION	CONTINUOUS	ACI-CFTT ICC-STT
7. INSPECT PLACEMENT OF CONCRETE. VERIFY THAT CONCRETE CONVEYANCE AND DEPOSITING AVOIDS SEGREGATION OR CONTAMINATION. VERIFY THAT CONCRETE IS PROPERLY CONSOLIDATED.	FIELD INSPECTION	CONTINUOUS	ACI-CCI ICC-RCSI
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES	FIELD INSPECTION	PERIODIC	ACI-CCI ICC-RCSI
9. INSPECTION OF FORMWORK FOR SHAPE, LINES, LOCATION AND DIMENSIONS	FIELD INSPECTION	PERIODIC	ACI-CCI ICC-RCSI
10. CONCRETE STRENGTH TESTING AND VERIFICATION OF COMPLIANCE WITH CONSTRUCTION DOCUMENTS	FIELD TESTING AND REVIEW OF LABORATORY REPORTS	PERIODIC	
11. PERFORM FLOOR FLATNESS AND/OR LEVELNESS TESTING (ASTM E1155) FOR ALL SLAB-ON-GRADE AND ELEVATED SLABS PER SPECIFICATION	FIELD INSPECTION	CONTINUOUS	ACI-CCI ICC-RCSI

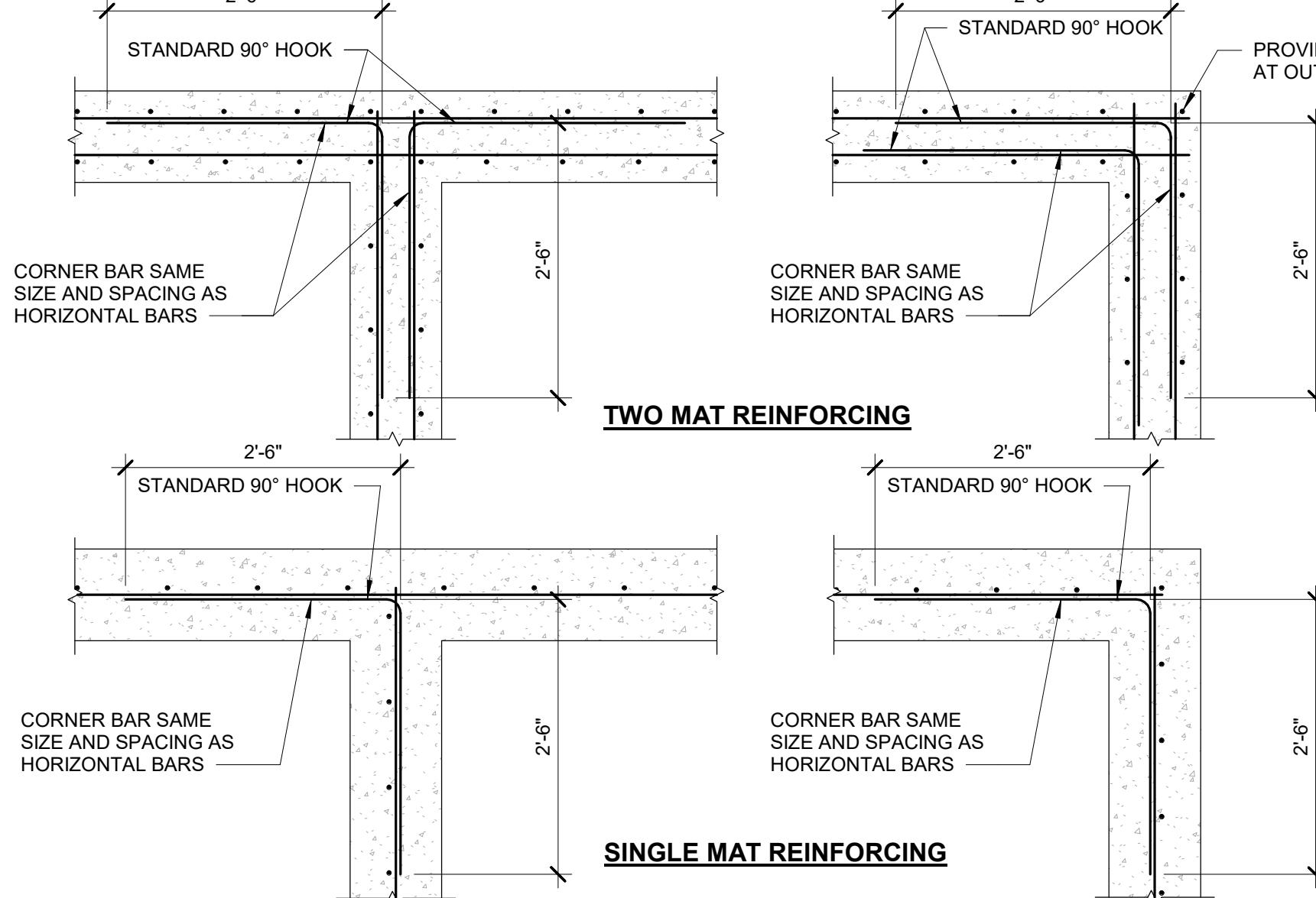
PRECAST CONCRETE CONSTRUCTION

PRECAST CONCRETE CONSTRUCTION	SERVICE	EXTENT	AGENT
1. REVIEW PLANT OPERATIONS AND QUALITY CONTROL PROCEDURES	PCI CERTIFIED PLANT REQUIRED BY SPECIFICATION		
2. ERECTION OF PRECAST CONCRETE MEMBERS			
A. INSPECT IN ACCORDANCE WITH CONSTRUCTION DOCUMENTS	FIELD INSPECTION	PERIODIC	
B. PERFORM INSPECTIONS OF WELDING AND BOLTING IN ACCORDANCE WITH STEEL CONSTRUCTION	FIELD INSPECTION	PERIODIC	
3. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS	FIELD INSPECTION	PERIODIC	

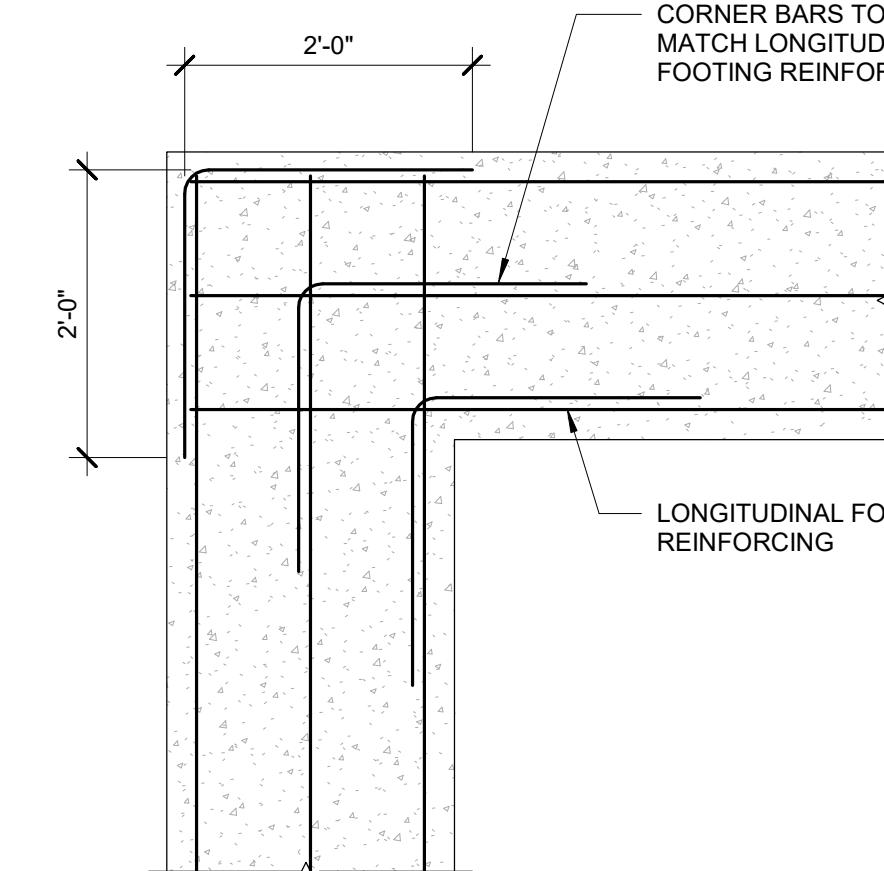
ABBREVIATIONS

A	AT	M	MASONRY
ADD	ADDENDUM	MECH	STEEL
AHJ	AUTHORITY HAVING JURISDICTION	MEP	MISCELLANEOUS
ALT	ALTERNATE	PLUMBING	CONCRETE
ARCH	ARCHITECT (URAL)	MEZZ	EARTH
B	BOTTOM OF BUILDING	MFR	GROUT
B/BLDG	BOTTOM	MIN	EXISTING
BP	BASE PLATE	MISC	CHANGE IN SLAB ELEVATION MARK
BRG	BEARING	N/A	STRUCTURAL COLUMN DESIGNATION
B/TWN	BETWEEN	NIC	(E) - EXISTING
		NTS	(D) - DEMOLISHED
C	CONTRACTOR FURNISHED	O	BASE PLATE MARK
CFCI	CONTRACTOR INSTALLED	OC	PIER MARK (TOP ELEVATION)
CIP	CAST-IN-PLACE	OD	FOOTING MARK (TOP ELEVATION)
CJ	CONSTRUCTION/CONTROL JOINT	OFCI	SPAN DIRECTION MARK - ONE WAY
CL	CENTER LINE	OF	SPAN DIRECTION MARK - TWO WAY
CLR	CLEAR (ANCE)	QTY	OPENING
CMU	CONCRETE MASONRY UNIT	R	MOMENT FRAMING CONNECTION MARK
COL	COLUMN	SCHED	SPOT ELEVATION MARK
CONN	CONCRETE	SEOR	VIEW NUMBER / SHEET NUMBER OF CONTINUING VIEW
COT	CONNECT (ION) (ED) (OR)	SIM	MATCHLINE
COORD	CONTINUOUS	SJ	
CFSF	COORDINATE	SLBB	
	COLD FORMED STEEL FRAMING	SLOS	
		SOG	
		SPEC	
DBE	DECK BEARING ELEVATION	SS	
DEG.	DEGREE	STA	
DEMO	DEMOLITION	STD	
DIA, Ø	DIAMETER	STL	
DIM	DIMENSION		
DN	DOWN		
DTL	DETAIL		
DWG	DRAWING		
E	EXISTING	T&B	
EA	EACH	T&G	
EF	EACH FACE	TOP	
EJ	EXPANSION JOINT	TOP OF	
ELEC	ELECTRIC / ELECTRICAL	TEMP	
ELEV or EL	ELEVATION	TRANS	
EMBED	EMBEDDED	TRANSVERSE	
EOR	ENGINEER OR RECORD	TYPI	
EQ	EQUIPMENT		
EQUIP	EQUIPMENT		
ES	EACH SIDE		
EW	EACH WAY		
FND	FOUNDATION	U	
FF	FINISHED FLOOR	UNO	
FRP	FIBER REINFORCED POLYMER	V	
FTG	FOOTING	VERT	
FV	FIELD VERIFY	VIF	
G	GAGE or GAUGE	W	
GALV	GALVANIZED	W/	
GC	GENERAL CONTRACTOR	W/O	
GL	GRID LINE	WP	
H	HORIZONTAL	WWR	
HWS	HEADED WELDED STUDS		
I	INSIDE DIAMETER		
J	JOIST BEARING ELEVATION		
L	LINEAR FOOT		
LLBB	LONG LEG BACK TO BACK		
LLOS	LONG LEG OUTSTANDING		
LLH	LONG LEG HORIZONTAL		
LLV	LONG LEG VERTICAL		
LVL</td			

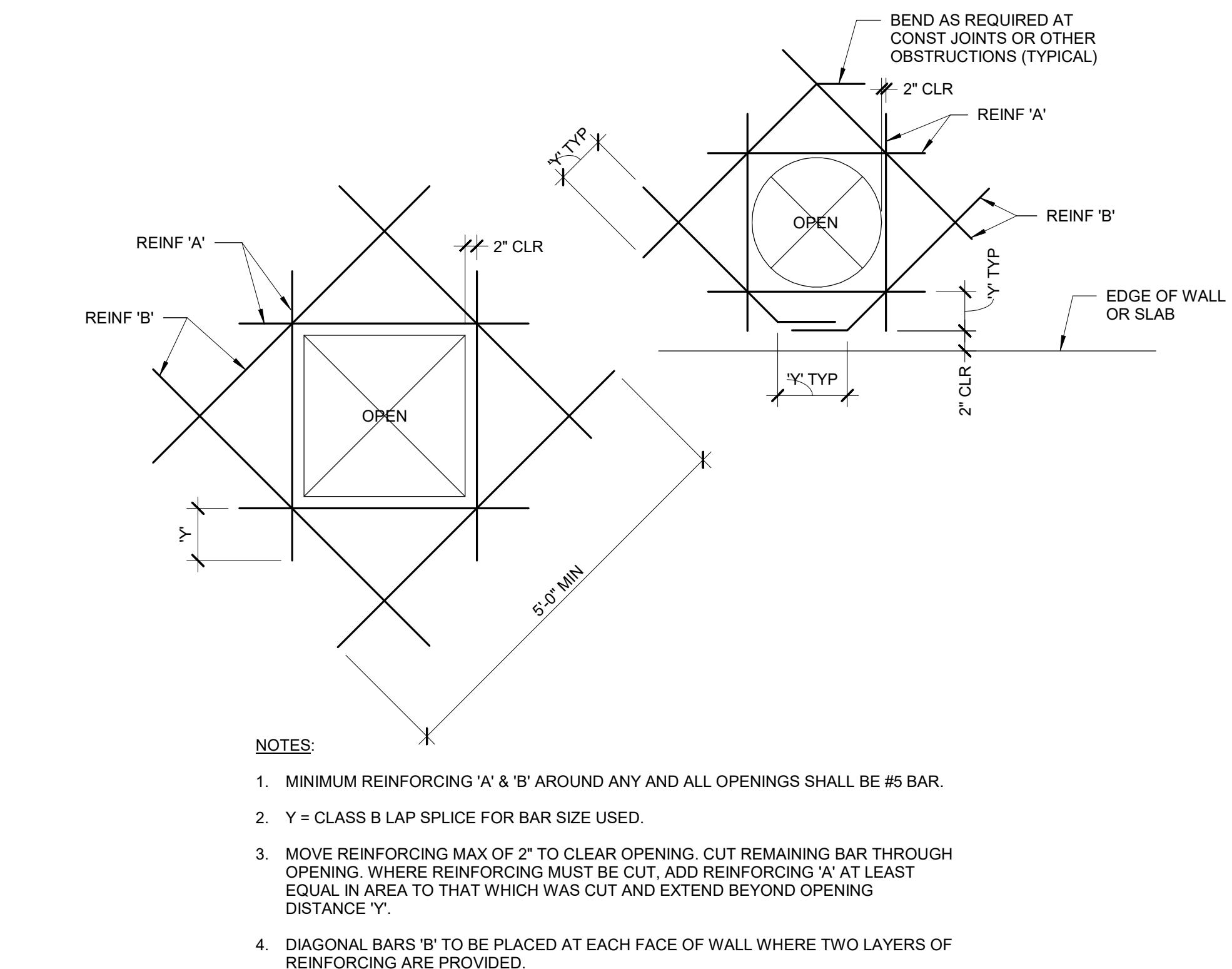




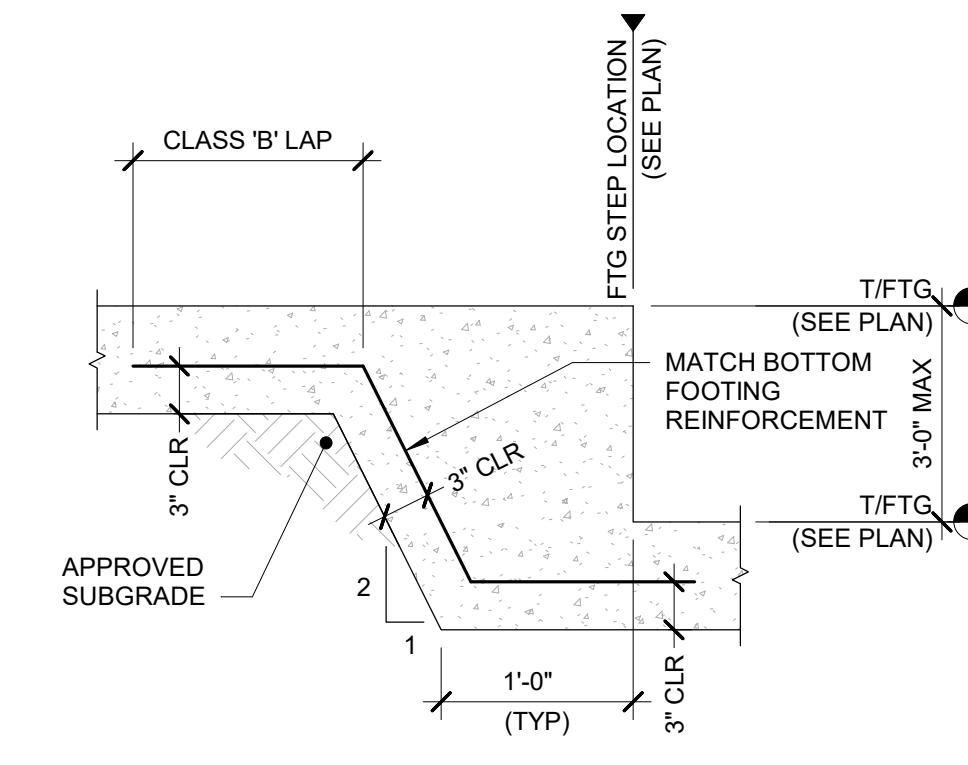
1 TYPICAL WALL CORNER DETAILS



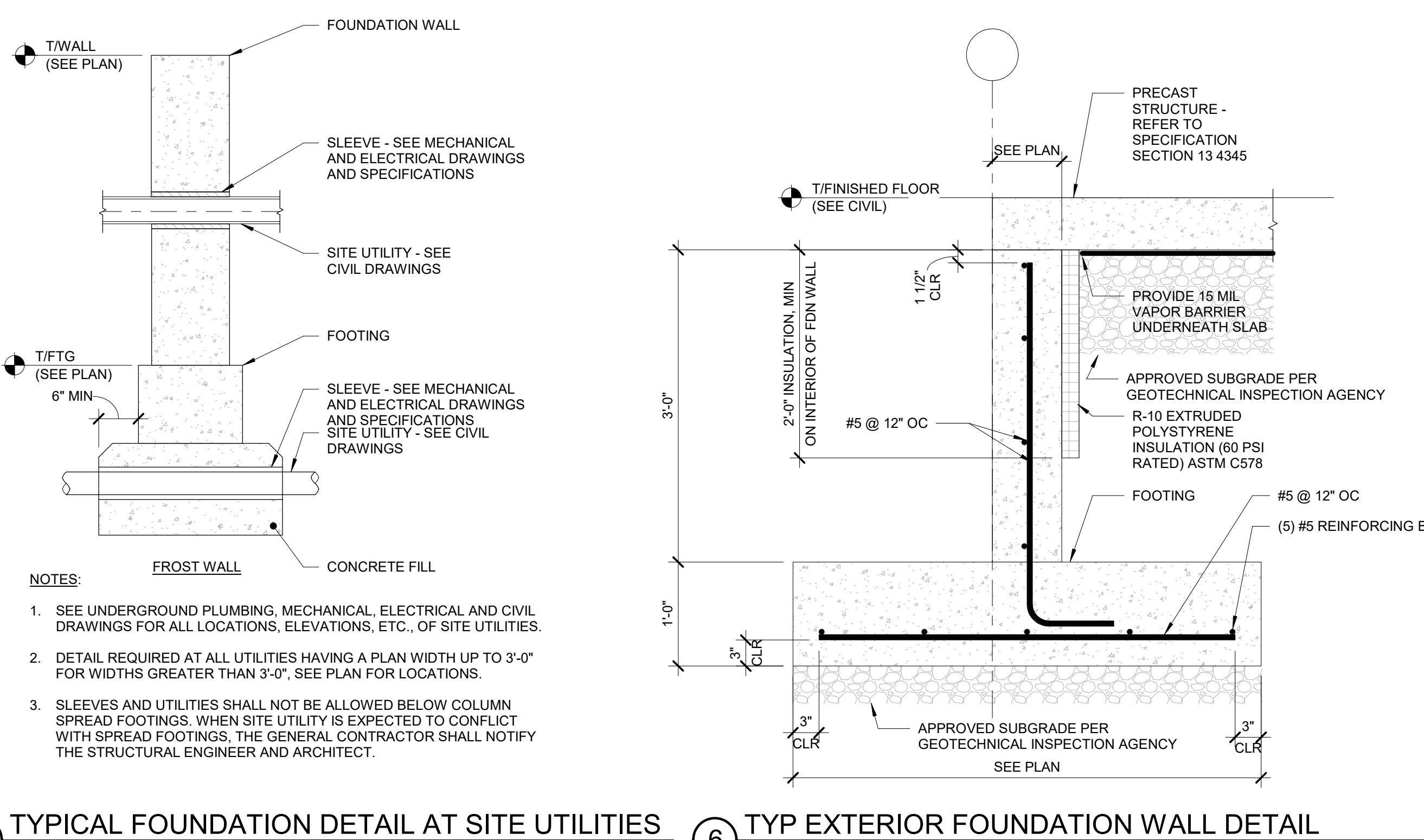
2 TYPICAL FOOTING CORNER BAR



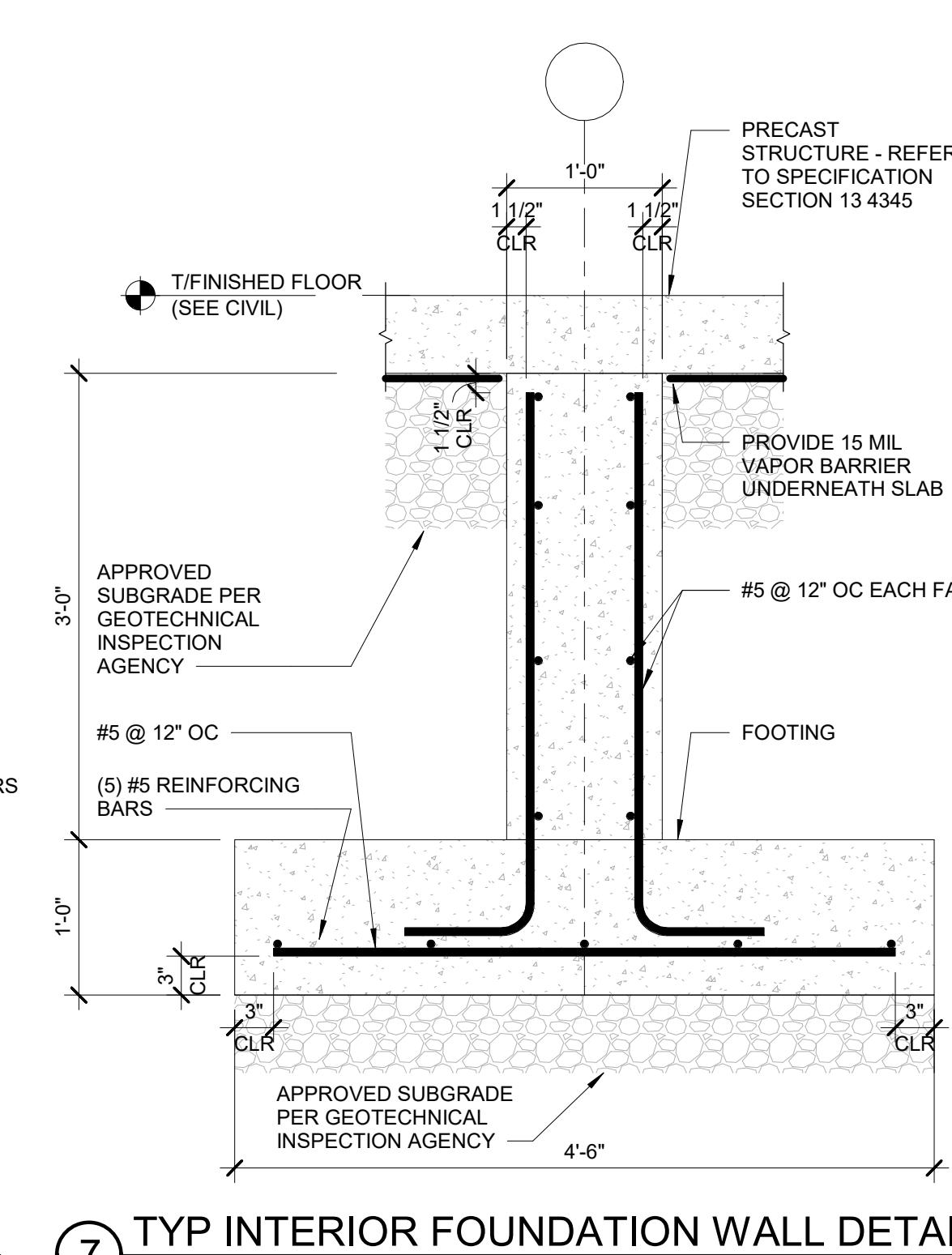
3 TYPICAL WALL OPENING REINFORCING DETAIL



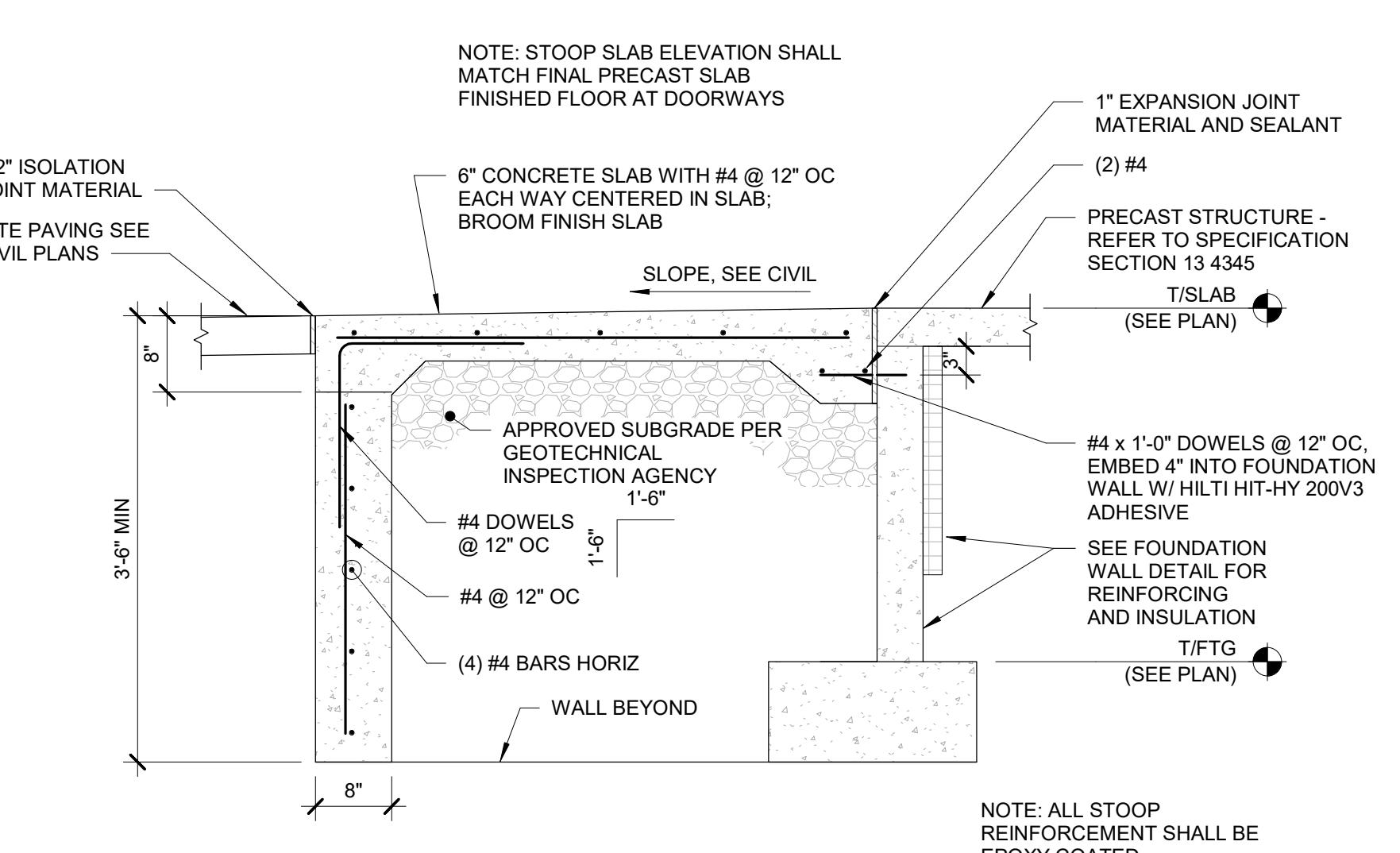
4 STEP FOOTING DETAIL



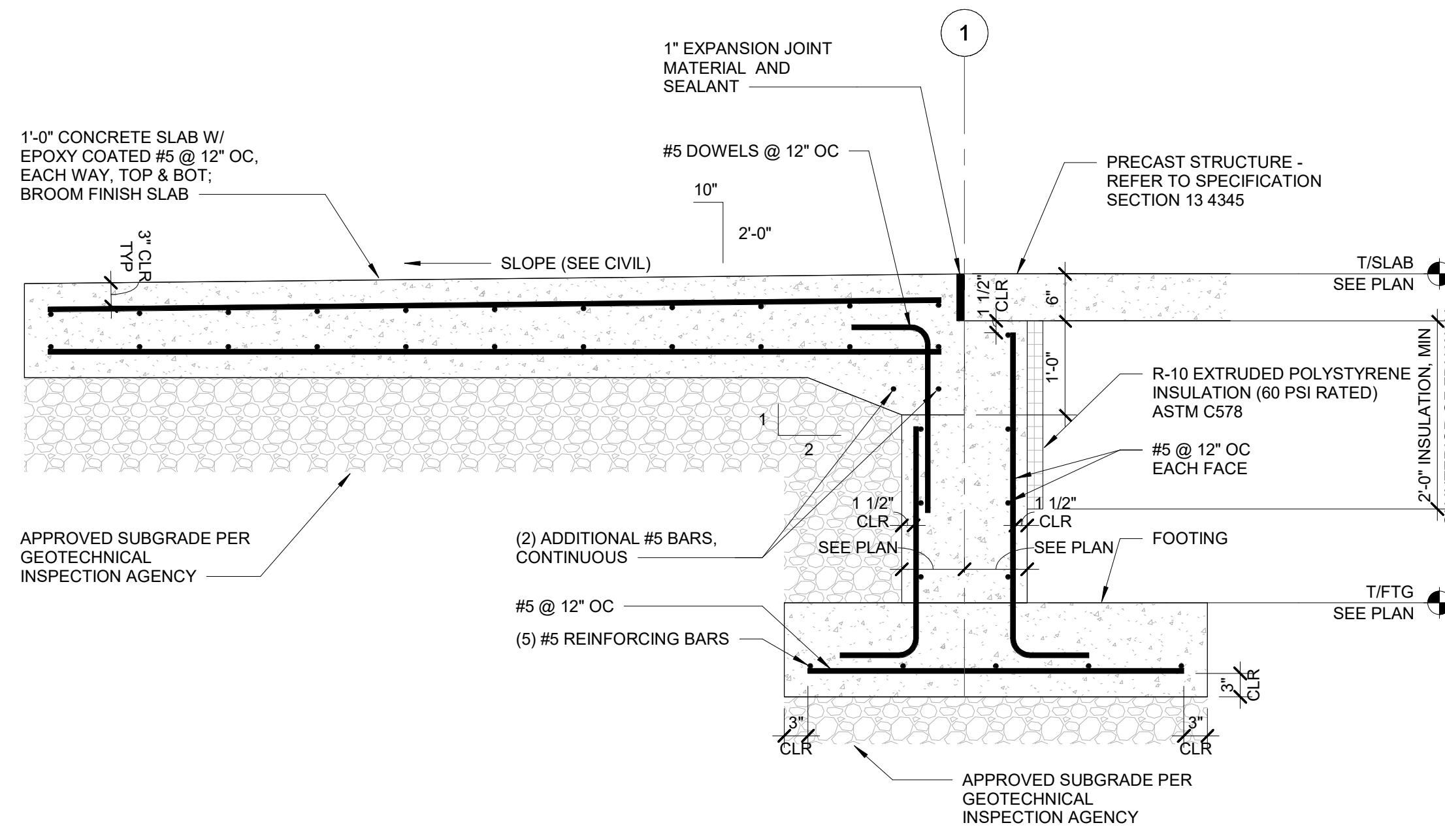
5 TYPICAL FOUNDATION DETAIL AT SITE UTILITIES



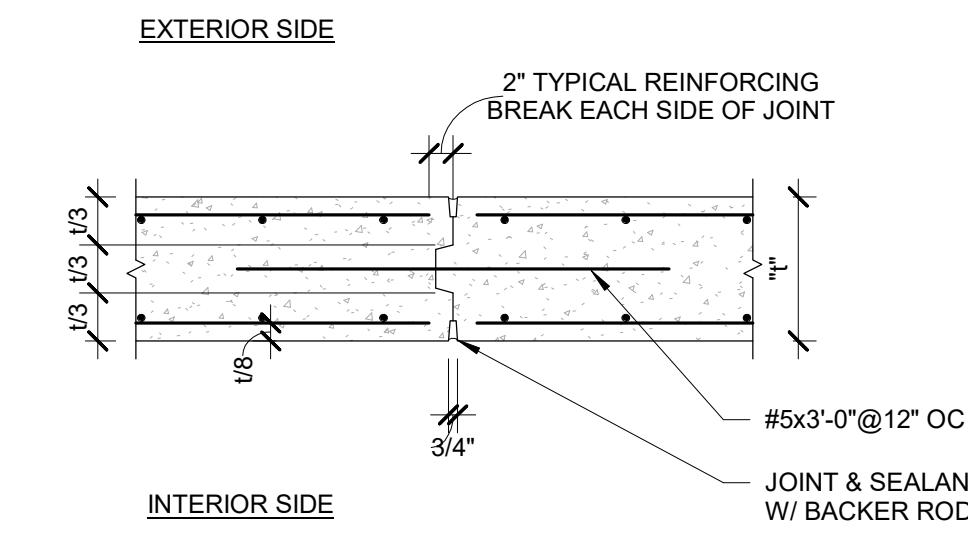
7 TYP INTERIOR FOUNDATION WALL DETAIL



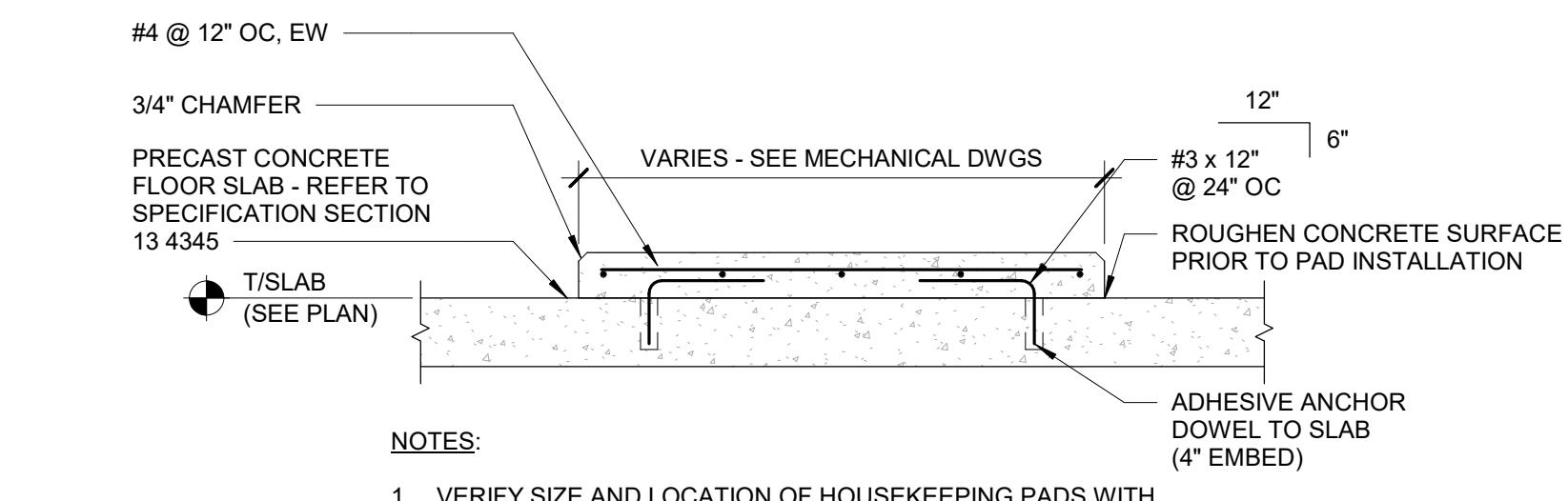
8 CONCRETE STOOP DETAIL



① CONCRETE APPROACH SLAB DETAIL



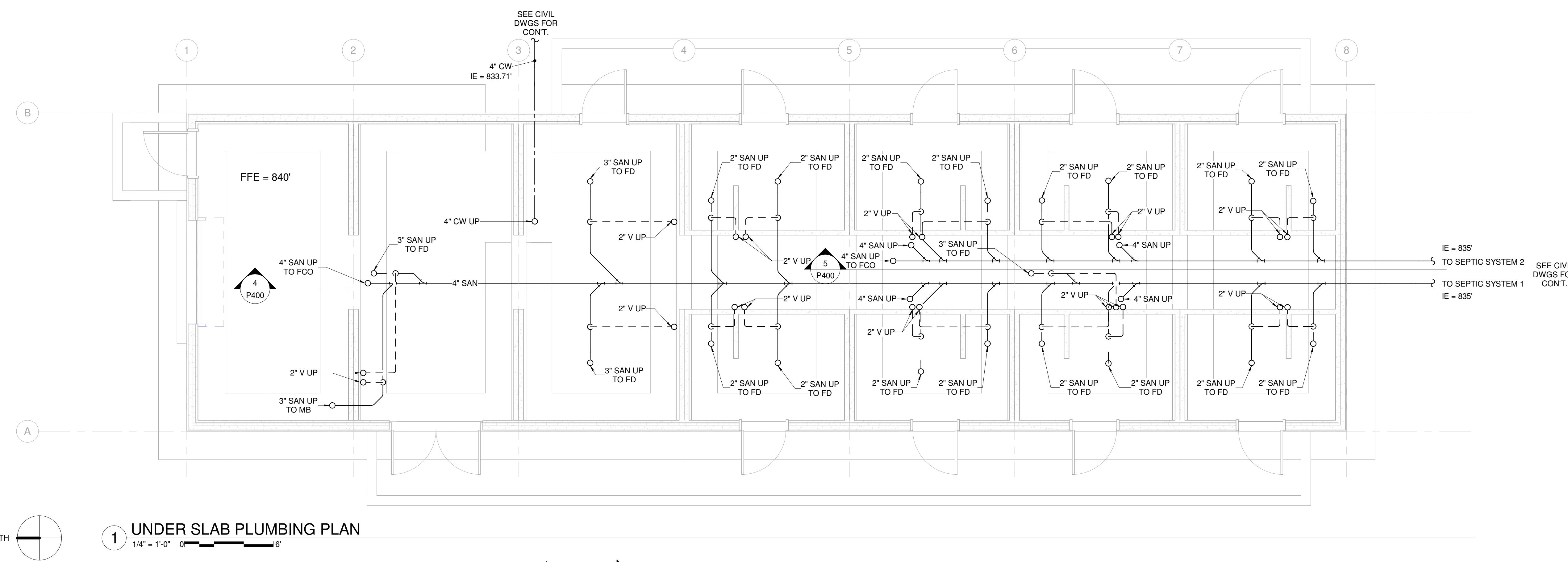
② TYPICAL WALL CONSTRUCTION JOINT



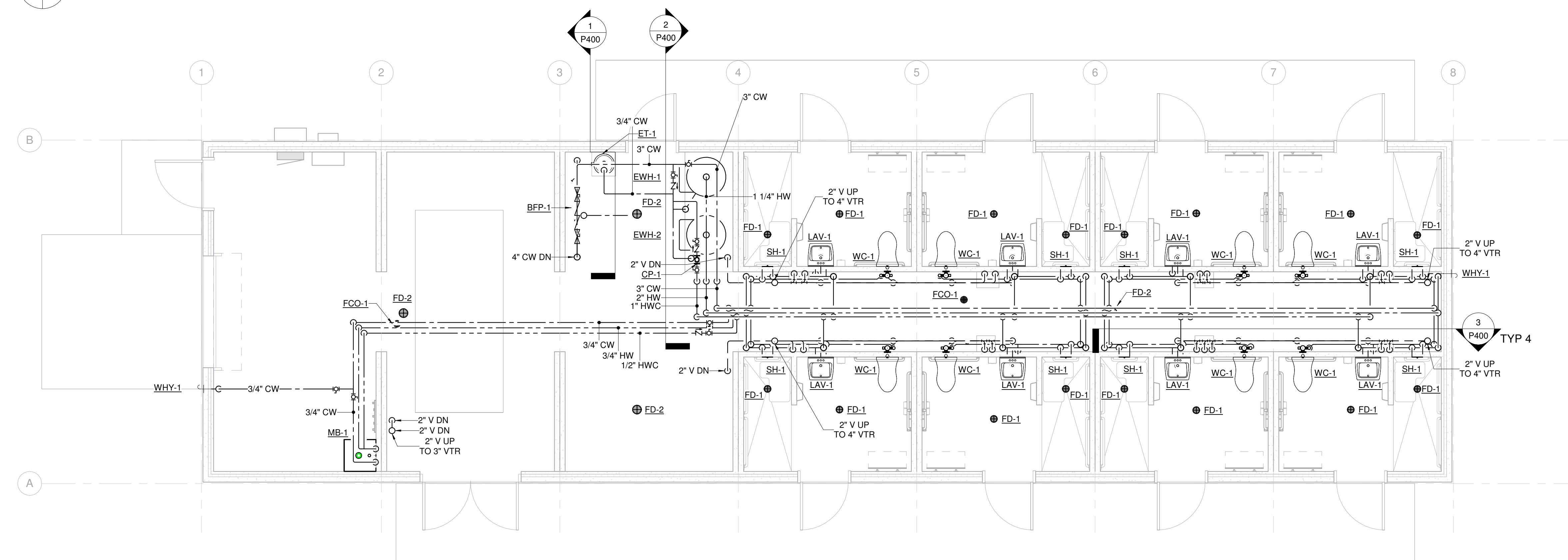
③ TYPICAL HOUSEKEEPING PAD

PLUMBING ABBREVIATIONS	
AND	F
AT	FCO FLOOR CLEANOUT
NUMBER or POUND	FD FLOOR DRAIN
#	FLA FULL LOAD AMPS
A	FS FLOOR SINK
AC	FSEC FOOD SERVICE EQUIPMENT CONTRACTOR
AD	FT FOOT/FEET
ADJ	FT HD FOOT HEAD OR PRESSURE DROP
AFF	FW FEEDWATER
ALT	G
AMB	GAS
AP	GA GAUGE
APD	GAL GALLON
APPROX	GC GENERAL CONTRACTOR
AR	GCO GROUND CLEANOUT
AS	GI GREASE INTERCEPTOR
ASSY	GPD GALLONS PER DAY
ATM	GPH GALLONS PER HOUR
AUX	GPM GALLONS PER MINUTE
AVG	GWH GAS FIRED WATER HEATER
B	H
BAS	HB HOSE BIBB
BFF	HD HUB DRAIN
BFP	HG MERCURY
BHP	HP HORSEPOWER
BLDG	HR HOSE REEL
BMS	HVAC HEATING, VENTILATION, AIR CONDITIONING
BOP	HZ HERTZ (FREQUENCY)
BP	I
BT	ID INSIDE DIAMETER
BTU	IE INVERT ELEVATION
BTUH	IMB ICE MAKER BOX
C	IN INCHES (WATER COLUMN)
CAL	INSTR INSTRUMENT
CAP	IPS IRON PIPE SIZE
CCR	ISO ISOMETRIC
CCW	J
CIRC	K
CL	KELVIN
CLG	KW KILOWATT
CLR	KWH KILOWATT HOUR
CLW	L
CO	LAVATORY
CONSTR	LB(S) POUND(S)
CONT	LWT LEAVING WATER TEMPERATURE
CONTR	M
COORD	Maint
CP	MAXIMUM
CS	MBH BRITISH THERMAL UNIT (1000/HR)
CT	MC MOP BASIN
CTRL	MCC MOTOR CONTROL CENTER
CU FT	MECH MINIMUM CIRCUIT AMPS
CU IN	MFR MANUFACTURER
D	MN MINUTE
%DEG	MISQ MISCELLANEOUS
C	MOPC MAXIMUM OVERCURRENT PROTECTION
F	MOV MOTOR OPERATED VALVE
DB	N
DDC	NA NOT APPLICABLE
DEMO	NC NORMALLY CLOSED
DF	NG NATURAL GAS
DFC	NIC NOT IN CONTRACT
DIA	NO NORMALLY OPEN
DIAG	NOM NOMINAL
DIP	NTS NOT TO SCALE
DN	O
DR	OD OUTER DIAMETER OR OVERFLOW ROOF DRAIN
DS	OFCI OWNER FURNISHED CONTRACTOR INSTALLED
DV	OFOI OWNER FURNISHED OWNER INSTALLED
DW	OI OWNER
DWG	OWN OWNER
DWV	P
E	PG PRESSURE GAUGE OR PROPYLENE GLYCOL
EA	PH PHASE
EC	PLBG PLUMBING
ECCR	PRV PRESSURE RELIEF VALVE OR PRESSURE
EE	REGULATING VALVE
EER	PSI POUNDS PER SQUARE INCH
EES	PSIA POUNDS PER SQUARE INCH ABSOLUTE
EF	PSIG POUNDS PER SQUARE INCH GAUGE
ELEV	
ELEC	
EQ	
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EWC	
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EX	

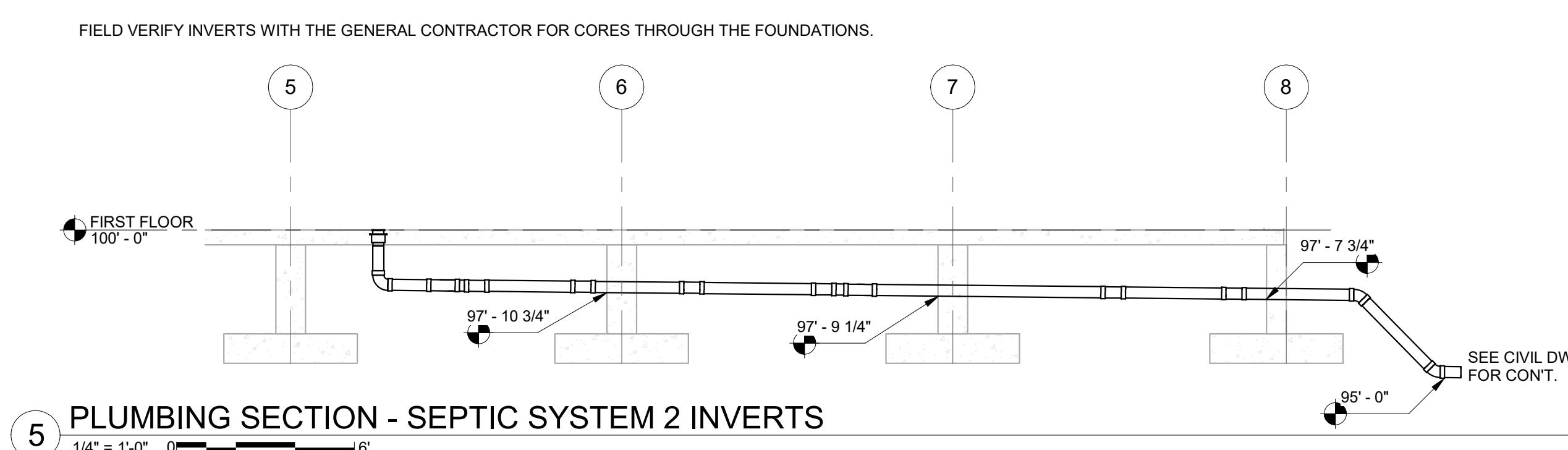
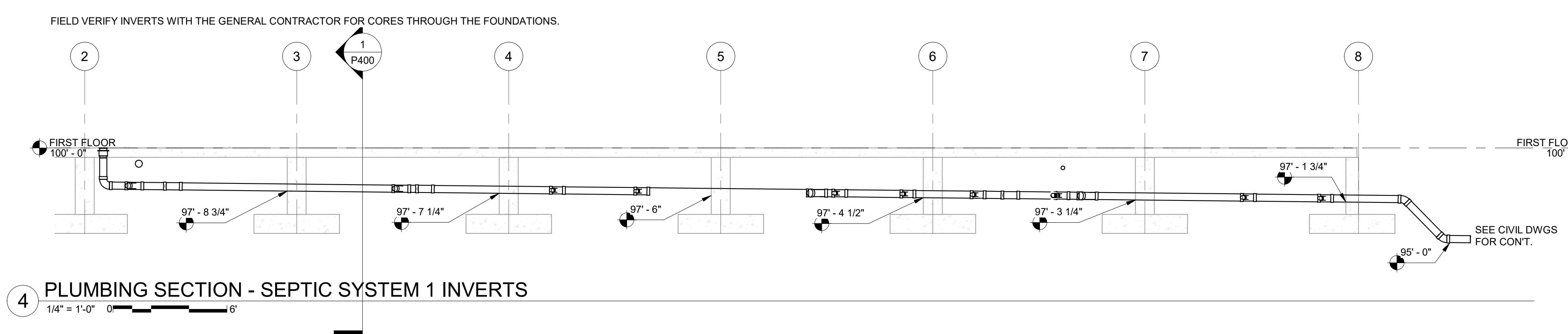
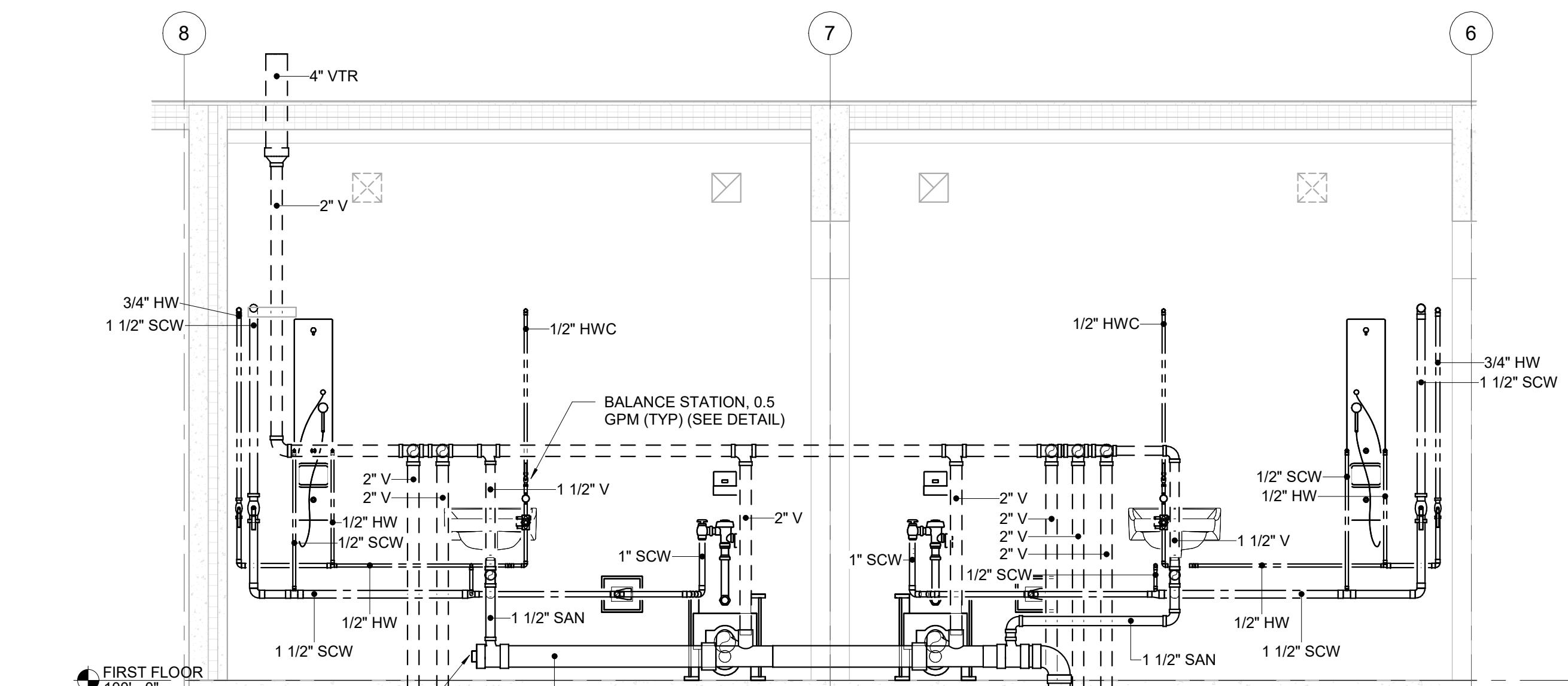
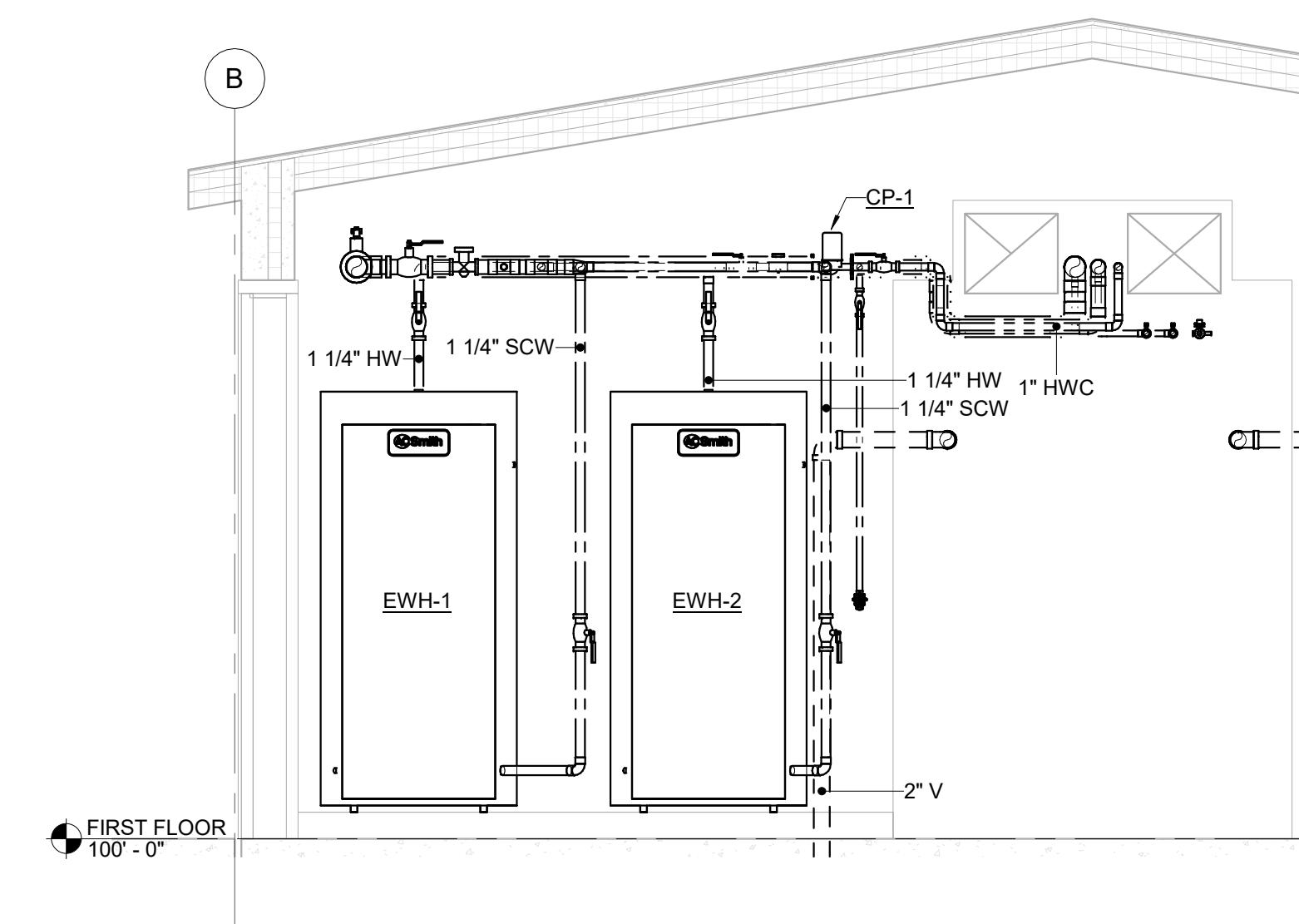
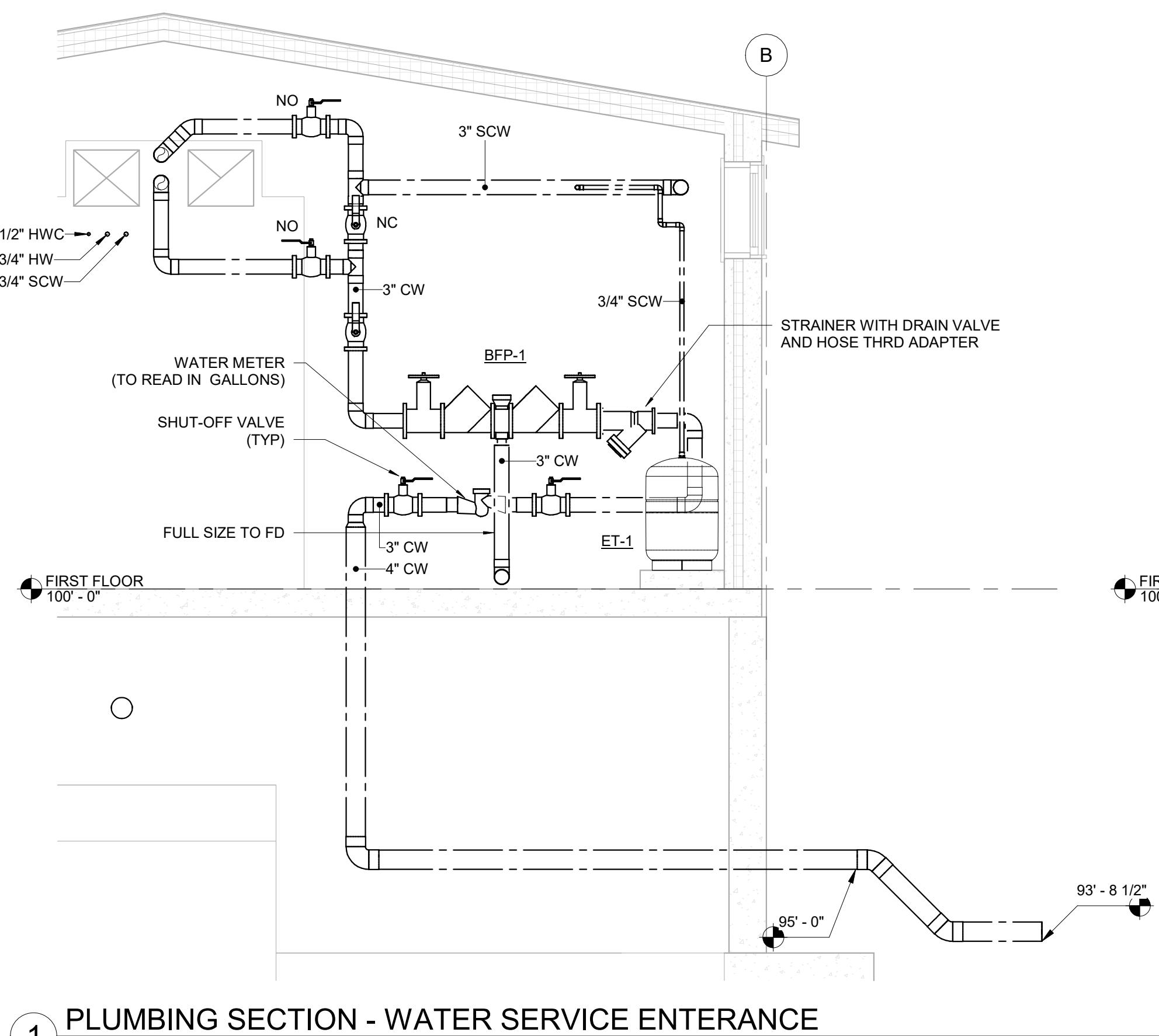
PLUMBING SYMBOLS LEGEND	
— 2" CW —	PIPE SIZE, SYSTEM TAG, AND FLOW
— CW —	DOMESTIC COLD WATER
— HW —	DOMESTIC HOT WATER
— HWC —	DOMESTIC HOT WATER - CIRCULATING
— SAN —	SANITARY SEWER
— V —	SANITARY VENT
6" CW UP	ELBOW UP
6" HW DN	ELBOW DOWN
—○—	PIPE OFFSET UP
—○—	PIPE OFFSET DOWN
—○—	PIPE TEE TURNED UP
—○—	PIPE TEE TURNED DOWN
—○—	PIPE TEE
—○—	PIPE CAP
— —	PIPE UNION
—X—	PIPE TRANSITION
—■—	KEYNOTE
○—○—	DETAIL NUMBER
○—○—	SCHEMATIC
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○—○—	BALL VALVE
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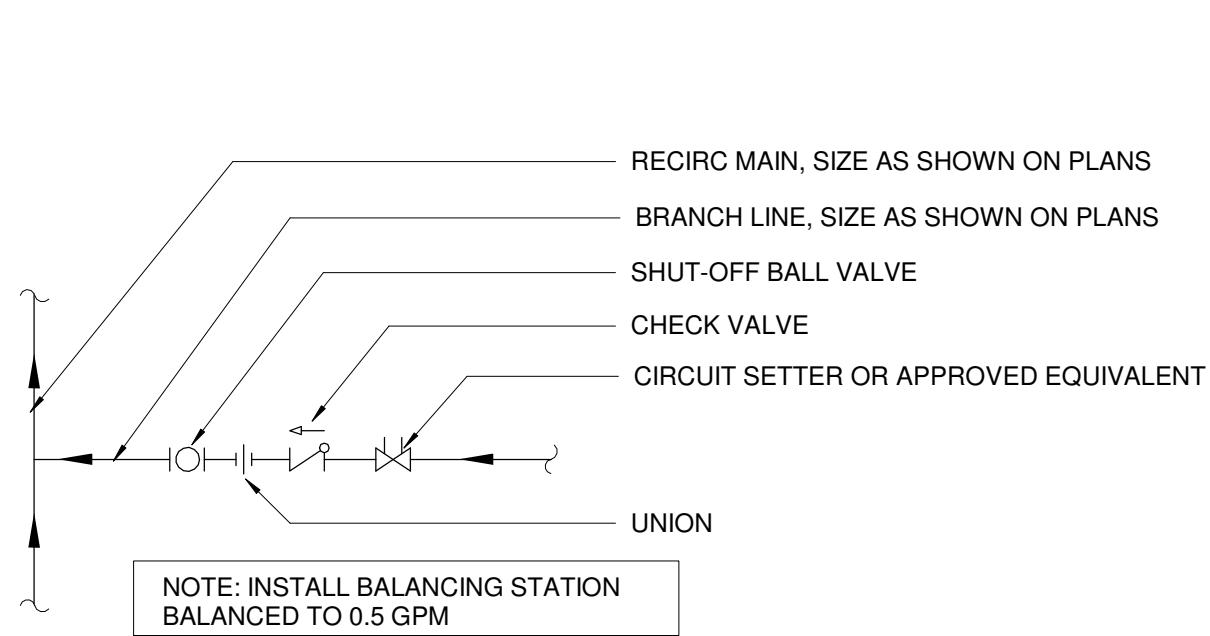


1 UNDER SLAB PLUMBING PLAN

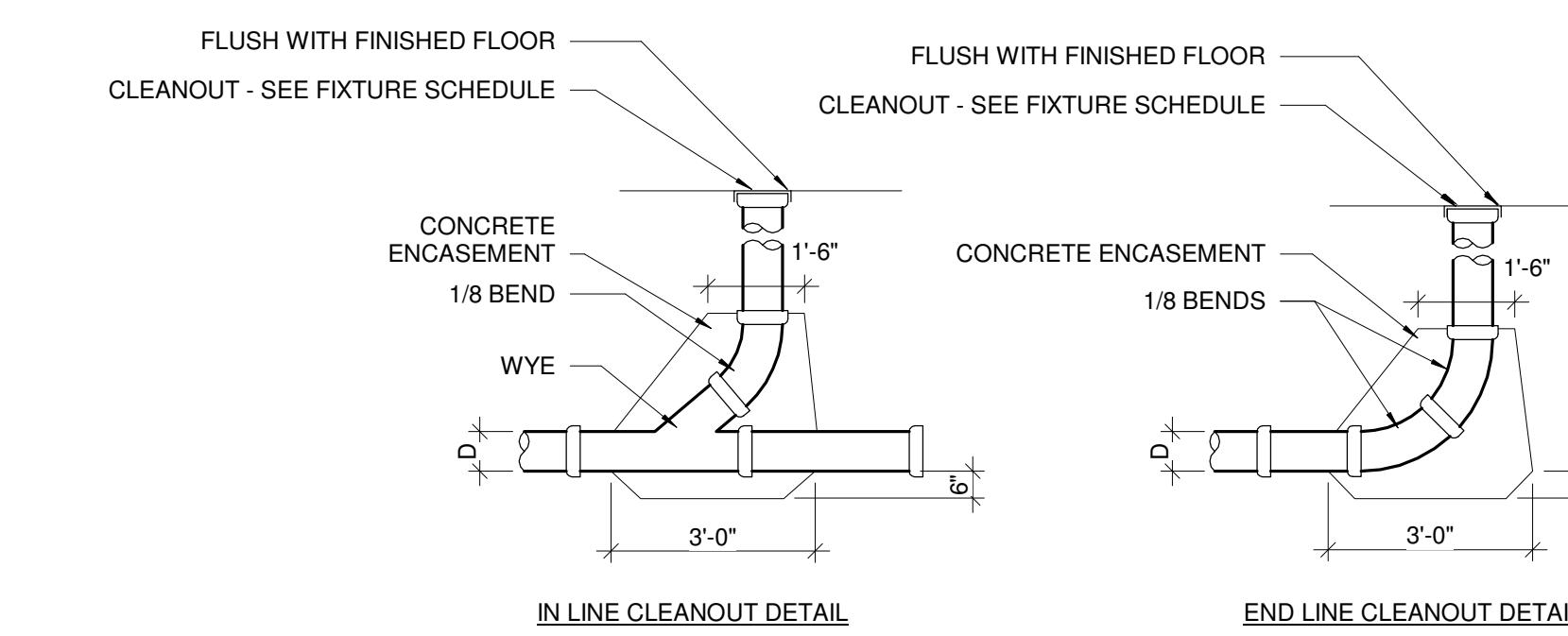


PLUMBING PLAN

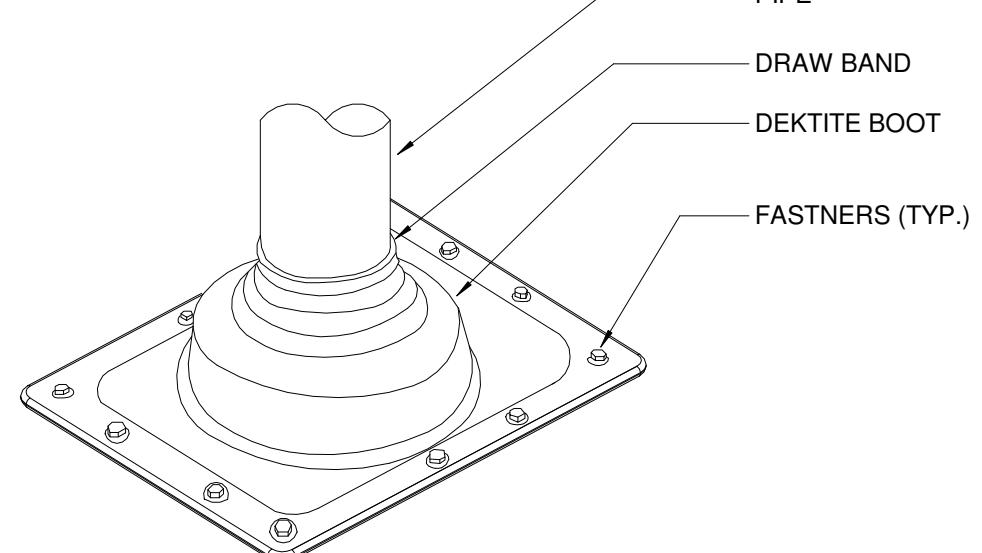




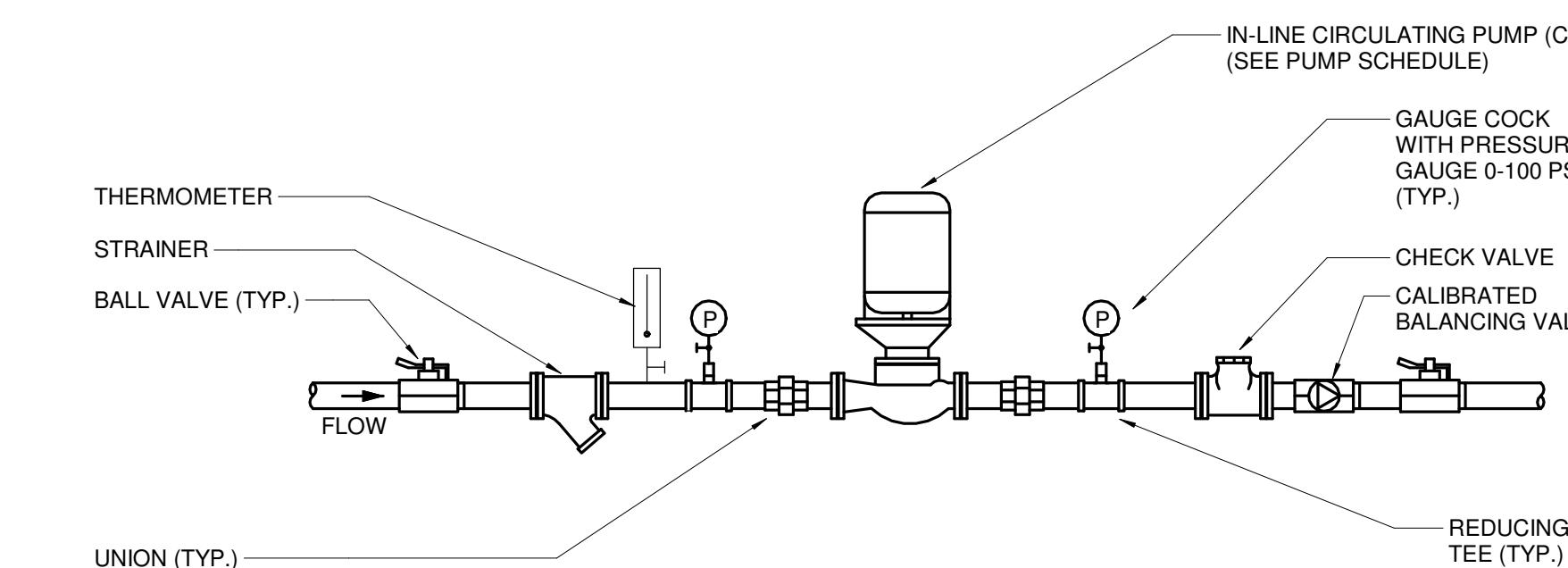
1 BALANCING STATION DETAIL
NOT TO SCALE



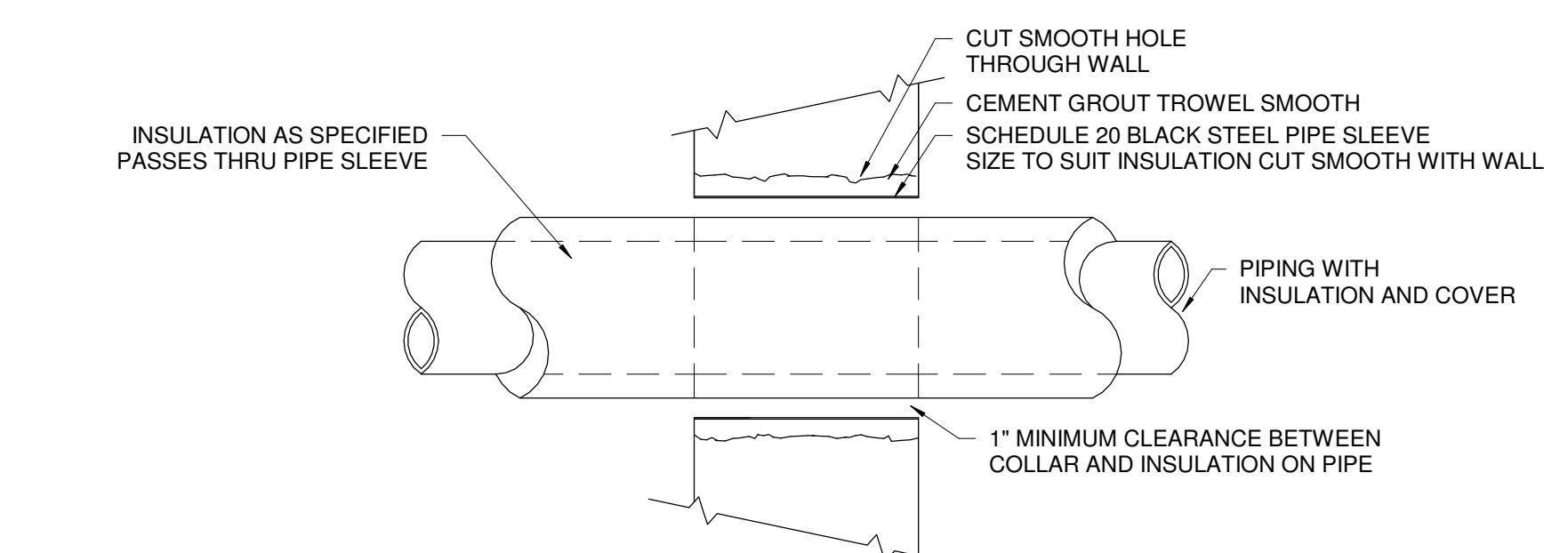
2 CLEANOUT DETAILS
NOT TO SCALE



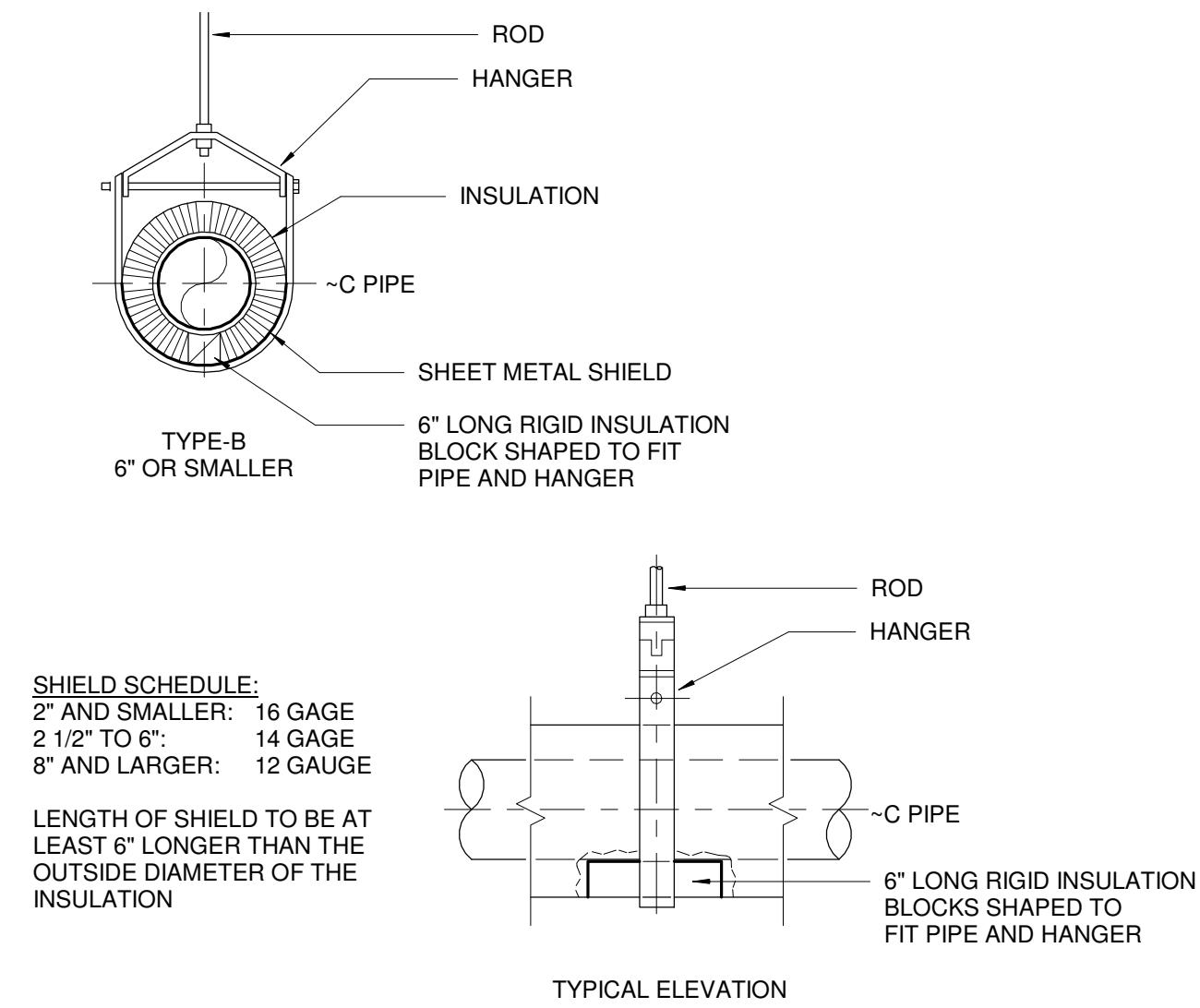
3 METAL ROOF PIPE PENETRATION
NOT TO SCALE



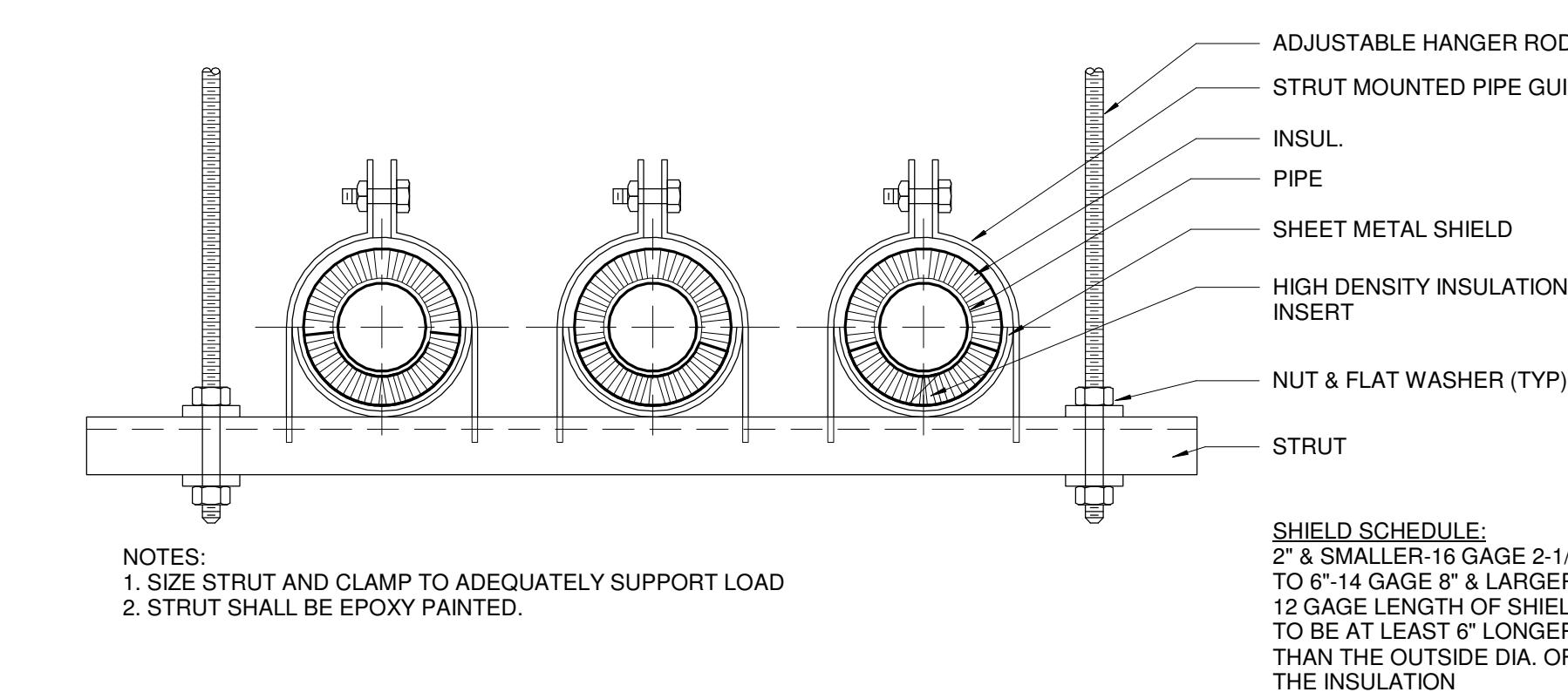
4 IN-LINE CIRCULATING PUMP DETAIL
NOT TO SCALE



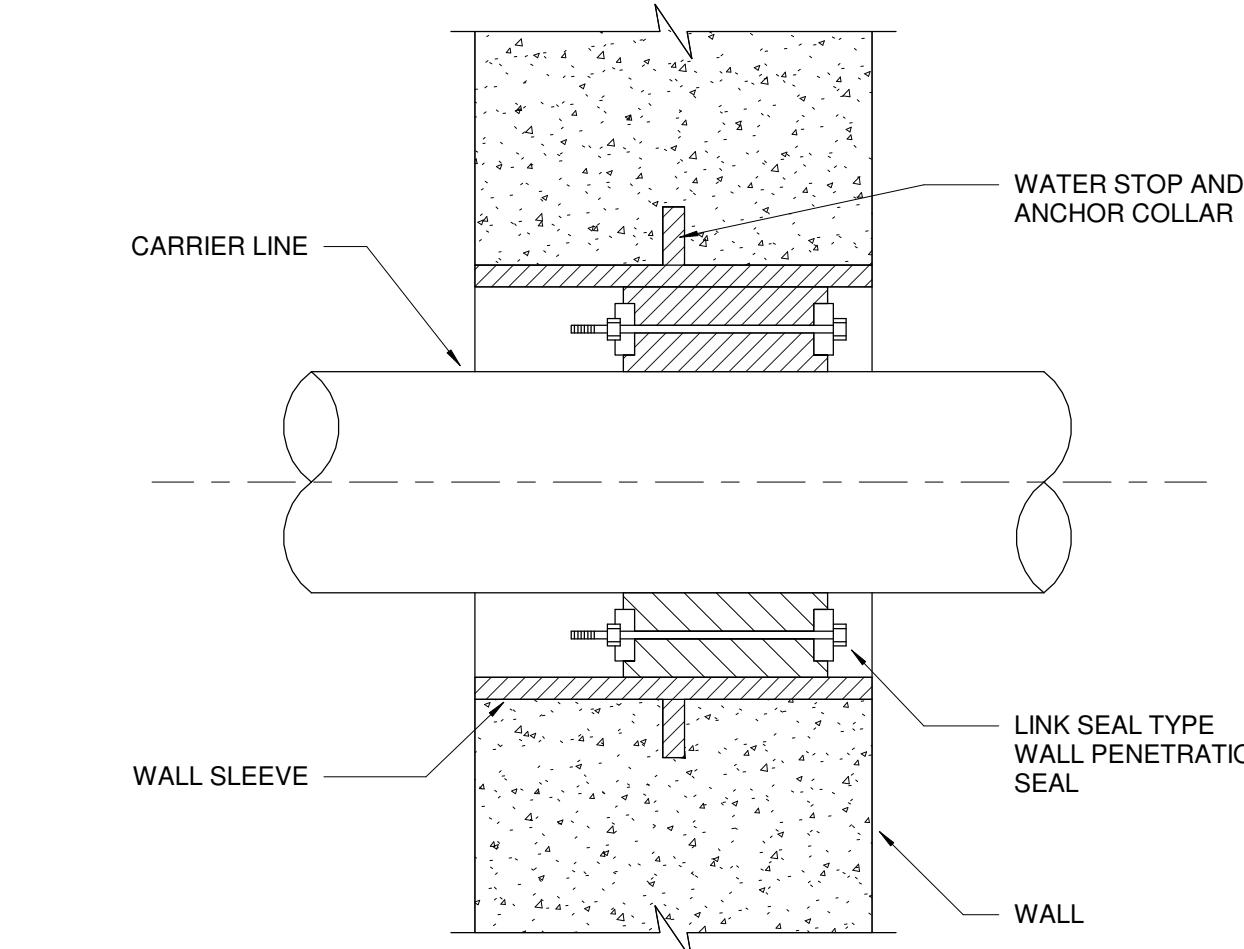
5 INTERIOR WALL PIPE PENETRATION DETAIL
NOT TO SCALE



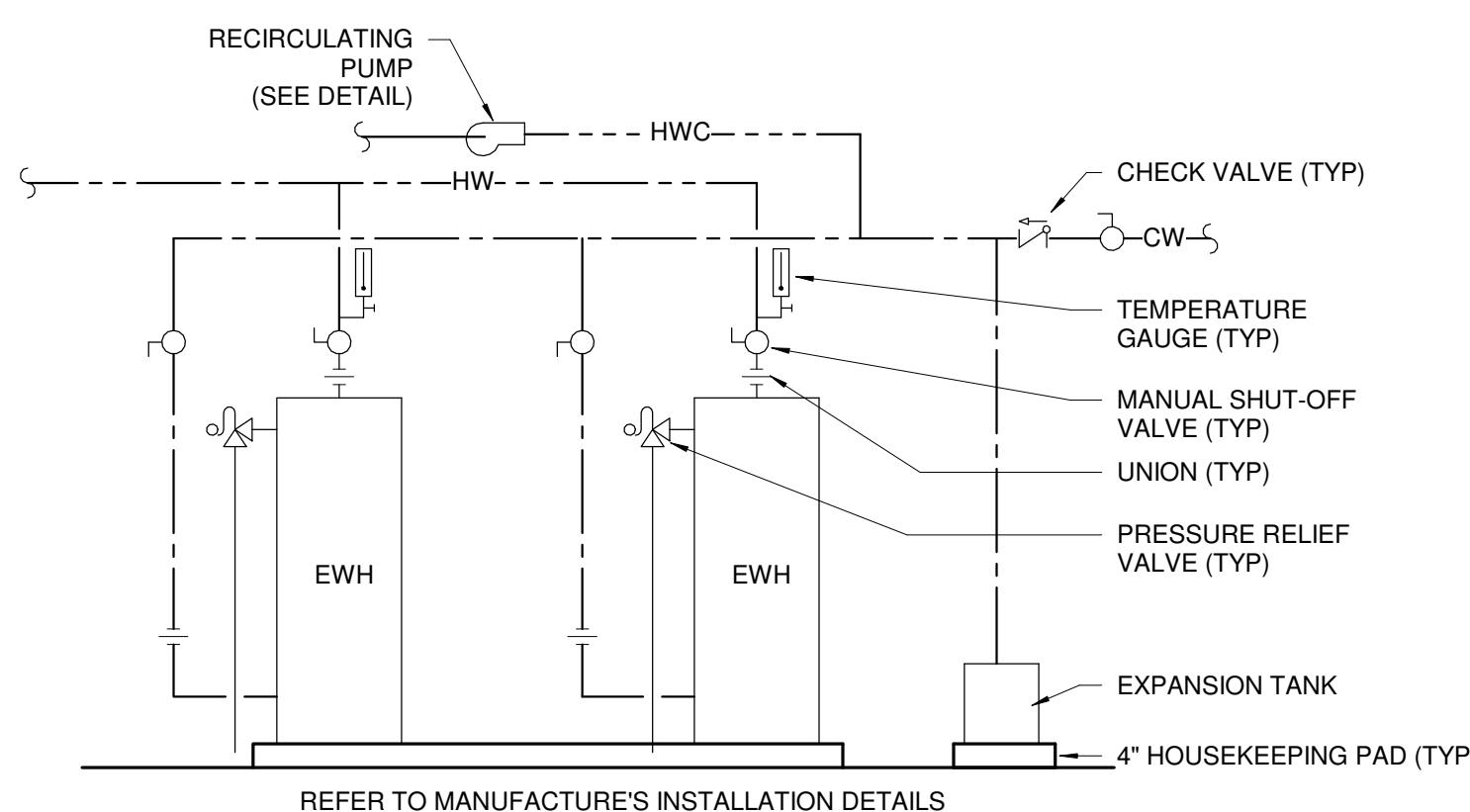
6 INSULATED PIPE HANGER DETAIL
NOT TO SCALE



7 TRAPEZE TYPE HANGER DETAIL
NOT TO SCALE



8 PIPE PENETRATION IN CAST-IN-PLACE CONCRETE WALL
NOT TO SCALE



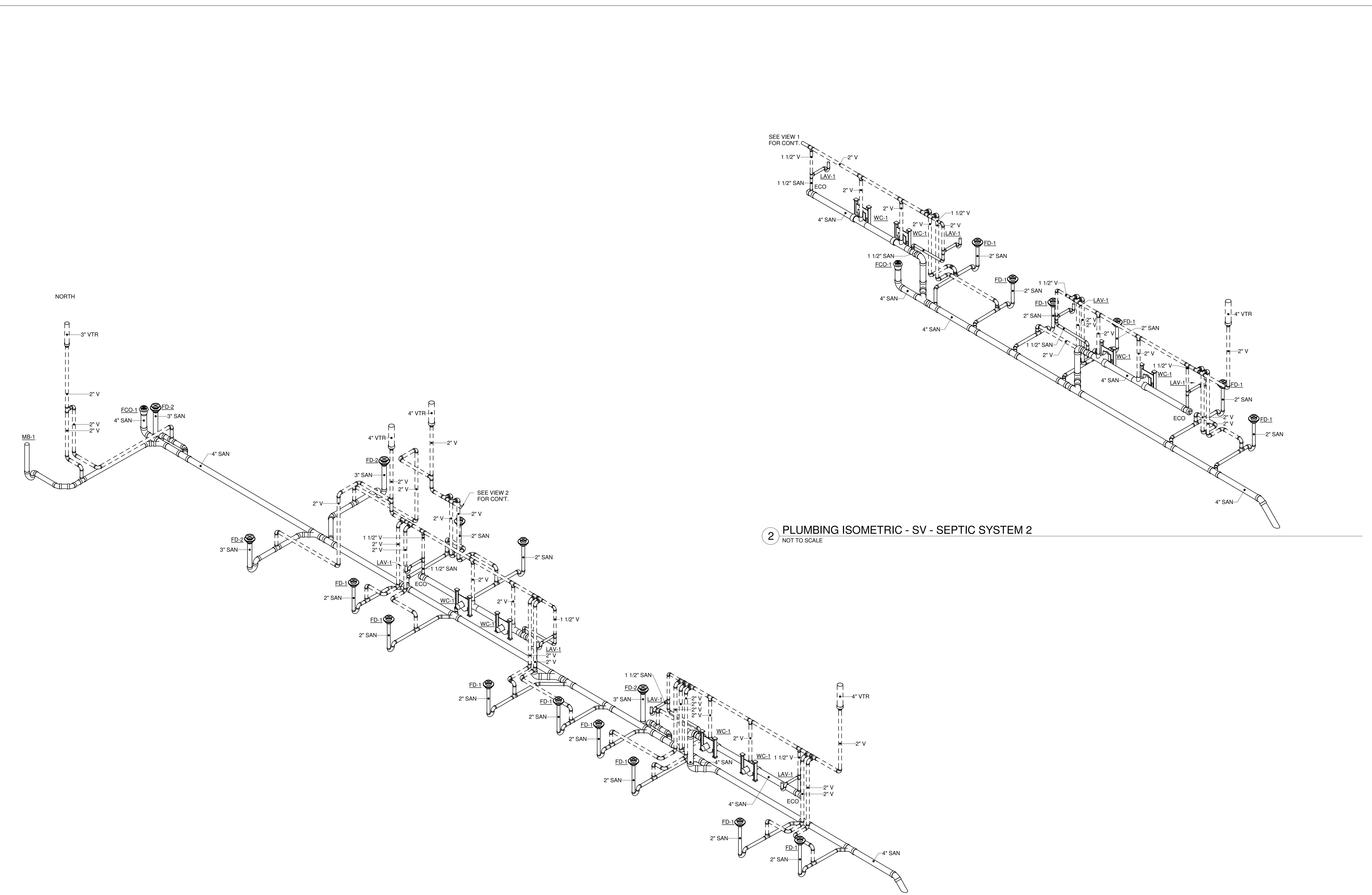
9 WATER HEATER DETAIL
NOT TO SCALE

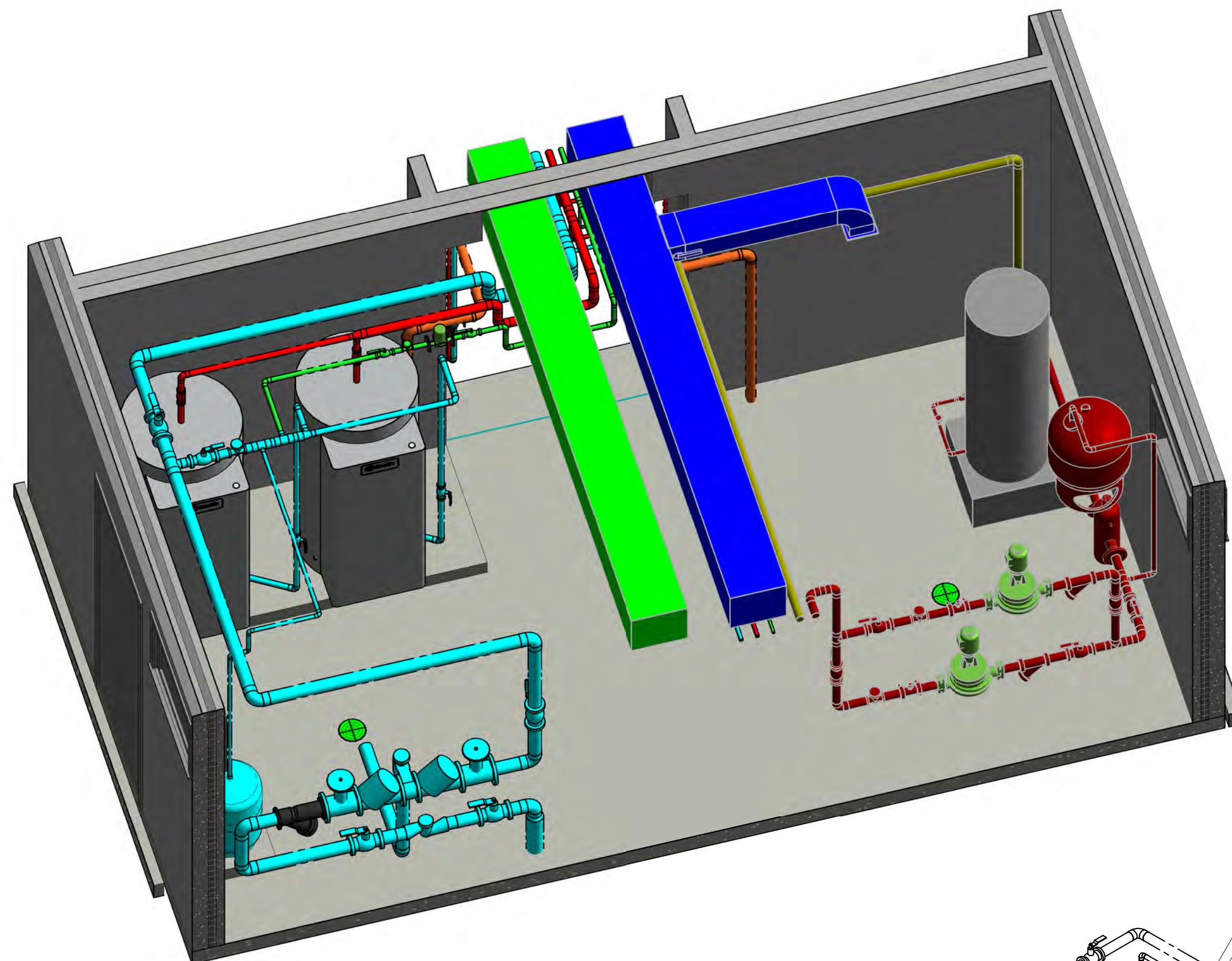
PLUMBING FIXTURE SCHEDULE																
REMARKS: 1. WATER HAMMER ARRESTORS NOT SHOWN ON PLANS. REFER TO SPECIFICATIONS AND 2021 UPC. INSTALL ON BOTH COLD AND HOT WATER PIPING IN AN UPRIGHT POSITION. LOCATE AT THE ENDS OF PIPE RUNS OR NEAR A BATTERY OF FIXTURES. FOLLOW MANUFACTURER'S SPECIFICATIONS FOR LOCATION AND INSTALLATION. INSTALL IN AN ACCESSIBLE LOCATION. AIR CHAMBERS NOT ALLOWED. 2. NOT ALL CO, FCO, WCO, ECO ARE SHOWN ON PLANS, REFER TO SPECIFICATIONS AND 2021 UPC. CLEANOUT COVERS SHALL BE STAMPED OR ENGRAVED ON COVER AS "SAN". FIELD COORDINATE EXACT LOCATION OF FLOOR AND WALL CLEANOUTS WITH GENERAL CONTRACTOR.																
TAG	Fixture Type	Fixture				Description	Faucet / Flush Valve				PIPE CONNECTIONS / ROUGH-IN PIPE				Accessories Comments	
		Manufacturer	Model	Material			Manufacturer	Model No.	Finish		STM	San	Vent	CW	HW	
BFP-1	BACKFLOW PREVENTER	WATTS	LF909	CAST IRON	REDUCED PRESSURE ZONE BACKFLOW PREVENTER ASSEMBLY, GATE VALVES, FDA EPOXY COATED WYE STRAINER, AIR GAP ACCESSORY.									3"		
FCO-1	FLOOR CLEANOUT - ROUND	SIOUX CHIEF	854-64NR	CAST IRON	ADJUSTABLE LEVELING FLOOR CLEANOUT, CAST IRON BODY, WITH GAS AND WATERTIGHT ABS TAPERED THREAD PLUG, AND ROUND SCORIATED SECURED NICKEL BRONZE LIGHT-DUTY TOP. INSTALL FLUSH WITH FINISHED FLOOR.									4"		
FD-1	FLOOR DRAIN - ROUND	SIOUX CHIEF	842	CAST IRON	FLOOR DRAIN, 4 1/2" DIAMETER ADJUSTABLE STRAINER HEAD, NICKEL BRONZE STRAINER DEEP CAST IRON P-TRAP. SET TOP OF STRAINER FLUSH WITH FINISHED FLOOR.									2"	2"	
FD-2	FLOOR DRAIN - ROUND	SIOUX CHIEF	842	CAST IRON	SAME AS FD-1 EXCEPT 6 1/2" DIAMETER ADJUSTABLE STRAINER HEAD.									3"	2"	
LAV-1	LAVATORY - WALL HUNG - ADA	KOHLER	K-1722-0	WHITE VITREOUS CHINA	WALL MOUNT LAVATORY, 19 1/4" x 17-1/4", SINGLE CENTER HOLE, WHITE VITREOUS CHINA. MOUNT RIM AT 34" AFF. PROVIDE CHROME PLATED TAILPIECE, GRID DRAIN AND P-TRAP, LOOSE KEY ANGLE STOPS AND SUPPLIES, MOUNT AT ADA COMPLIANT HEIGHT. INSULATE WATER AND WASTE TO MEET ADA REQUIREMENTS USING ADA INSULATION KIT, TRUEBRO OR EQUIVALENT.		MOEN	M8884	CHROME	SINGLE HANDLE FAUCET, 0.5 GPM, SINGLE HOLE INSTALLATION, VANDAL RESISTANT, ADA COMPLIANT.		1 1/2"	1 1/2"	1/2"	1/2"	PROVIDE WITH ZURN CONCEALED ARM CARRIER, MODEL AS REQUIRED. PROVIDE WITH LEONARD MODEL 270 THERMAL MIXING VALVE SET TO DELIVER A MIXED HOT WATER TEMPERATURE OF 110°F.
MB-1	MOP BASIN	PROFLO	PFMB24X24	MOLDED COMPOSITE	24" x 24" x 10" CORNER INSTALLATION, VINYL BUMPER GUARDS, STAINLESS STEEL WALL GUARDS ON TWO SIDES. DRAIN BODY SHALL BE FACTORY INSTALLED, STAINLESS STEEL FLAT STRAINER, LEAD CAULKED JOINT FOR 3" WASTE CONNECTION, DEEP SEAL CAST IRON P-TRAP.		CHICAGO FAUCET CO	835-369CP	CHROME	WALL MOUNTED, 6" CENTERS, TOP MOUNTED SUPPLIES, INTEGRAL STOPS AND VACUUM BREAKER SPOUT WITH PAI HOOK AND WALL BRACE. VANDAL-PROOF, LEVER HANDLES.		3"	2"	3/4"	3/4"	PROVIDE STAINLESS STEEL MOP HANGER AND 3 RUBBER TOOL GRIPS, 30" LONG RUBBER HOSE WITH HOSE BRACKET AND RUBBER GRIP.
SH-1	SHOWER - FAUCET	-	-	-	-		ACORN	1741ADA	STAINLESS STEEL	42" X 11" SINGLE-PANEL WALL MOUNT, T/P TEMPERATURE/PRESSURE BALANCING MIXING VALVE, RECESSED SOAP DISH, UPPER SHOWER HEAD WITH LOWER HANDHELD SHOWER WITH 60" HOSE FOR ADA USE. VACUUM BREAKER, QUICK DISCONNECT, MOUNTING BRACKET, WALL SLEEVE. MOUNT AT ADA COMPLIANT HEIGHT.				1/2"	1/2"	
WC-1	WATER CLOSET - WALL HUNG - ADA	KOHLER	K-84454-0	WHITE VITREOUS CHINA	16 1/2" ELONGATED BOWL, WATERSENSE CERTIFIED 1.28 GPF, WHITE VITREOUS CHINA, 1 1/2" REAR SPUD, MOUNT RIM AT 17" AFF FOR ADA HEIGHT REQUIREMENTS.		SLOAN	S3914856	CHROME	CONCEALED MANUAL FLUSH VALVE, PUSH-BUTTON FLUSH ACTUATOR, 1.28 GPF, 1" I.P.S. WHEEL, HANDLE ANGLE STOP, 14 1/2" ROUGH-IN ABOVE FIXTURE BACK-CHECK ANGLE STOP, VACUUM BREAKER, WALL AND SPUD FLANGE, ADA COMPLIANT.		4"	2"	1"		PROVIDE WITH ZURN ADJUSTABLE HORIZONTAL CARRIER, ZZ1203-NL4(R4) MODEL AS REQUIRED. PROVIDE WITH REMIS SEAT, ELONGATED, ANTI-MICROBIAL SOLID PLASTIC, OPEN FRONT, WHITE HEAVY DUTY SELF-SUSTAINING CHECK HINGE WITH BUMPERS, NO COVER.
WHY-1	EXTERIOR WALL HYDRANT	WOODFORD	B67	STAINLESS STEEL	FREEZELESS, AUTOMATIC DRAINING, ASSE 1052 NIDEL 50HA HIGH FLOW DOUBLE CHECK BACKFLOW PREVENTER, WALL CLAMP AND LOCKABLE DOOR W/LOOSE TEE KEY. EXACT HEIGHT, LOCATION AND FINISH TO BE COORDINATED WITH BUILDING MATERIALS, ARCHITECTURAL FINISHES AND G.C.									3/4"		

WATER HEATER SCHEDULE - ELECTRIC																			
REMARKS: 1. INSTALL ON 4" CONCRETE HOUSE KEEPING PAD																			
WATER (°F)																			
MARK	STORAGE (GAL)		RECOVERY (GPH)		IN		OUT		ELEMENT KW		# OF ELEMENTS		ELECTRICAL DATA						
EWH-1	120		99		40		140		4		3		12		240		1 INTERNAL	EC/EC	AO SMITH DRE-120-12
EWH-2	120		99		40		140		4		3		12		240		1 INTERNAL	EC/EC	AO SMITH DRE-120-12

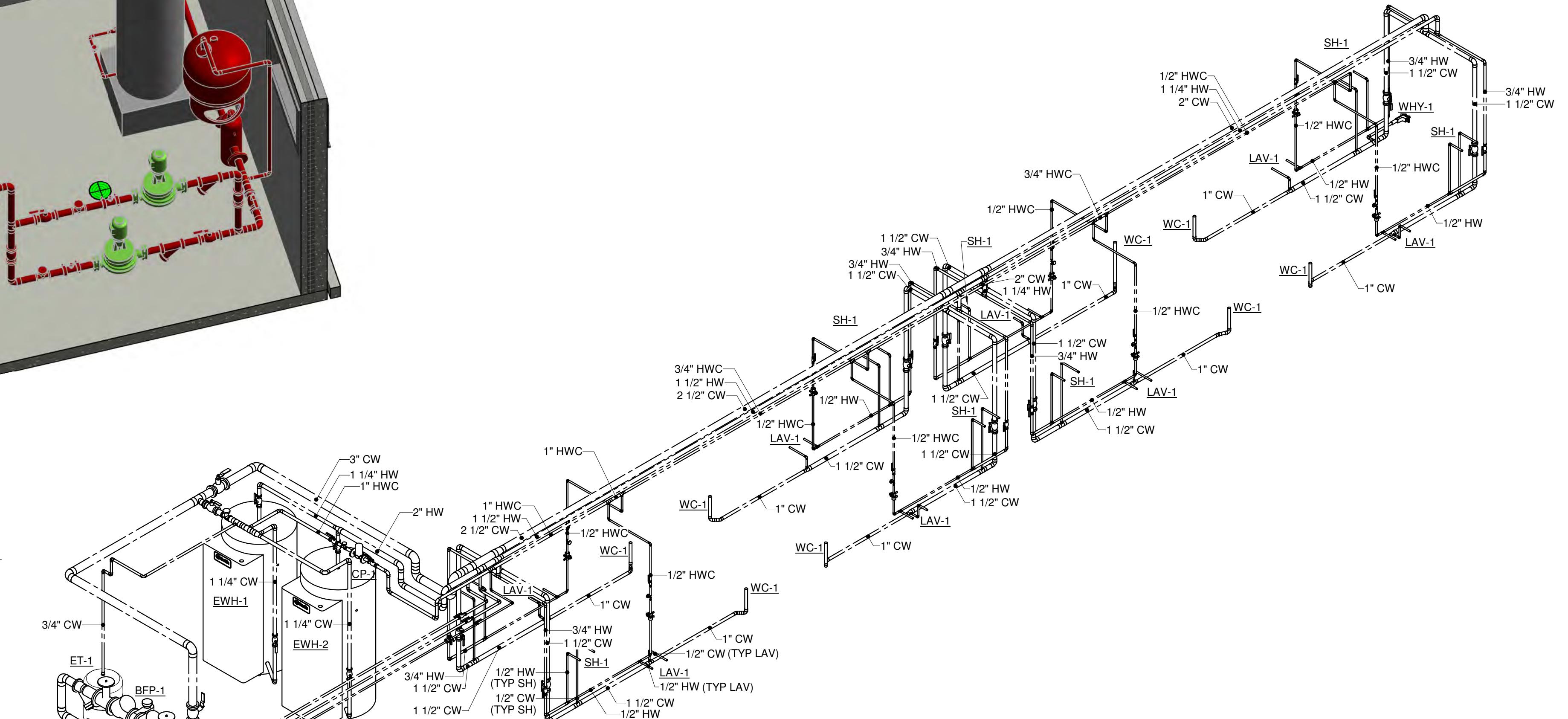
PLUMBING PUMP SCHEDULE																				
REMARKS: 1. PROVIDE WITH AQUASTAT AND TIMER. 115V, MAX 16A, COORDINATE WITH EC. 2. INSTALL PUMP PER MANUFACTURER'S INSTRUCTIONS. 3. STARTER, DISCONNECT AND TIMER INTERLOCK WIRING BY EC.																				
ELECTRICAL DATA																				
MARK	TYPE		GPM		HEAD (FT)		WATTS		FLA		RPM		VOLTS		PHASE		CONTROL OR STARTER	CONTROLLER OR STARTER FURNISHED / INSTALLED	DISCONNECT FURNISHED / INSTALLED	DESIGN BASIS
CP-1	IN-LINE		4.5		10		92		0.8		2940		115		1		AQUASTAT	MC/EC	EC/EC	BELL&GOSSET NBF-22

PLUMBING EXPANSION TANK SCHEDULE				
MARK	TYPE	TANK CAPACITY (GAL)	ACCEPTANCE CAPACITY (GAL)	DESIGN BASIS
ET-1	DIAPHRAGM	16.6	11.3	AMTROL ST-30VC-DD



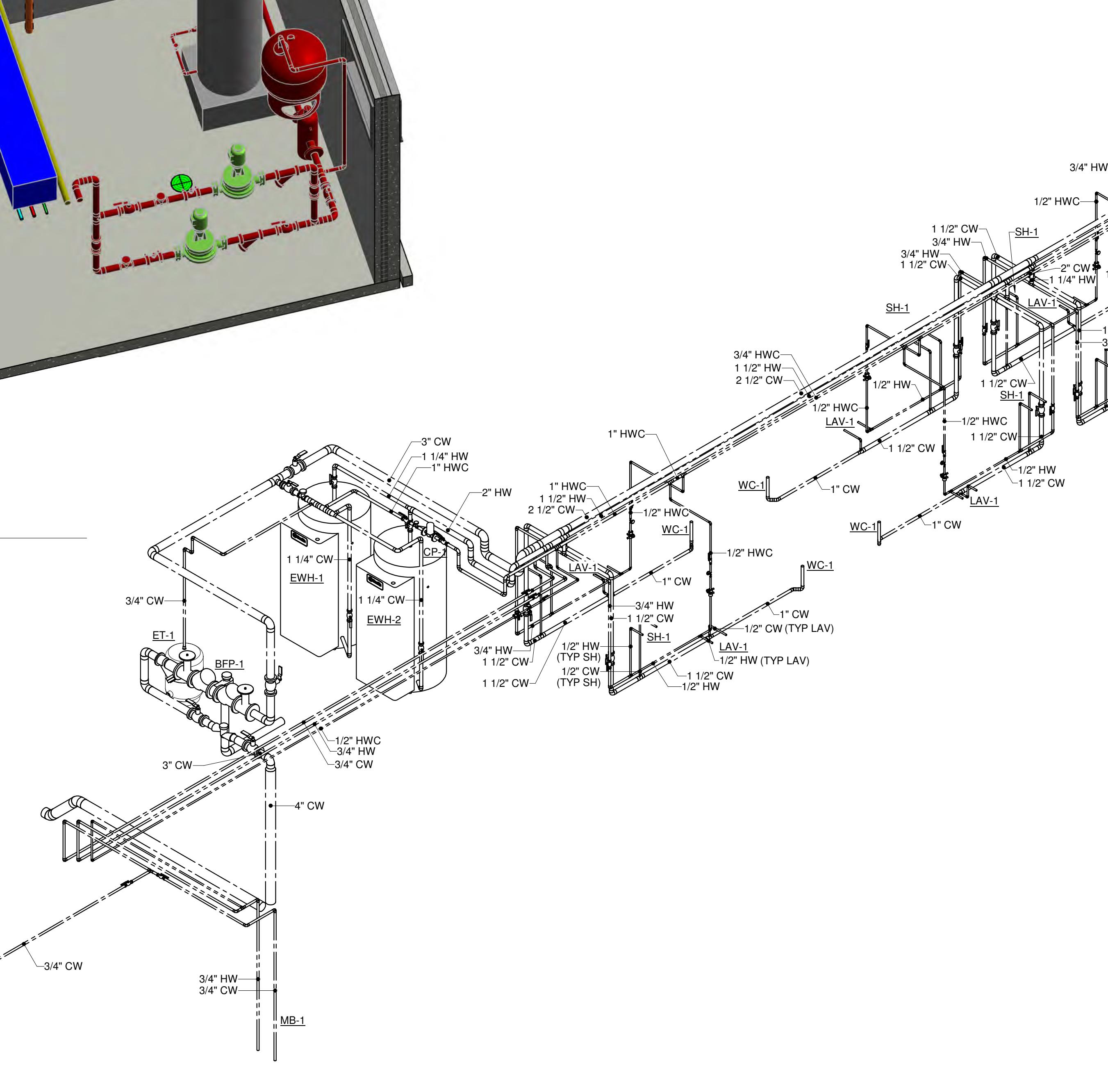


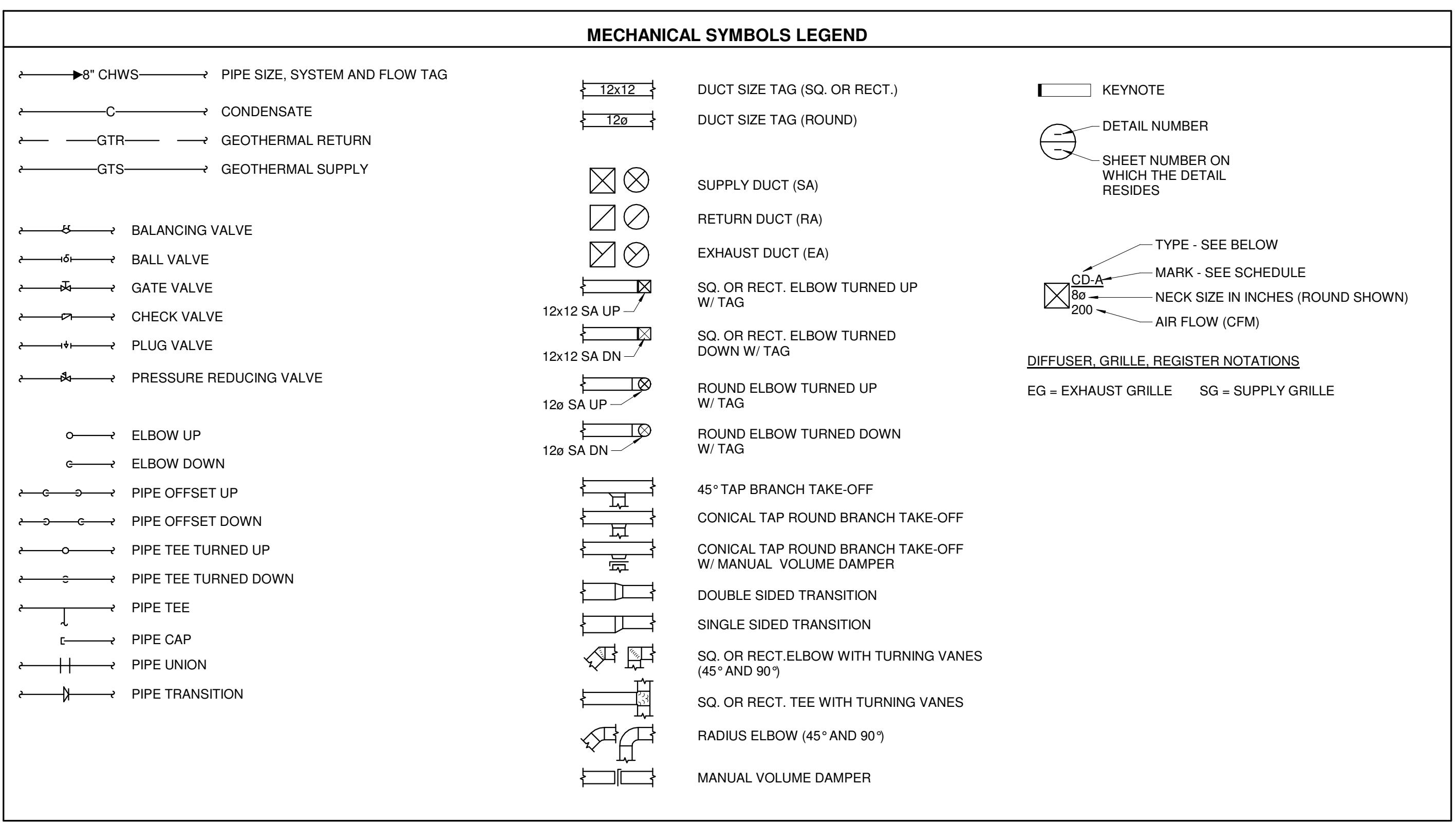
2 PLUMBING ISOMETRIC - WATER UTILITY BAY
NOT TO SCALE



NORTH

1 PLUMBING ISOMETRIC - DOMESTIC
NOT TO SCALE



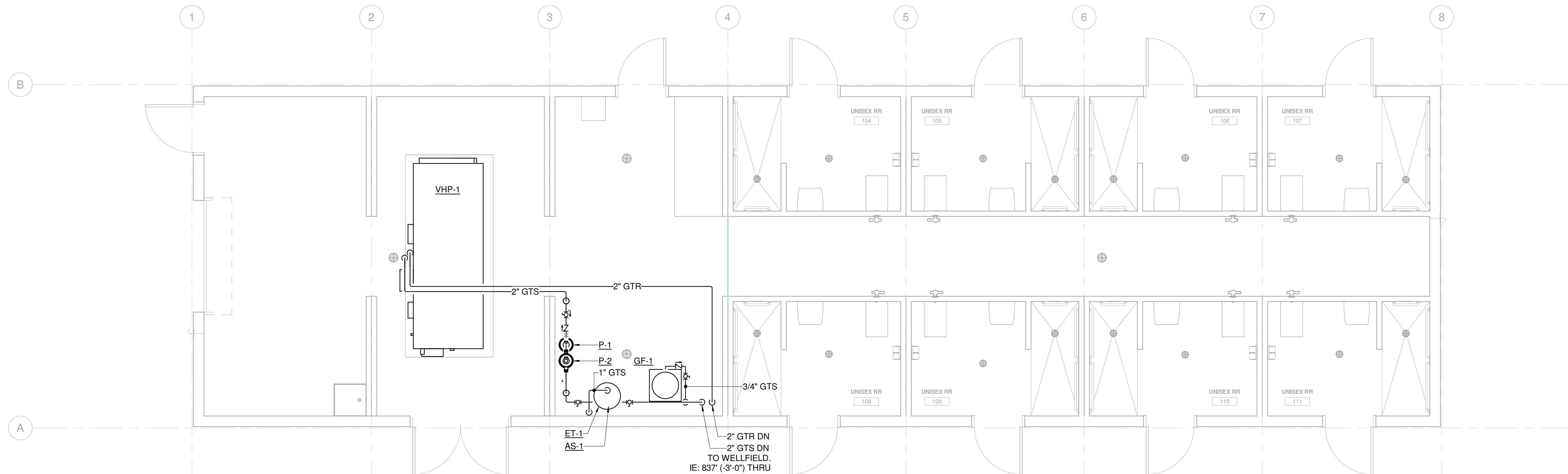


MECHANICAL DUCTWORK

- UNLESS NOTED OTHERWISE: LIGHT LINES INDICATE EXISTING DUCTWORK OR EQUIPMENT WHICH IS TO REMAIN. BOLD LINES INDICATE DUCTWORK AND EQUIPMENT TO BE INSTALLED UNDER THIS CONTRACT.
- DUCTWORK SHOWN IS IN SCHEMATIC FORM. NOT ALL RISERS AND DROPS ARE SHOWN. PROVIDE OFFSETS AS REQUIRED TO MEET SPACE REQUIREMENTS AND TO AVOID INTERFERENCE WITH OTHER TRADES. COORDINATE WITH OTHER TRADES PRIOR TO FABRICATION. THE CONTRACTOR SHALL PROVIDE COMPLETE FULLY FUNCTIONAL SYSTEMS.
- INSTALL MANUAL VOLUME DAMPERS IN ALL SUPPLY, RETURN AND EXHAUST DUCT SYSTEMS AS REQUIRED FOR CONTROLLING AIR VOLUMES TO TRUNK DUCTS, BRANCH DUCTS, OUTLETS, AND INLETS. CONTRACTOR SHALL INSTALL A COMPLETE SYSTEM OF DAMPERS AS REQUIRED FOR BALANCING AIR SYSTEMS.
- ALL FLOOR MOUNTED MECHANICAL EQUIPMENT SHALL BE MOUNTED ON MINIMUM 4" CONCRETE HOUSEKEEPING PAD(S).
- ALL EQUIPMENT AND DUCTWORK SUSPENDED BELOW THE ROOF SHALL BE SUSPENDED FROM THE STRUCTURE AND NOT THE ROOF DECK.
- ALL EQUIPMENT AND ACCESSORIES SHALL BE INSTALLED TO BE EASILY ACCESSIBLE.
- ALL WORK SHALL BE COMPLETED IN A SAFE WORKMANLIKE MANNER AND IN ACCORDANCE WITH ALL APPLICABLE STATE, LOCAL AND NATIONAL CODES, REGULATIONS AND ORDINANCES. IF ANY CONFLICTS ARISE BETWEEN THE CONTRACT DOCUMENTS AND THE APPLICABLE CODES, REGULATIONS OR ORDINANCE, THE CONTRACTOR SHALL BE RESPONSIBLE TO HAVE ALL WORK CONFORM TO THE STRICTER OF SAID REQUIREMENTS.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS AS REQUIRED FOR MECHANICAL INSTALLATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE BOTH A COMPLETE AND COMPLIANT INSTALLATION AS MAY BE DETERMINED BY THE AUTHORITY(S) HAVING JURISDICTION.
- CONTRACTOR SHALL NOT PROCURE OR FABRICATE ANY DUCTWORK OR EQUIPMENT WITHOUT FIRST VERIFYING ALL DIMENSIONS AND CONDITIONS WHETHER CURRENTLY EXISTING OR NOT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK, INCLUDING ANY REQUIRED REWORK.
- MAINTAIN ALL MANUFACTURER RECOMMENDED EQUIPMENT SERVICE AND SAFETY CLEARANCES. DO NOT LOCATE ANY EQUIPMENT OR RUN MATERIALS ABOVE ANY ELECTRICAL PANELS OR SWITCHGEAR. MAINTAIN ALL NFPA/NEC CODE REQUIRED CLEARANCES.
- EACH CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING, SCHEDULING AND SEQUENCING OF THEIR WORK WITH ALL OTHER TRADES. PROVIDE OFFSETS, EASEMENTS, OR RELOCATE TO AVOID CONFLICTS WITH WORK OF OTHER TRADES. FURNISH SUFFICIENT RESOURCES TO MEET ALL PROJECT MILESTONES AND DEADLINES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE WATERTIGHT AND WEATHER-PROOF INTEGRITY OF ROOFS, WALLS AND FLOORS DURING CONSTRUCTION. EACH TRADE SHALL LOCATE/DIMENSION/COORDINATE THEIR ROOF, FLOOR AND WALL OPENINGS WITH THE GENERAL CONTRACTOR (GC) OR CONSTRUCTION MANAGER.
- PROTECT NEW WORK FROM DAMAGE OR DECONTAMINATION. PROVIDE TEMPORARY PROTECTIVE CAPPING OR TAPE POLYETHYLENE ENCLOSURES OVER OPEN DUCTWORK ENDS AND EQUIPMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING DUCTWORK SYSTEMS PRIOR TO PLACING THEM IN SERVICE.
- IN A NEAT AND WORKMANLIKE MANNER: PATCH ANY REMAINING OPENINGS AND FILL EXCESSIVE GAPS; REWORK AND REFISH TO MATCH ADJACENT STRUCTURES; FLASH AND SEAL ALL MECHANICAL AND ELECTRICAL PENETRATIONS THRU WALLS, CEILINGS AND FLOORS WITH METAL FRAMEWORK OR ESCUTCHEONS. ALL OPENINGS SHALL BE PROPERLY SEALED SO AS TO MEET FIRE RATING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE WATERTIGHT AND WEATHER-PROOF INTEGRITY OF ROOFS, WALLS AND FLOORS DURING CONSTRUCTION. EACH TRADE SHALL LOCATE/DIMENSION/COORDINATE THEIR ROOF, FLOOR AND WALL OPENINGS WITH THE GENERAL CONTRACTOR (GC) OR CONSTRUCTION MANAGER.
- PROTECT NEW WORK FROM DAMAGE OR DECONTAMINATION. PROVIDE TEMPORARY PROTECTIVE CAPPING OR TAPE POLYETHYLENE ENCLOSURES OVER OPEN PIPING ENDS AND EQUIPMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING PIPING SYSTEMS PRIOR TO PLACING THEM IN SERVICE.
- IN A NEAT AND WORKMANLIKE MANNER, PATCH ANY REMAINING OPENINGS AND FILL EXCESSIVE GAPS; REWORK AND REFISH TO MATCH ADJACENT STRUCTURES; FLASH AND SEAL ALL MECHANICAL AND ELECTRICAL PENETRATIONS THRU WALLS, CEILINGS AND FLOORS WITH METAL FRAMEWORK OR ESCUTCHEONS. ALL OPENINGS SHALL BE PROPERLY SEALED SO AS TO MEET FIRE RATING.

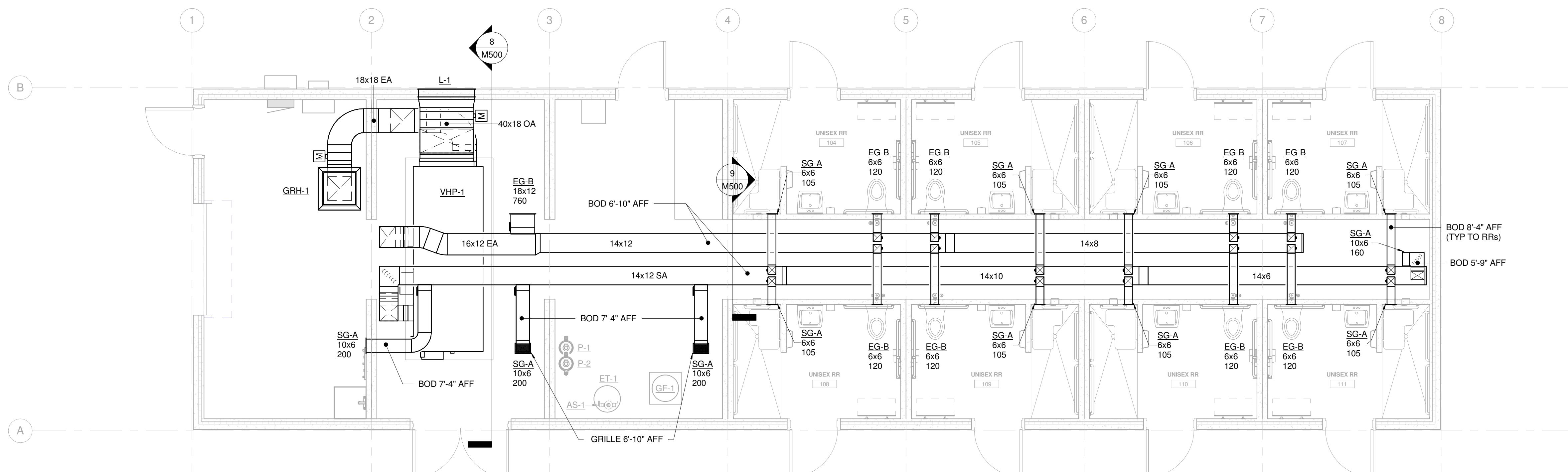
MECHANICAL PIPING

- PIPING SHOWN IS IN SCHEMATIC FORM. NOT ALL RISERS AND DROPS ARE SHOWN. PROVIDE OFFSETS AS REQUIRED TO MEET SPACE REQUIREMENTS AND TO AVOID INTERFERENCE WITH OTHER TRADES. COORDINATE WITH OTHER TRADES PRIOR TO FABRICATION. THE CONTRACTOR SHALL PROVIDE COMPLETE FULLY FUNCTIONAL SYSTEMS.
- PROVIDE ACCESSIBLE ISOLATION VALVES AT ALL BRANCH CONNECTIONS TO MAINS. COORDINATE VALVE LOCATIONS ABOVE ACCESSIBLE CEILINGS OR COORDINATE WITH THE GC TO PROVIDE ACCESS PANELS.
- BREAK CONNECTIONS REQUIRED AT ALL MAJOR EQUIPMENT AND PIPING ITEMS THAT REQUIRE REMOVAL FOR MAINTENANCE.
- PIPE REDUCTIONS ON HORIZONTAL PIPING GOING FROM LARGER TO SMALLER SHALL BE MADE WITH ECCENTRIC REDUCERS: TOP FLAT FOR LIQUID SYSTEMS, CONCENTRIC REDUCERS MAY BE USED FOR FLOW GOING FROM SMALL TO LARGER SIZE PIPE.
- NEW FLOOR/WALL/CEILING PENETRATIONS REQUIRED FOR MECHANICAL PIPING INSTALLATION SHALL BE CLEANLY BORED AT RIGHT ANGLES. AS NEW PIPING IS INSTALLED, NEW PIPING PENETRATIONS SHALL BE NEATLY CAULKED TO FILL VOID. WALL PENETRATIONS SHALL BE FINISHED WITH ESCUTCHEONS.
- ALL NEW PIPING EXPOSED IN OCCUPIED SPACES SHALL HAVE PVC JACKETS INSTALLED OVER THE PIPING INSULATION. ANY PIPING REQUIRED TO BE EXPOSED SHALL BE INSTALLED VERTICALLY OR HORIZONTALLY IN LEAST VISIBLE LOCATION.
- ALL BRANCH PIPING TO EQUIPMENT TO BE A MINIMUM OF 3/4" UNLESS OTHERWISE NOTED.
- EXTEND ALL DRAIN CONNECTIONS FOR MECHANICAL EQUIPMENT TO NEAREST FLOOR DRAIN, MOP SINK, ETC. PROVIDE P-TRAP AS REQUIRED BY MANUFACTURER. DRAIN PIPING TO BE SIZED PER CODE OR LINE SIZE, WHICHEVER IS LARGER.
- ALL EQUIPMENT AND ACCESSORIES SHALL BE INSTALLED TO BE EASILY ACCESSIBLE.
- ALL WORK SHALL BE COMPLETED IN A SAFE WORKMANLIKE MANNER AND IN ACCORDANCE WITH ALL APPLICABLE STATE, LOCAL AND NATIONAL CODES, REGULATIONS AND ORDINANCES. IF ANY CONFLICTS ARISE BETWEEN THE CONTRACT DOCUMENTS AND THE APPLICABLE CODES, REGULATIONS OR ORDINANCE, THE CONTRACTOR SHALL BE RESPONSIBLE TO HAVE ALL WORK CONFORM TO THE STRICTER OF SAID REQUIREMENTS.
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- MAINTAIN ALL MANUFACTURER RECOMMENDED EQUIPMENT SERVICE AND SAFETY CLEARANCES. DO NOT LOCATE ANY EQUIPMENT OR RUN MATERIALS ABOVE ANY ELECTRICAL PANELS OR SWITCHGEAR. MAINTAIN ALL NFPA/NEC CODE REQUIRED CLEARANCES.
- EACH CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING, SCHEDULING AND SEQUENCING OF THEIR WORK WITH ALL OTHER TRADES. PROVIDE OFFSETS, EASEMENTS, OR RELOCATE TO AVOID CONFLICTS WITH WORK OF OTHER TRADES. FURNISH SUFFICIENT RESOURCES TO MEET ALL PROJECT MILESTONES AND DEADLINES.
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- IN A NEAT AND WORKMANLIKE MANNER, PATCH ANY REMAINING OPENINGS AND FILL EXCESSIVE GAPS; REWORK AND REFISH TO MATCH ADJACENT STRUCTURES; FLASH AND SEAL ALL MECHANICAL AND ELECTRICAL PENETRATIONS THRU WALLS, CEILINGS AND FLOORS WITH METAL FRAMEWORK OR ESCUTCHEONS. ALL OPENINGS SHALL BE PROPERLY SEALED SO AS TO MEET FIRE RATING.

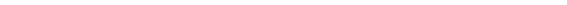


2 MECHANICAL PIPING PLAN

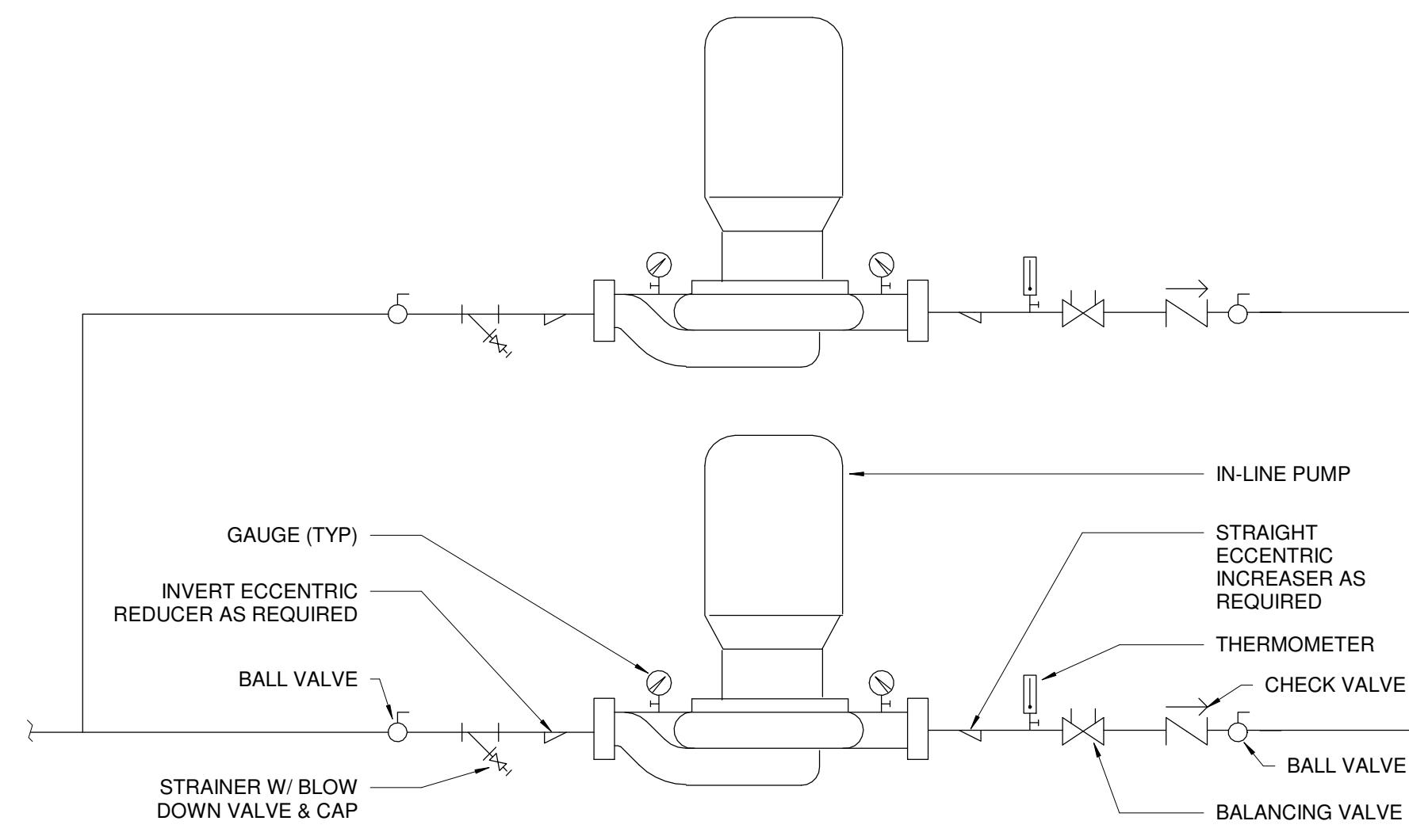
A compass rose is shown, consisting of a circle divided into four quadrants by a horizontal and a vertical line. A thick black horizontal line extends from the left side of the circle to the left, with the word "NORTH" written in black capital letters to its left.



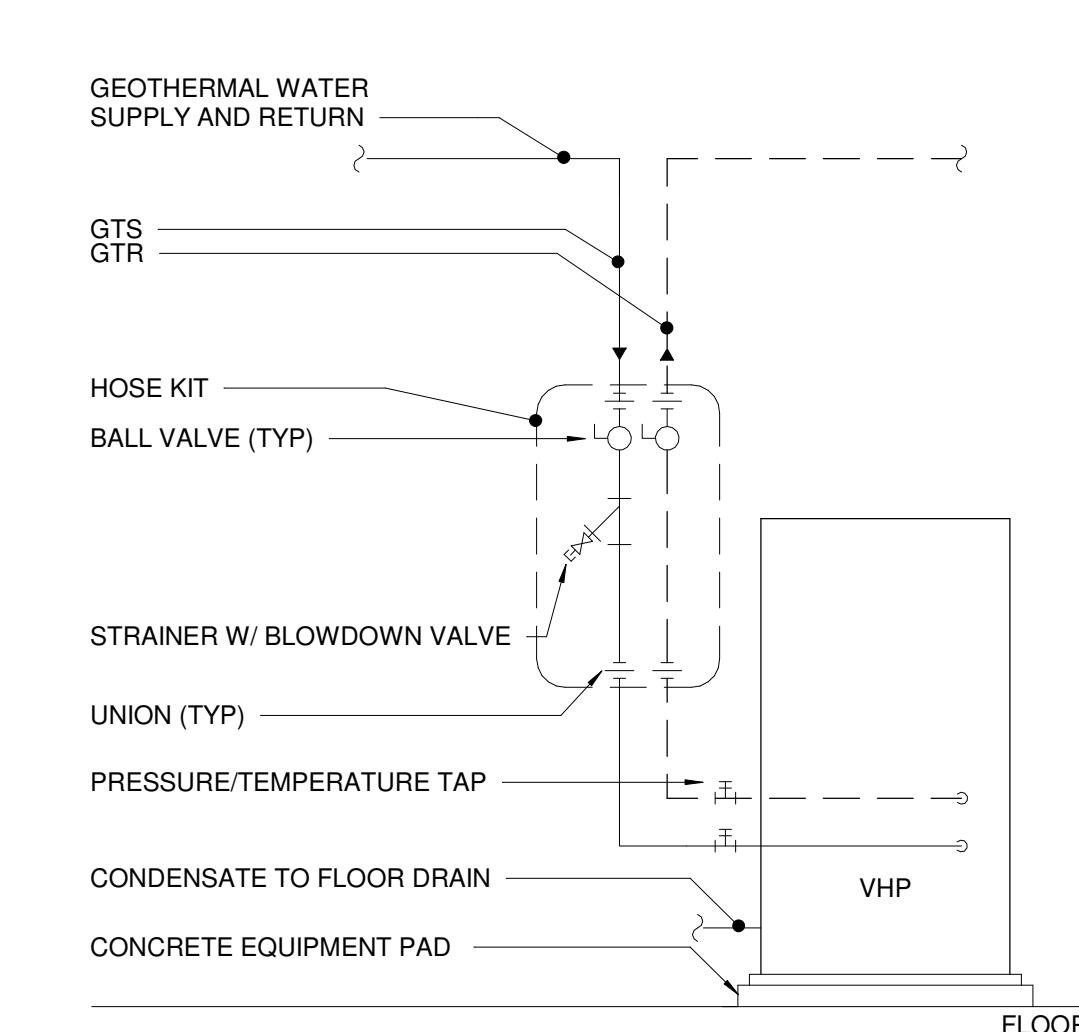
1 MECHANICAL HVAC PLAN



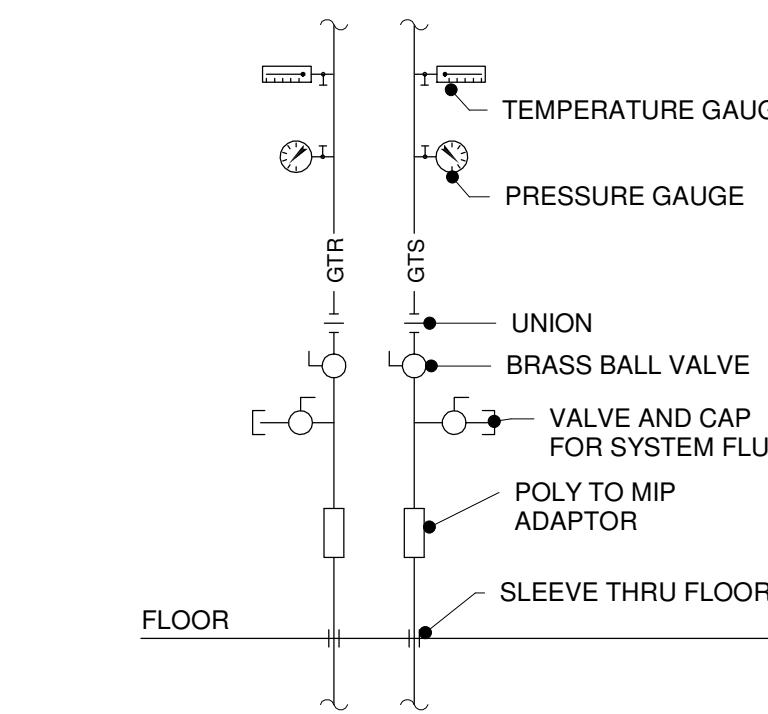
A compass rose with four quadrants. The word "NORTH" is written in bold capital letters to the left of a thick black horizontal line that extends into the top quadrant. The other three quadrants are empty.



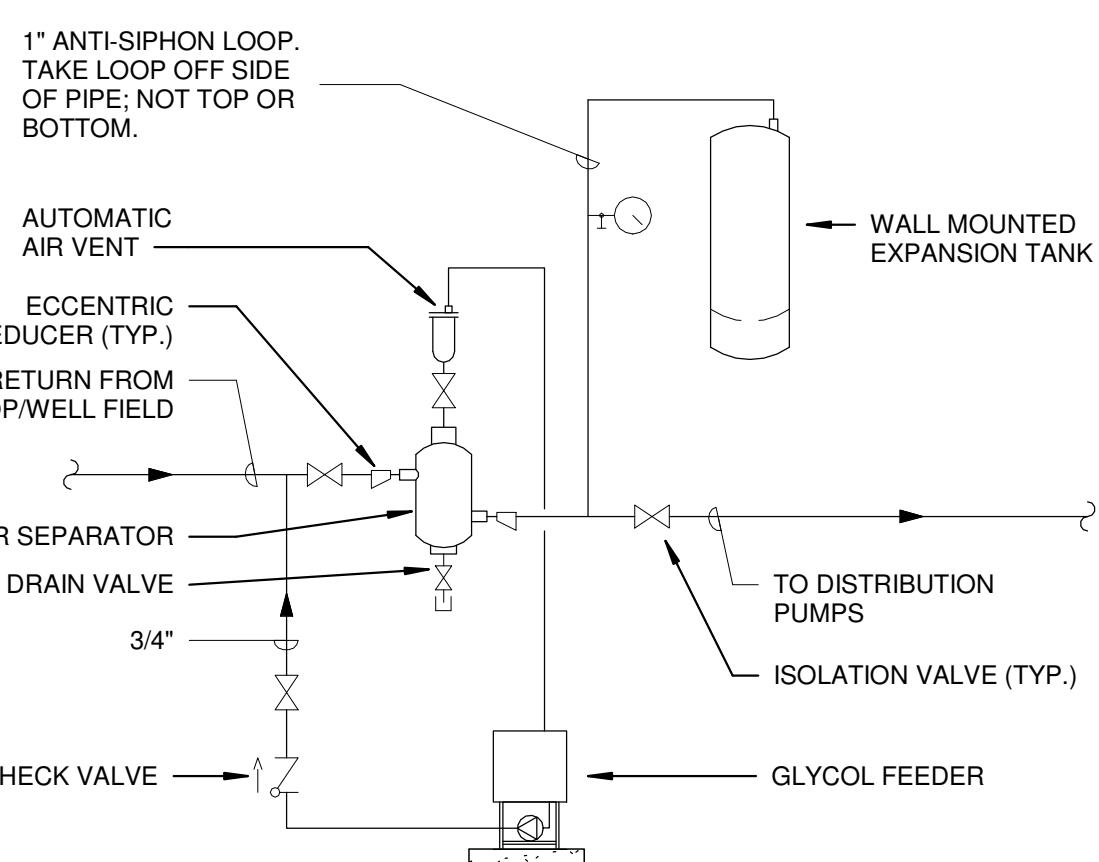
1 PIPING DIAGRAM - IN-LINE PUMP
NOT TO SCALE



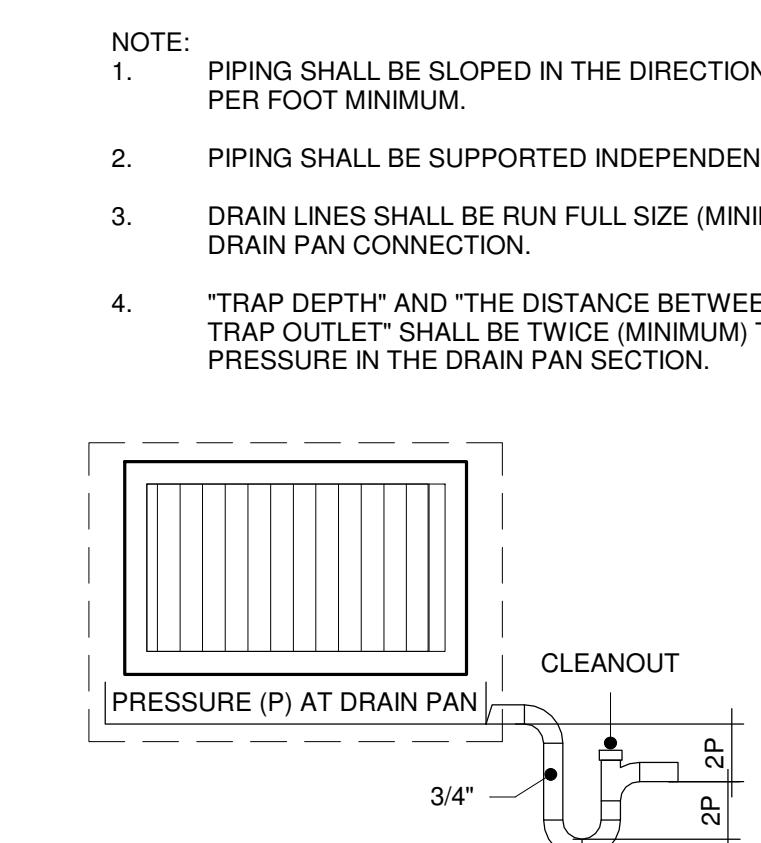
2 HEAT PUMP PIPING DETAIL
NOT TO SCALE



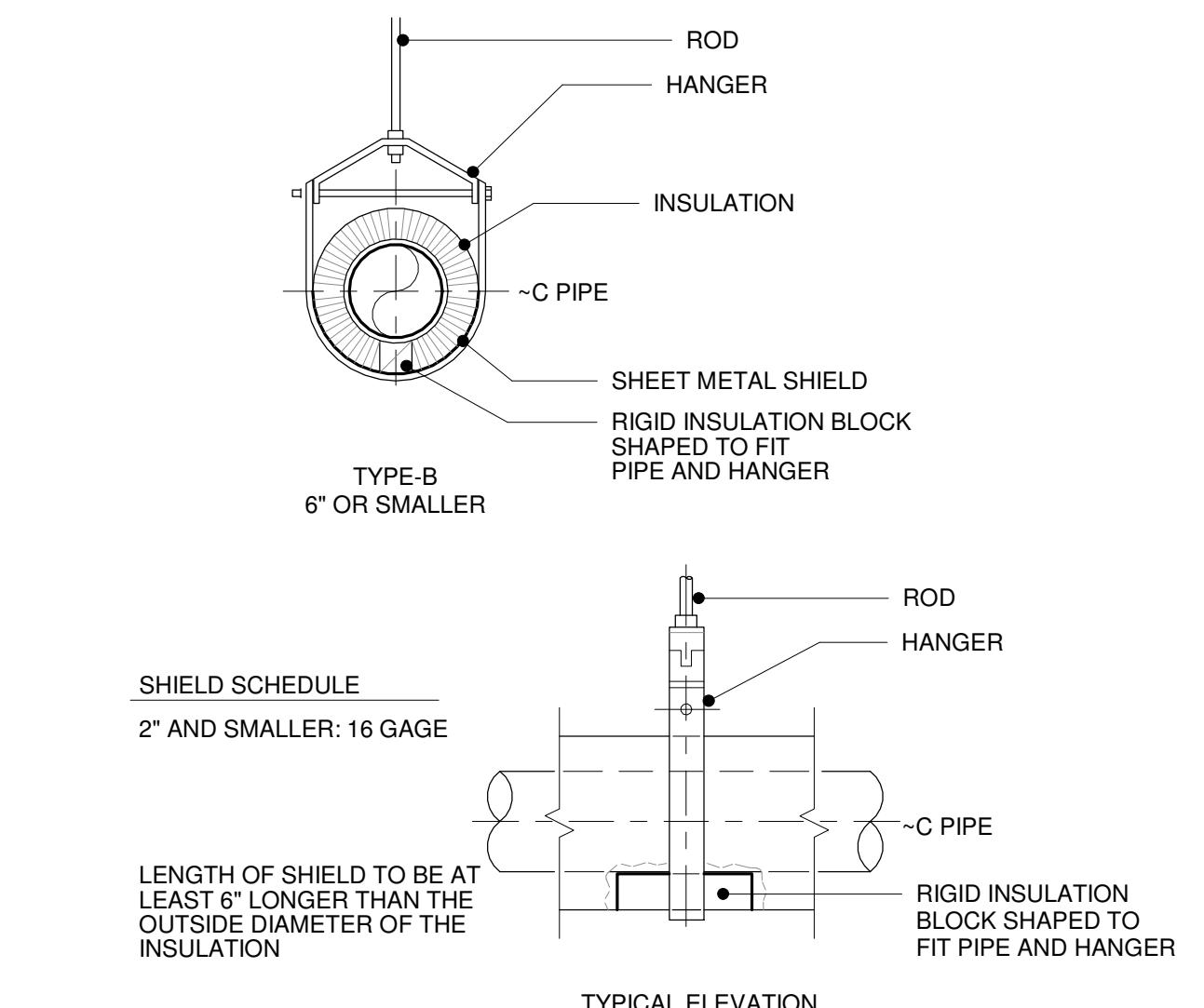
3 GEOTHERMAL LOOP HEADER DETAIL
NOT TO SCALE



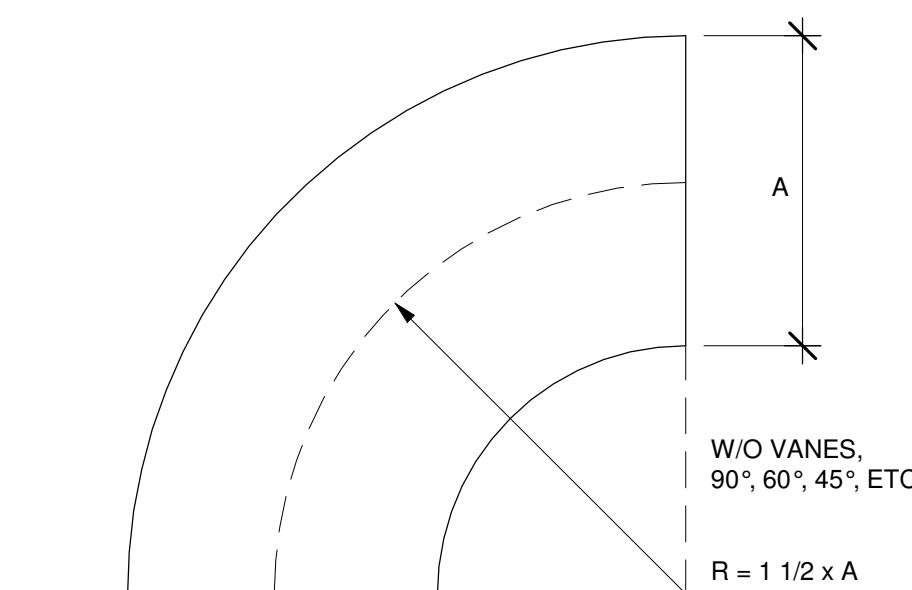
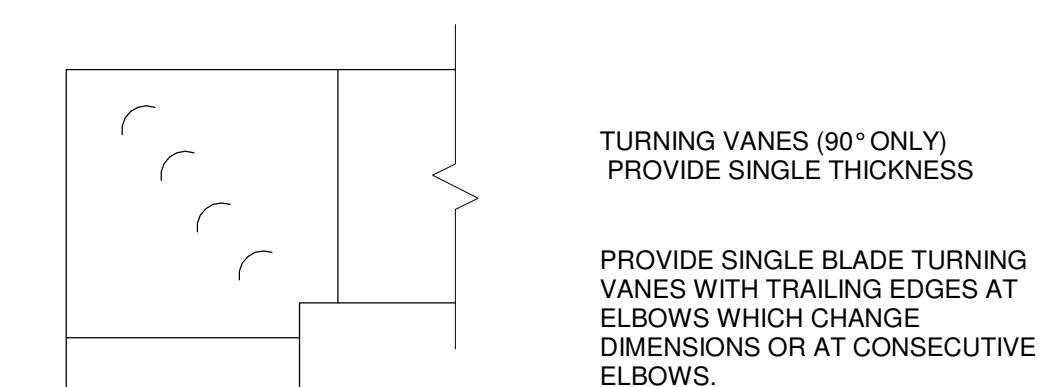
4 AIR SEPARATOR, EXPANSION TANK AND GLYCOL FEEDER DETAIL
NOT TO SCALE



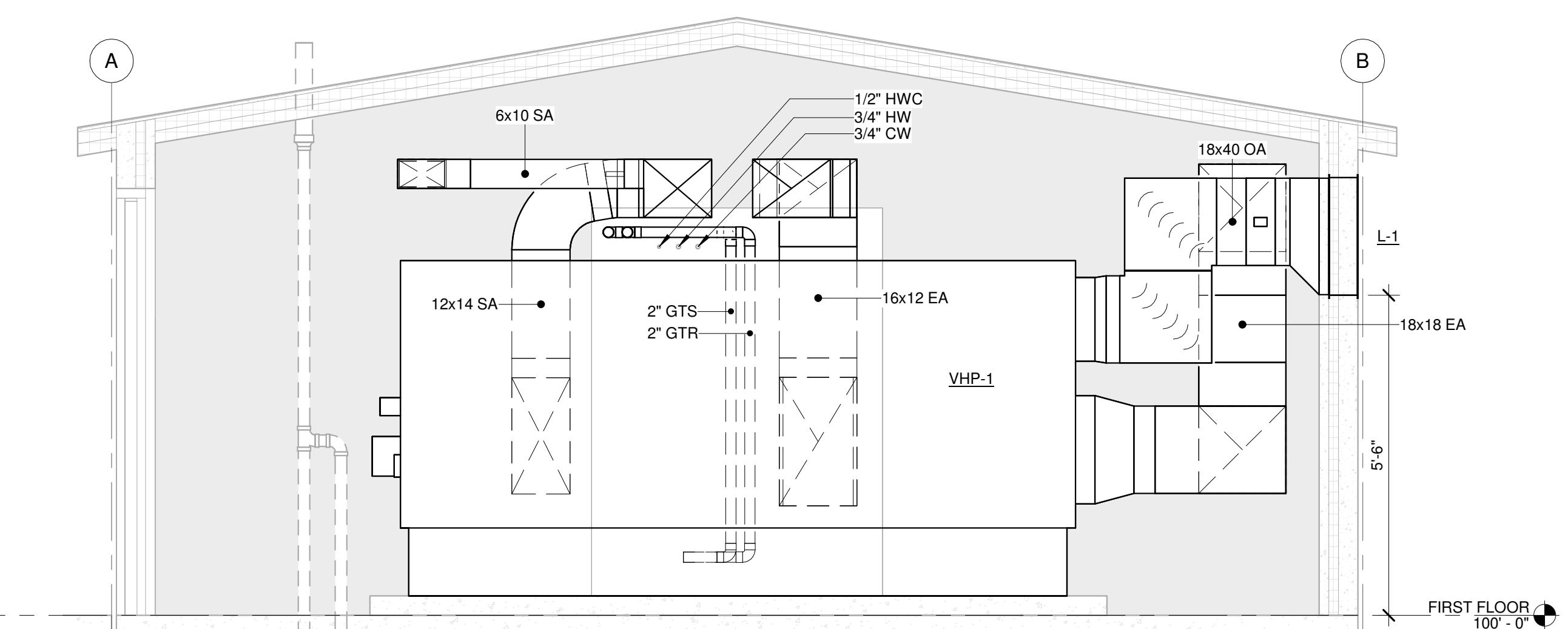
5 DRAIN PAN PIPING DETAIL
NOT TO SCALE



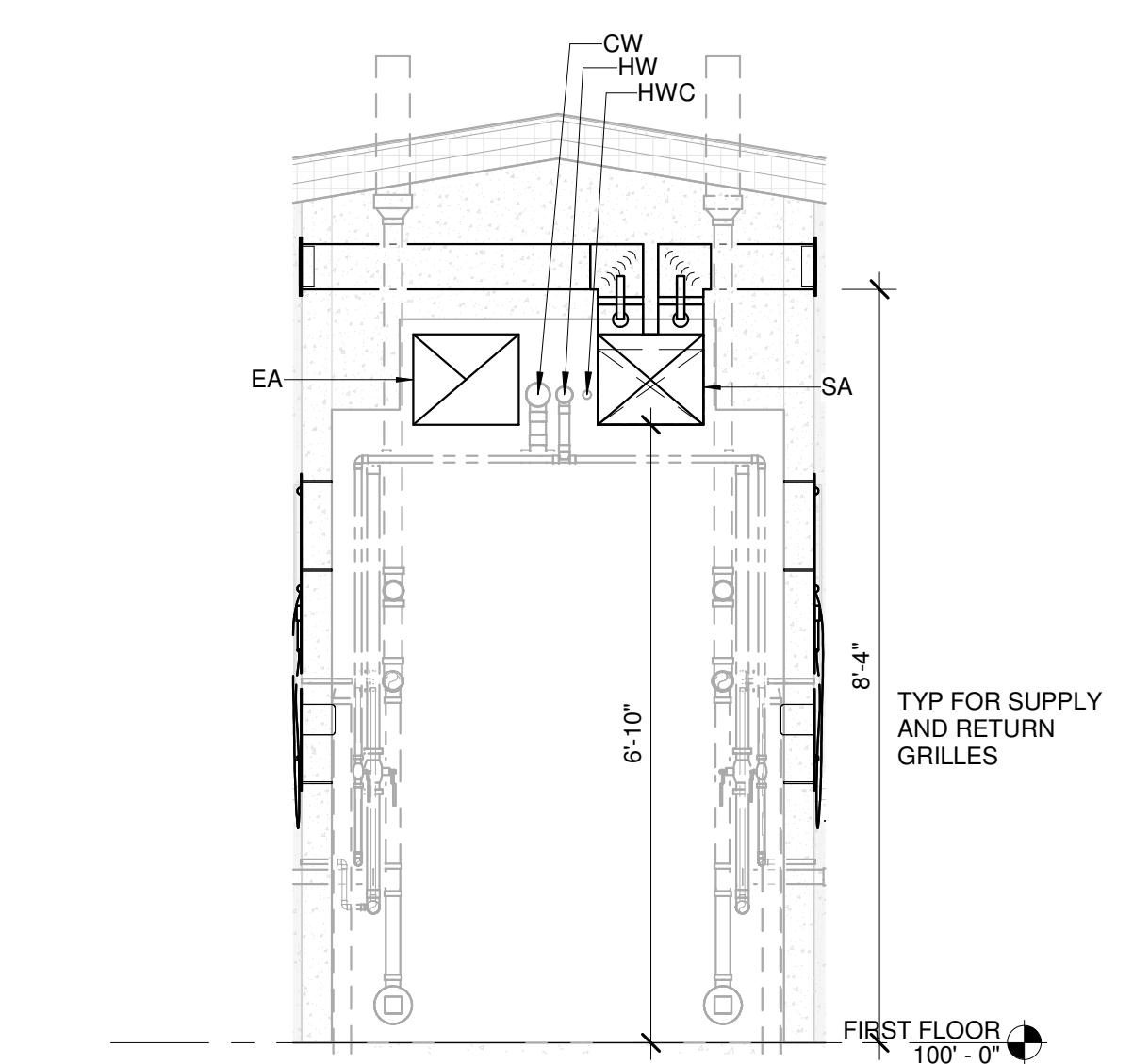
6 INSULATED PIPE HANGER DETAIL
NOT TO SCALE



7 ELBOW DETAILS
NOT TO SCALE



8 MECHANICAL SECTION - VHP
1/2" = 1'-0" 0" 3"



9 MECHANICAL SECTION - PIPE CHASE
1/2" = 1'-0" 0" 3"

HEAT PUMP SCHEDULE - WATER SOURCE

REMARKS:
 1. SENSIBLE ENERGY RECOVERY WHEEL WITH BYPASS DAMPER, WATER COOLED HEAT PUMP, AND ELECTRIC REHEAT.
 2. ALL MOTORS SHALL BE NEMA PREMIUM EFFICIENCY.
 3. PROVIDE FACTORY MOUNTED DISCONNECT.
 4. VHP-1 COOLING IS BASED ON 90°F EWT, HEATING IS BASED ON 40°F EWT. 30% PROPYLENE GLYCOL.
 5. EER AND COP VALUE BASED ASHRAE STANDARD CONDITIONS.
 6. HEAT PUMP SHALL HAVE MODULATING CAPACITY WITH VFD. FANS SHALL BE VARIABLE SPEED ECM MOTORS.
 7. ALL ALUMINUM INTERIOR.
 8. PROVIDE WITH EXTRA SET OF FILTERS. REPLACE AT TIME OF OWNER ACCEPTANCE.

MARK	SUPPLY FAN DATA		EXHAUST FAN DATA		HEAT PUMP - COOLING						HOT GAS REHEAT			HEAT PUMP - HEATING						ENERGY RECOVERY WHEEL						ELECTRICAL INFORMATION				DESIGN BASIS				
	CFM	EXTERNAL STATIC PRESSURE (IN. WG)	HP	CFM	EXTERNAL STATIC PRESSURE (IN. WG)	HP	GPM	PD (FT H2O)	EWT (°F)	LWT (°F)	EAT (°F)	LAT (°F)	CAPACITY (MBH)	EER	MBH	EAT DB (°F)	LAT DB (°F)	EWT (°F)	LWT (°F)	TOTAL MBH	COP	OUTSIDE AIR EAT (°F)	EXHAUST AIR EAT (°F)	TEMPERED AIR LAT (°F)	EFFECTIVENESS %	TOTAL REC MBH	OUTSIDE AIR EAT (°F)	EXHAUST AIR EAT (°F)	TEMPERED AIR LAT (°F)	EFFECTIVENESS %	TOTAL REC MBH	VOLTS	PHASE	MCA

MECHANICAL PUMP SCHEDULE							
1. WELLFIELD PRESSURE DROP ASSUMED TO BE 25 FEET. CONTRACTOR TO VERIFY PRIOR TO ORDERING PUMP.							
MARK	SYSTEM SERVED	TYPE	GPM	HEAD (FT)	HP	RPM	VOLTS PHASE
P-2	GEOTHERMAL	IN-LINE	20	40	1	1760	240

AIR/DIRT SEPARATOR						
MARK	PIPE SIZE (IN)	CAPACITY (GPM)	MAX PD (FT)	AIR REMOVAL (%)	DESIGN BASIS	REMARKS

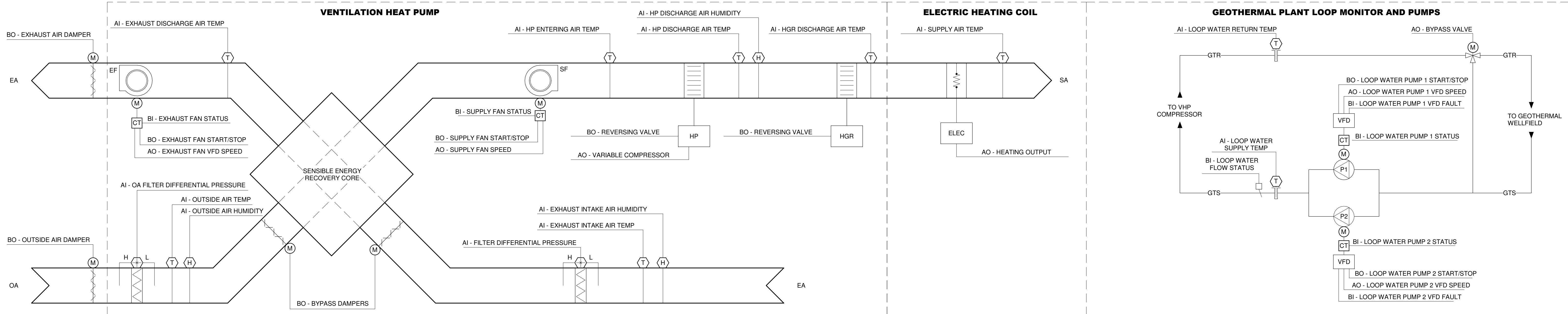
GRAVITY INTAKE/RELIEF HOOD SCHEDULE							
REMARKS: 1. PROVIDE WITH INSECT SCREEN AND 12" CURB. 2. PROVIDE WITH MOTORIZED DAMPER, GREENHECK MODEL ICD-45 WITH 24V/1PH ACTUATOR (OR EQUAL).							
MARK	CFM	THROAT SIZE (WxL) (IN)	THROAT VELOCITY (FPM)	MAX PD (IN)	DESIGN BASIS		
GRH-1	1925	18X18	856	0.15	GREENHECK WRH-18X18		

DIFFUSERS REGISTERS AND GRILLES SCHEDULE							
MARK	MATERIAL	DESCRIPTION	FACTORY FINISH	DESIGN BASIS			
A	ALUMINUM	3/4" SPACING DBL DEF	WHITE	TITUS 300FS			
B	ALUMINUM	3/4" SPACING 35° DEF					

GLYCOL FEED SYSTEM SCHEDULE						
MARK	SYSTEM SERVED	TANK VOLUME (GAL)	PRESSURE RANGES (PSI)	ELECTRICAL DATA	DESIGN BASIS	
			CUT IN CUT OUT	VOLTS PHASE HP		

MECHANICAL PIPING EXPANSION TANK SCHEDULE					
MARK	SYSTEM SERVED	TYPE	TANK CAPACITY (GAL)	ACCEPTANCE CAPACITY (GAL)	DESIGN BASIS

LOUVER SCHEDULE							
1. PROVIDE WITH BIRD SCREEN.							
2. COLOR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE OF COLOR OPTIONS.							
MARK	CFM	DIMENSIONS (IN)	W	H	D	(%)	FREE AREA VELOCITY (FPM) PRESSURE DROP (IN WG)
L-1	1825	42	24	6	49	540	0.05
							RUSKIN ELF6375DX



CONTROLS SCHEMATIC

NOT TO SCALE

VENTILATION HEAT PUMP:

RUN CONDITIONS - CONTINUOUS:
THE UNIT SHALL RUN CONTINUOUSLY BASED ON A USER DEFINED SCHEDULE.

SUPPLY FAN:
THE SUPPLY FAN SHALL RUN CONTINUOUSLY, UNLESS SHUTDOWN ON SAFETIES.
OCCUPIED MODE: FAN SHALL OPERATE AT FULL SCHEDULED AIRFLOW
UNOCCUPIED MODE: FAN SHALL OPERATE AT 30% SCHEDULED AIRFLOW

ALARMS SHALL BE PROVIDED AS FOLLOWS:
• SUPPLY FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
• SUPPLY FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.

EXHAUST FAN:
THE EXHAUST FAN SHALL RUN WHENEVER THE SUPPLY FAN RUNS.
OCCUPIED MODE: FAN SHALL OPERATE AT FULL SCHEDULED AIRFLOW
UNOCCUPIED MODE: FAN SHALL OPERATE AT 30% SCHEDULED AIRFLOW

ALARMS SHALL BE PROVIDED AS FOLLOWS:
• EXHAUST FAN FAILURE: COMMANDED ON, BUT THE STATUS IS OFF.
• EXHAUST FAN IN HAND: COMMANDED OFF, BUT THE STATUS IS ON.

HEATING AND COOLING - VARIABLE COMPRESSOR:
THE CONTROLLER SHALL MODULATE THE COMPRESSOR TO MAINTAIN EXHAUST INTAKE AIR TEMPERATURE SETPOINT. THE COMPRESSOR SHALL RUN SUBJECT TO ITS OWN INTERNAL SAFETIES AND CONTROLS.

• COOLING MODE: 75°F (ADJ.) OCCUPIED / 78°F (ADJ.) UNOCCUPIED RETURN AIR TEMPERATURE
• HEATING MODE: 70°F (ADJ.) OCCUPIED / 67°F (ADJ.) UNOCCUPIED RETURN AIR TEMPERATURE

THE HEATING SHALL BE ENABLED WHENEVER:
• EXHAUST INTAKE AIR TEMPERATURE IS 2°F (ADJ.) LESS THAN SETPOINT
• AND THE FAN STATUS IS ON
• AND THE REVERSING VALVE IS IN HEAT MODE.

THE COOLING SHALL BE ENABLED WHENEVER:
• EXHAUST INTAKE AIR TEMPERATURE IS 2°F (ADJ.) MORE THAN SETPOINT
• AND THE FAN STATUS IS ON
• AND THE REVERSING VALVE IS IN COOL MODE.

ON MODE CHANGE, THE COMPRESSOR SHALL BE DISABLED AND REMAIN OFF UNTIL
AFTER THE REVERSING VALVE HAS CHANGED POSITION.

DEHUMIDIFICATION:
THE CONTROLLER SHALL MEASURE THE EXHAUST INTAKE AIR HUMIDITY AND OVERRIDE THE COOLING SEQUENCE WHEN THE EXHAUST INTAKE AIR HUMIDITY IS AT OR ABOVE 60% RH (ADJ.). THE FANS SHALL OPERATE AT FULL AIRFLOW WHEN IN DEHUMIDIFICATION MODE. THE HP DISCHARGE AIR TEMPERATURE SHALL BE MAINTAINED AT 75°F (ADJ.) AND THE HOT GAS REHEAT COIL VALVE SHALL MODULATE TO MATCH AIR EXHAUST INTAKE AIR TEMPERATURE SETPOINT. DEHUMIDIFICATION SHALL BE ENABLED WHENEVER THE SUPPLY FAN STATUS IS ON.

HGR DISCHARGE AIR TEMPERATURE:
THE CONTROLLER SHALL MONITOR THE HGR DISCHARGE AIR TEMPERATURE.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
• HIGH EXHAUST INTAKE AIR TEMP: IF THE EXHAUST INTAKE AIR HUMIDITY IS GREATER THAN 75% (ADJ.).
• LOW EXHAUST INTAKE AIR HUMIDITY: IF THE EXHAUST INTAKE AIR HUMIDITY IS LESS THAN 35% (ADJ.).

EXHAUST AIR FILTER DIFFERENTIAL PRESSURE MONITOR:
THE CONTROLLER SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FILTER.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
• FILTER CHANGE REQUIRED: FILTER DIFFERENTIAL PRESSURE EXCEEDS A USER DEFINABLE LIMIT (ADJ.).

EXHAUST DISCHARGE AIR TEMPERATURE:
THE CONTROLLER SHALL MONITOR THE EXHAUST DISCHARGE AIR TEMPERATURE.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
• HIGH EXHAUST DISCHARGE AIR TEMP: IF THE EXHAUST DISCHARGE AIR TEMPERATURE IS GREATER THAN 95°F (ADJ.).
• LOW EXHAUST DISCHARGE AIR TEMP: IF THE EXHAUST DISCHARGE AIR TEMPERATURE IS LESS THAN 60°F (ADJ.).

EXHAUST INTAKE AIR TEMPERATURE:
THE CONTROLLER SHALL MONITOR THE EXHAUST INTAKE AIR TEMPERATURE AND USE AS REQUIRED FOR SETPOINT CONTROL.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
• HIGH EXHAUST INTAKE AIR TEMP: IF THE EXHAUST INTAKE AIR TEMPERATURE IS GREATER THAN 95°F (ADJ.).
• LOW EXHAUST INTAKE AIR TEMP: IF THE EXHAUST INTAKE AIR TEMPERATURE IS LESS THAN 60°F (ADJ.).

EXHAUST INTAKE AIR HUMIDITY:
THE CONTROLLER SHALL MONITOR THE EXHAUST INTAKE AIR HUMIDITY AND USE AS REQUIRED FOR HUMIDITY CONTROL.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
• HIGH EXHAUST INTAKE AIR HUMIDITY: IF THE EXHAUST INTAKE AIR HUMIDITY IS GREATER THAN 75% (ADJ.).
• LOW EXHAUST INTAKE AIR HUMIDITY: IF THE EXHAUST INTAKE AIR HUMIDITY IS LESS THAN 35% (ADJ.).

EXHAUST AIR FILTER DIFFERENTIAL PRESSURE MONITOR:
THE CONTROLLER SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FILTER.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
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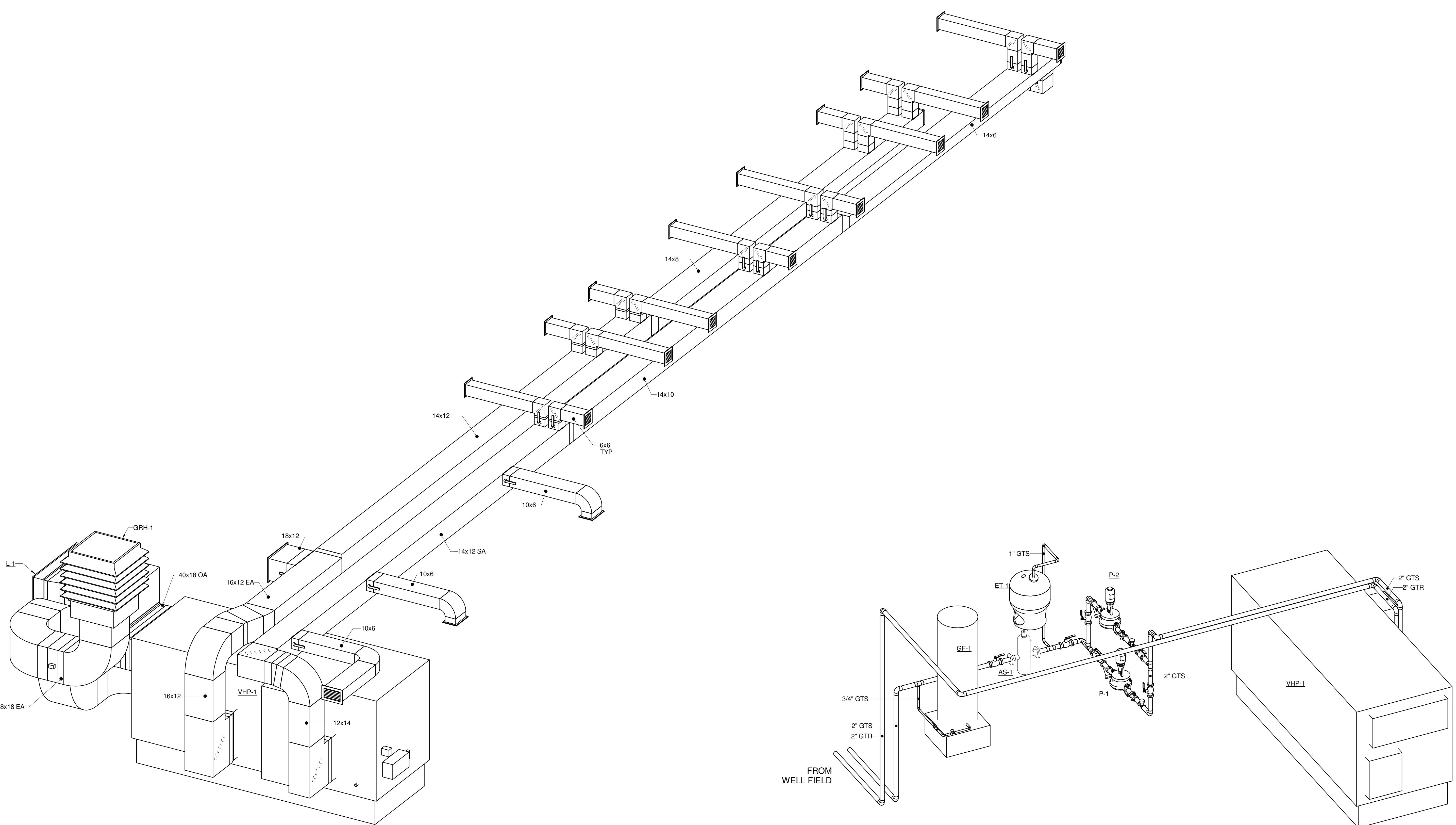
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ALARMS SHALL BE PROVIDED AS FOLLOWS:
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• LOW EXHAUST DISCHARGE AIR TEMP: IF THE EXHAUST DISCHARGE AIR TEMPERATURE IS LESS THAN 60°F (ADJ.).

EXHAUST INTAKE AIR TEMPERATURE:
THE CONTROLLER SHALL MONITOR THE EXHAUST INTAKE AIR TEMPERATURE AND USE AS REQUIRED FOR SETPOINT CONTROL.

ALARMS SHALL BE PROVIDED AS FOLLOWS:
• HIGH EXHAUST INTAKE AIR TEMP: IF THE EXHAUST INTAKE AIR TEMPERATURE IS GREATER THAN 95°F (ADJ.).
• LOW EXHAUST INTAKE AIR TEMP: IF THE EXHAUST INTAKE AIR TEMPERATURE IS LESS THAN 60°F (ADJ.).

THE CONTROLLER SHALL MEASURE THE EXHAUST INTAKE AIR TEM



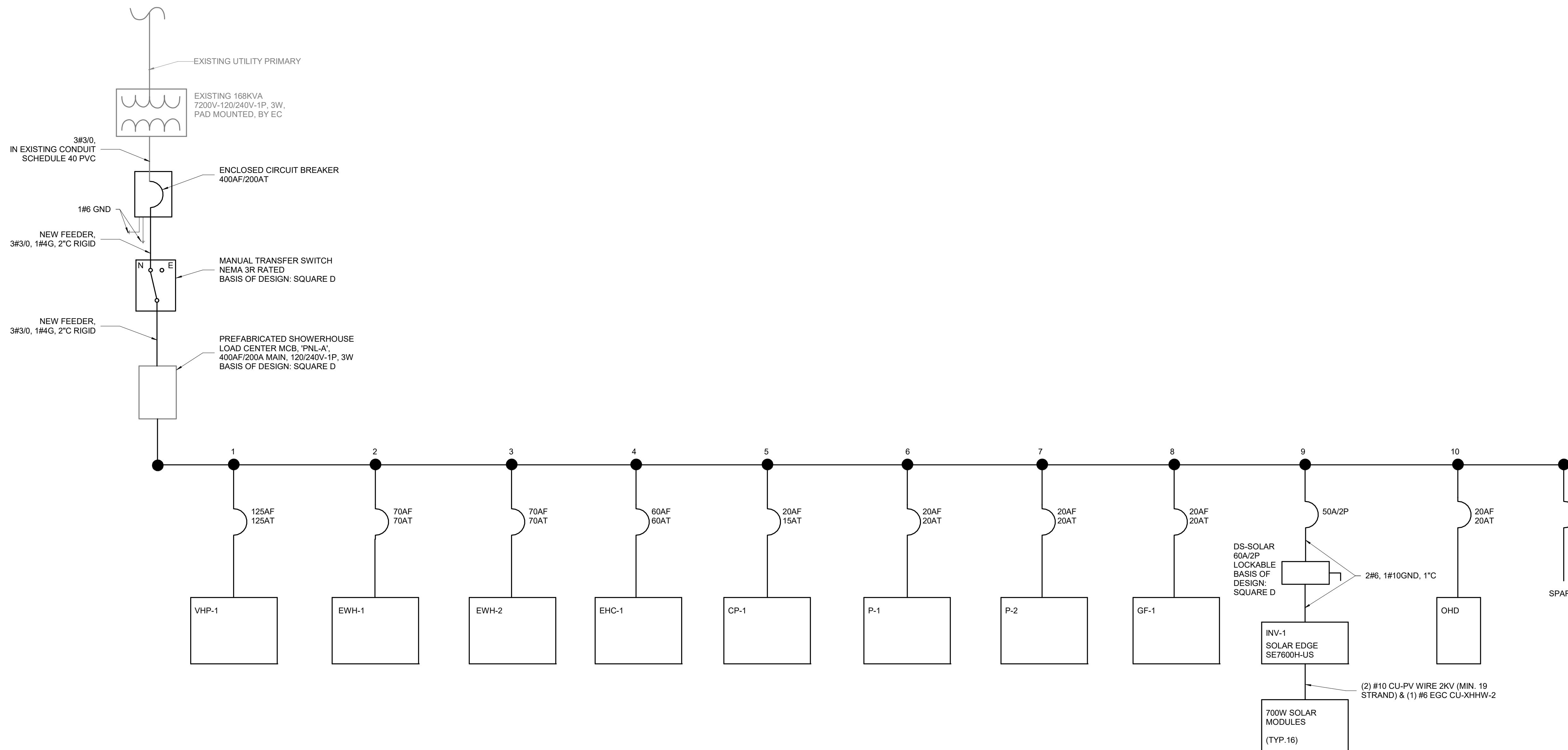
2 MECHANICAL ISOMETRIC - DUCTWORK

0' 1' 2' 3'

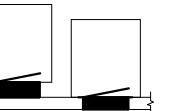
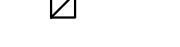
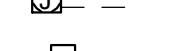
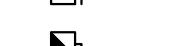
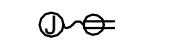
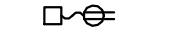
NOTE: SEE DETAILS ON SHEET M500 FOR ADDITIONAL VALVE AND ACCESSORY REQUIREMENTS.

1 MECHANICAL ISOMETRIC - GEOTHERMAL PIPING
NOT TO SCALE

MECHANICAL AND ELECTRICAL COORDINATION SCHEDULE																
GENERAL NOTES:																
A. MOCP SIZES SHOWN BELOW ARE FOR BIDDING PURPOSES ONLY. VERIFY MOCP WITH EQUIPMENT NAME PLATE DATA PRIOR TO ORDERING EQUIPMENT.																
B. MINIMUM WIRE SIZE SHALL BE #12 AWG AND MINIMUM CONDUIT SIZE SHALL BE 3/4".																
C. INCLUDE A SEPARATE, GREEN, CONDUCTOR IN ALL FEEDER AND BRANCH CIRCUIT CONDUITS.																
ABBREVIATIONS:																
EC - ELECTRICAL CONTRACTOR																
MC - MECHANICAL CONTRACTOR																
MFR - MANUFACTURER																
TCC - TEMPERATURE CONTROL CONTRACTOR																
OWN - OWNER																
REMARKS:																
1. XXX.																
2. XXX.																
EQUIPMENT SCHEDULE																
MARK	VOLTAGE	PHASE	FLA	MCA	MOCP	HP	KVA	CONDUIT AND WIRE SIZE	CONTROL OR STARTER	CONTROLLER OR STARTER FURNISHED / INSTALLED	DISCONNECT TYPE	DISCONNECT FURNISHED / INSTALLED	REMARKS			
CP-1	120	1	0.8	1	15	-	0.092	2#12, 1#12GND, 3/4"	AQUASTAT	MC/EC	NEMA 1, MS	EC/EC	XXX			
EWH-1	240	1	50	62.5	70	-	12	2#4, 1#8GND, 1"	INTERNAL	-	NEMA 1, MS	EC/EC	XXX			
EWH-2	240	1	50	62.5	70	-	12	2#4, 1#8GND, 1"	INTERNAL	-	NEMA 1, MS	EC/EC	XXX			
GF-1	120	1	7.2	9	20	0.33	0.864	2#12, 1#12GND, 3/4"	INTERNAL	-	NEMA 1, MS	EC/EC	XXX			
P-1	240	1	8	10	20	1	1.92	2#12, 1#12GND, 3/4"	VFD	EC/EC	NEMA 1, MS	EC/EC	XXX			
P-2	240	1	8	10	20	1	1.92	2#12, 1#12GND, 3/4"	VFD	EC/EC	NEMA 1, MS	EC/EC	XXX			
VHP-1	240	3	68	83.7	100	-	28.267	2#3, 1#8GND, 1"	VFD	MFR/EC	NEMA 3R, F	MFR/EC	XXX			



A4 ONE-LINE DIAGRAM
NOT TO SCALE

ELECTRICAL SYMBOLS LEGEND				
GENERAL		POWER		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	POWER - CONTINUED
—	CONDUIT CONCEALED IN WALL OR OVERHEAD	○	DUPLEX RECEPTACLE	 BRANCH PANEL WITH CLEARANCE (SURFACE OR RECESS MOUNTED)
—	CONDUIT CONCEALED BELOW FLOOR	○○	DOUBLE DUPLEX RECEPTACLE	 ELECTRICAL EQUIPMENT (SWITCHBOARD, DISTRIBUTION PANEL)
—○	CONDUIT TRANSITION UP	FB	FLOOR BOX	 SPECIAL CABINET
—●	CONDUIT TRANSITION DOWN	FB○	POKE-THROUGH FLOOR BOX	 TRANSFORMER
—	CONDUIT STUBBED OUT	WB	WALL BOX	 SURFACE RACEWAY
—	BRANCH CIRCUIT HOME RUN	○○○	DUPLEX RECEPTACLE - CEILING MOUNTED	 UNDERFLOOR RACEWAY SYSTEM
—	CABLE TRAY (TYPE DENOTED)	○○○○	SPECIAL RECEPTACLE (CEILING, WALL, AND FLOOR MOUNTED)	 DISCONNECT SWITCH
—	CONDUIT SLEEVE (SIZE DENOTED)	○○○○○	DIRECT POWER CONNECTION - WALL AND EQUIPMENT	 FUSED DISCONNECT SWITCH
E#	KEYNOTE (SEE SCHEDULE)	HH	HANDHOLE	 COMBINATION MOTOR STARTER
0000	SPECIALTY EQUIPMENT TAG	J	JUNCTION BOX	 VARIABLE FREQUENCY DRIVE
J○	SURFACE MOUNTED DEVICE (J-BOX SHOWN AS EXAMPLE)	○○○○○○	SIMPLEX RECEPTACLE	 RELAY
GROUNDING		○○○○○○○	SPLIT DUPLEX RECEPTACLE	 RECEPTACLE ON DROP CORD (DUPLEX SHOWN)
POWER		○○○○○○○○	DUPLEX RECEPTACLE PLUG LOAD CONTROL	 RECEPTACLE ON CORD REEL (DUPLEX SHOWN)
○○	STATIC GROUND RECEPTACLE (TYPE DENOTED)	○○○○○○○○○	DOUBLE DUPLEX RECEPTACLE PLUG LOAD CONTROL	 EXAMPLE RECEPTACLE TAG
○○○	LIGHTNING PROTECTION AIR TERMINAL	○○○○○○○○○○	DUPLEX RECEPTACLE ON EMERGENCY CIRCUIT	###" - MOUNTING HEIGHT AS INDICATED. IF OMITTED, 18" OR ABOVE COUNTER
○○○○	LIGHTNING PROTECTION CONDUCTOR SPLICE	○○○○○○○○○○○	DOUBLE DUPLEX RECEPTACLE ON EMERGENCY CIRCUIT	XX - INDICATES RECEPTACLE CONFIGURATION:
○○○○○	GROUND ROD (PLAN VIEW)	○○○○○○○○○○○○	SURFACE MOUNTED RECEPTACLE, VARIES PER TYPE	AC - ABOVE COUNTER (COORDINATE HEIGHT) GFI - GROUND FAULT CIRCUIT INTERRUPTER HZ - HORIZONTALLY MOUNTED IG - ISOLATED GROUND OC - OCCUPANCY CONTROLLED USB - INTEGRAL USB CHARGER WP - WEATHERPROOF XP - EXPLOSION PROOF
○○○○○○	GROUND CONNECTION TO STEEL OR STRUCTURE	○○○○○○○○○○○○○	EMERGENCY POWER OFF	
○○○○○○○	GROUND CONNECTION - EXOTHERMIC WELD	○○○○○○○○○○○○○○	MOTOR HORSEPOWER RATED SWITCH	
○○○○○○○○	GROUND BAR	○○○○○○○○○○○○○○○	PUSH BUTTON	

ELECTRICAL

1. ALL WORK SHALL BE IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE - LATEST EDITION ADOPTED BY THE STATE, THE STATE AMENDMENTS, LOCAL/MUNICIPAL CODES AND ORDINANCES, AND THE AUTHORITY HAVING JURISDICTION. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ADAAG (AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES).
2. IT IS THE INTENT OF THESE DOCUMENTS TO COMPLY WITH THE APPLICABLE CODES. WHERE DISCREPANCIES OCCUR, NOTIFY THE ENGINEER/ARCHITECT IN WRITING FOR INTERPRETATION. CORRECT ANY INSTALLATION THAT FAILS TO COMPLY WITH THE CODES AND STANDARDS AT NO ADDITIONAL COST TO THE OWNER.
3. CONTRACTOR SHALL PROVIDE ALL WORK NECESSARY INCLUDING ALL LABOR, MATERIALS, PERMITS, TAXES, FEES, INSPECTIONS, HARDWARE, AND COST FOR INSTALLATION FOR A COMPLETE AND OPERATIONAL SYSTEM.
4. ALL MATERIALS FURNISHED BY THE CONTRACTOR SHALL BE NEW, COMPLETE WITH MANUFACTURER'S GUARANTEE OR WARRANTY AND SHALL BE LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL).
5. COORDINATE ELECTRICAL INSTALLATION WITH ALL TRADES PRIOR TO INSTALLATION. IF ELECTRICAL WORK INSTALLED INTERFERES WITH OTHER TRADES AFTER INSTALLATION, THE CONTRACTOR SHALL MAKE ALL NECESSARY CHANGES TO CORRECT THE CONDITION AT NO ADDITIONAL COST TO THE OWNER.
6. DRAWINGS ARE DIAGRAMMATIC. ALL DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL FURNITURE, MODULAR FURNITURE, AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL ELECTRICAL INSTALLATION THIS CONTRACTOR SHALL ADJUST CONNECTION LOCATIONS TO ACCOMMODATE FURNITURE AND/OR EQUIPMENT.
7. ALL ELECTRICAL PANELS WITH ANY BRANCH CIRCUIT/LOAD REVISIONS (DEMOLITION OR NEW WORK) SHALL HAVE A NEW TYPED UPDATED CIRCUIT DIRECTORY CARD INSTALLED INSIDE THE DOOR OF THE ELECTRICAL PANEL. THE CONTRACTOR SHALL VERIFY THAT ALL UNUSED CIRCUIT BREAKERS ARE TURNED 'OFF' AND PROPERLY INDICATED AS 'SPARE' ON THE NEW CIRCUIT DIRECTORY CARD. THE CONTRACTOR SHALL INSTALL FILLER PLATES WHERE BREAKERS ARE REMOVED AS PART OF THIS PROJECT OR HAVE BEEN REMOVED PREVIOUSLY.
8. NO ENERGIZED CONDUCTORS SHALL BE EXPOSED AT ANYTIME EXCEPT WHEN THE IMMEDIATE AREA IS UNDER THE SUPERVISION OF A QUALIFIED ELECTRICIAN.
9. WHERE CONDUIT IS SURFACE MOUNTED TO A WALL AND RUN VERTICALLY DOWN TO A SWITCH/OUTLET BOX, UTILIZE 1-HOLE OR 2-HOLE CONDUIT STRAPS.
10. REFER TO THE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF BUILDING EXPANSION JOINTS. ALL CONDUITS CROSSING EXPANSION JOINTS SHALL BE INSTALLED WITH EXPANSION FITTINGS, UNLESS THE CONDUIT IS BELOW SLAB IN THE COMPAKTED GRANULAR FILL. EXPANSION FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, AND MANUFACTURE'S WRITTEN RECOMMENDATIONS.
11. PENETRATIONS THROUGH FIRE RATED WALLS BY DIVISION 26 CONTRACTOR SHALL BE SEALED WITH APPROPRIATE FIRE PROOFING MATERIAL TO RESTORE FIRE RATING. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RATED WALLS.
12. THE CONTRACTOR SHALL KEEP THE WORK AREA CLEAN OF ALL DEBRIS ON A DAILY BASIS. ALL NEW MATERIALS AWAITING INSTALLATION SHALL BE KEPT IN AREAS DESIGNATED BY THE OWNER.
13. THESE DRAWINGS SHALL NOT BE SCALED TO OBTAIN DIMENSIONS. REFER TO DIMENSIONED ARCHITECTURAL FLOOR PLANS. IF THE DIMENSIONS CANNOT BE DETERMINED BY THE INFORMATION GIVEN, CONTRACTOR SHALL CONTACT THE ENGINEER FOR ADDITIONAL INFORMATION.
14. PERIODIC SITE OBSERVATION BY THE ENGINEER IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS PROCEEDING IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OR QUANTITY OF THE WORK, BUT RATHER PERIODIC IN AN EFFORT TO GUARD THE OWNER AGAINST DEFECTS OR DEFICIENCIES IN THE WORK OF THE CONTRACTOR.
15. THE INFORMATION CONTAINED ON THE ELECTRICAL DRAWINGS IS IN ITSELF INCOMPLETE AND VOID UNLESS USED IN CONJUNCTION WITH ALL OTHER DISCIPLINE DRAWINGS, THE SPECIFICATIONS, TRADE PRACTICES, OR APPLICABLE STANDARDS, CODES, ETC., AND SHALL BE CONSIDERED THE CONTRACT DOCUMENTS AND WITH ALL THEREIN BY REFERENCE, WHICH THE CONTRACTOR CERTIFIES KNOWLEDGE OF BY SIGNING THE CONTRACT.
16. CONTRACTOR IS TO ASSUME FULL RESPONSIBILITY, UNRELIEVED BY REVIEW OF SHOP DRAWINGS OR PERIODIC OBSERVATION OF CONSTRUCTION, FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS, FOR DIMENSIONS TO BE CONFIRMED AND CORRELATED ON THE JOB SITE AND BETWEEN INDIVIDUAL DRAWINGS OR SETS OF DRAWINGS FOR FABRICATION PROCESSES AND CONSTRUCTION TECHNIQUES (INCLUDING EXCAVATION, SHORING, SCAFFOLDING, BRACING, ERECTION, FORM WORK, ETC.), FOR COORDINATION OF THE VARIOUS TRADES, AND FOR SAFE CONDITIONS ON THE JOB SITE. VARIATIONS IN FIELD CONDITIONS RELATIVE TO THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ENGINEER AS SOON AS THEY ARE FOUND. WORK SHALL NOT PROGRESS UNTIL WRITTEN PERMISSION FROM THE ENGINEER IS OBTAINED.

ELECTRICAL DEMOLITION

1. LIGHT LINES INDICATE EXISTING WALLS AND EQUIPMENT TO REMAIN. DASHED LINES INDICATE WALLS, EQUIPMENT, AND ELECTRICAL ITEMS TO BE REMOVED.
2. COORDINATE PATCHING REQUIREMENTS FOR UNUSED OPENINGS WITH THE GENERAL CONTRACTOR. GENERAL CONTRACTOR SHALL PATCH ALL UNUSED OPENINGS. PATCHWORK SHALL MATCH MATERIALS, FINISH, AND TEXTURE OF ADJACENT SURFACES.
3. FIRE ALARM - REMOVE EXISTING CEILING MOUNTED DEVICES TO PERMIT REMOVAL OF CEILING. WALL MOUNTED NOTIFICATION DEVICES SHALL BE DEMOLISHED. COORDINATE WORK WITH PROJECT PHASING TO MAINTAIN FIRE ALARM SYSTEM PROTECTION OF SPACES AT ALL TIMES. INCLUDE COSTS OF ALL TEMPORARY DEVICES IN THE BID.
4. SECURITY/SURVEILLANCE - EXISTING DEVICES TO BE REMOVED BY SYSTEMS VENDOR. CONTRACTOR SHALL REMOVE ASSOCIATED CABLING, ROUGH-IN, AND POWER WIRING. PRIOR TO ANY DEMOLITION IDENTIFY AND PROTECT CABLING REQUIRED TO MAINTAIN THE SYSTEM IN AREAS THAT WILL NOT BE REMODELED.
5. COORDINATE DISPOSAL OF ALL ITEMS NOT REQUESTED AS SALVAGE BY THE OWNER.
6. TELEPHONE AND DATA HORIZONTAL CABLING SHALL BE REMOVED COMPLETELY BACK TO THE FIRST REMAINING DISTRIBUTION FRAME. PROTECT FIBER OPTIC AND COPPER TRUNK CABLING SERVING DISTRIBUTION RACKS.
7. LIGHTING FIXTURES AND CONTROLS - REMOVE EXISTING LIGHT FIXTURES, WALL SWITCHES, OCCUPANCY SENSORS, AND ASSOCIATED WIRING. VERIFY AND MAINTAIN CONNECTION TO EXISTING LIGHTING THAT WILL NOT BE REMOVED BUT ARE ON COMMON CIRCUITS WITH ITEMS TO BE REMOVED.
8. DISCONNECT OUTLETS, WIRING, AND OTHER NOTED EQUIPMENT TO PERMIT DEMOLITION OF WALLS. VERIFY AND MAINTAIN CONNECTION TO EXISTING OUTLETS THAT WILL NOT BE REMOVED BUT ARE ON COMMON CIRCUITS WITH ITEMS TO BE REMOVED.
9. DRAWINGS DO NOT IDENTIFY ALL OUTLETS, SWITCHES, CABLING, OR EQUIPMENT TO BE REMOVED. CONTRACTOR SHALL BECOME FAMILIAR WITH THE SITE PRIOR TO BIDDING AND INCLUDE LABOR AND MATERIAL NECESSARY FOR REQUIRED DEMOLITION IN THEIR BID.
10. WIRING SHALL BE REMOVED BACK TO SERVING PANEL. INSTALLATION OF NEW CONDUCTORS IN EXISTING CONDUITS WILL BE PERMITTED AS DESCRIBED IN THE DIVISION 26 SPECIFICATIONS.
11. HVAC EQUIPMENT NOTED FOR REMOVAL IS FOR REFERENCE ONLY. THE ELECTRICAL CONTRACTOR SHALL REVIEW THE MECHANICAL SYSTEMS DEMOLITION PLANS AND INCLUDE ALL LABOR AND MATERIAL NECESSARY TO FACILITATE REMOVAL OF EQUIPMENT AS SHOWN ON THOSE DRAWINGS. THIS SHALL INCLUDE ALL ITEMS NOTED ON EITHER THE PLUMBING OR MECHANICAL SERIES OF DRAWINGS.

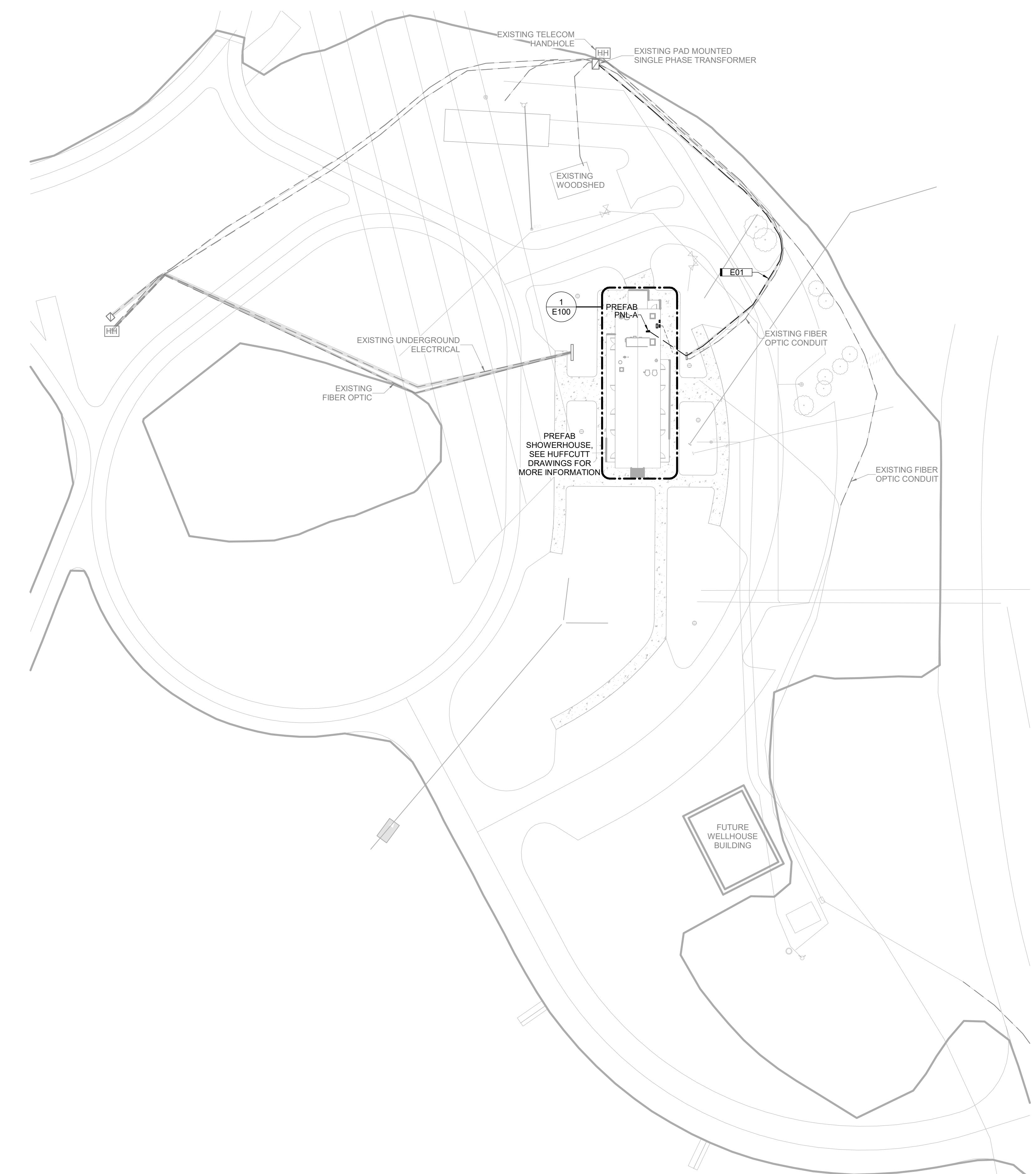
SITE ELECTRICAL

1. ALL UTILITY FEEDERS INDICATED ON PLANS ARE DIAGRAMMATIC IN NATURE AND RELEVANT UTILITIES SHALL BE IDENTIFIED AND STAKED PRIOR TO NEW CONSTRUCTION.

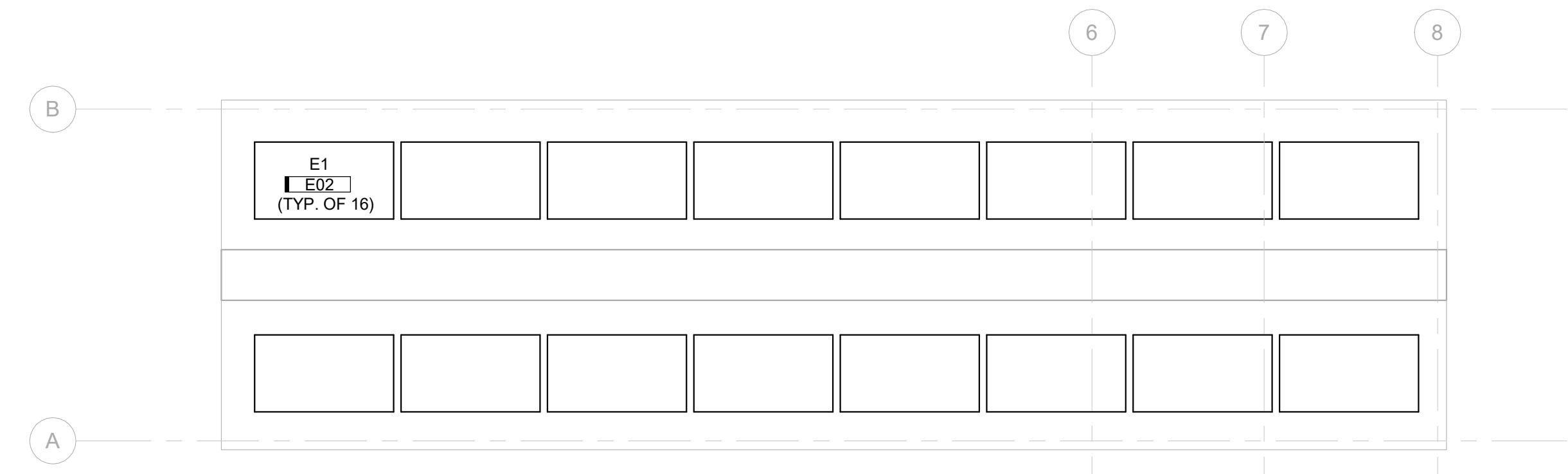
2. LINE TYPE KEY:

- NEW WORK UNDERGROUND BY THIS CONTRACTOR (DARK LONG DASHED LINE)
- WORK BY OTHERS AND/OR EXISTING TO REMAIN (GRAYSCALE DASHED LINE)

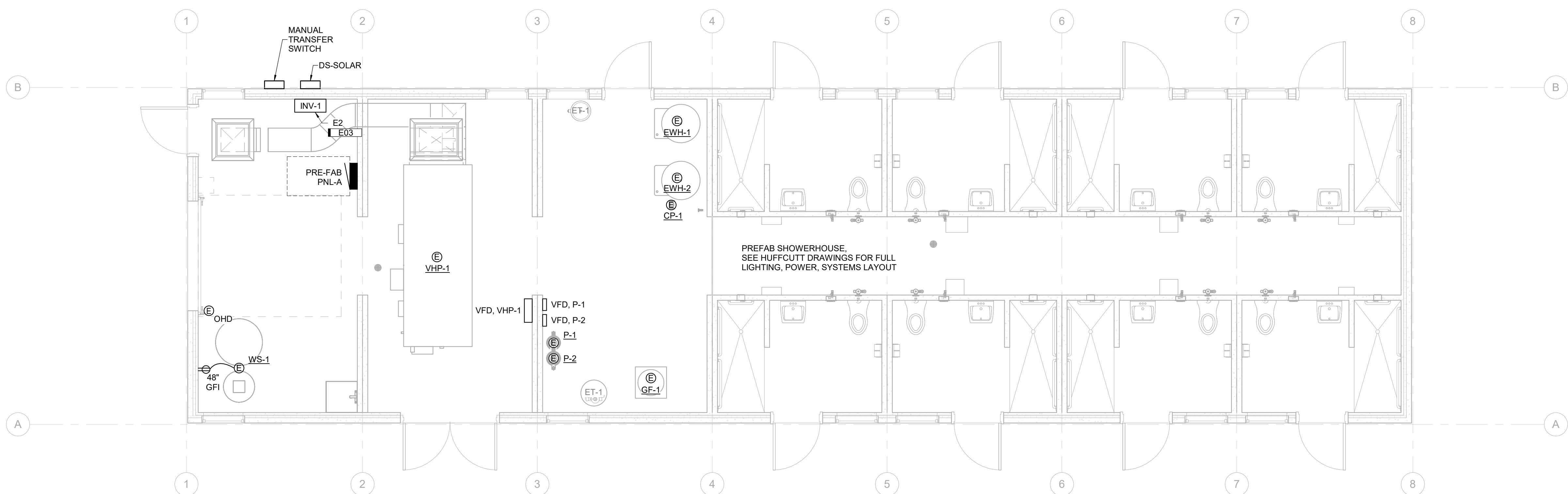
KEYNOTES	
KEY	NOTE
E01	PULL NEW FEEDERS THROUGH EXISTING IN PLACE (3) 3" HDPE CONDUIT WITH FULL STRING AND TRACER WIRE. REFER TO SHEET E500 FOR FULL ONE-LINE DIAGRAM. VERIFY EXISTING CAPED CONDUIT LOCATION ON SITE PRIOR TO NEW INSTALLATION.



1 ELECTRICAL SITE PLAN



1 SOLAR ROOF PLAN
1/8" = 1'-0" 0



2 SHOWERHOUSE LIGHTING, POWER & SYSTEMS PLAN
1/4" = 1'-0" 0

POWER

- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ALL ELECTRICAL ITEMS SHOWN ON THIS DRAWING.
- WHERE CONNECTED TO A 20A BRANCH CIRCUIT SUPPLYING AN INDIVIDUAL RECEPTACLE (SIMPLEX OR DUPLEX), THE RECEPTACLE SHALL BE RATED AT 20A.
- VERIFY LOCATIONS AND ROUGH-IN REQUIREMENTS OF ALL OWNER FURNISHED EQUIPMENT PRIOR TO ROUGH-IN.
- PROVIDE HOUSEKEEPING PADS FOR ALL FLOOR MOUNTED AND GRADE MOUNTED ELECTRICAL EQUIPMENT. MINIMUM REQUIREMENTS: 4" HIGH, 4% AIR ENTRAINED, POLYFIBER REINFORCED CONCRETE, 4" WIDER AND 4" LONGER THAN EQUIPMENT TO BE PLACED ON IT. REFER TO ELECTRICAL DETAIL DRAWINGS FOR TRANSFORMER, GENERATOR, OR SWITCHGEAR PADS THAT MAY EXCEED THESE REQUIREMENTS.
- CONDUIT AND WIRE SHALL NOT BE INSTALLED BELOW FLOOR SLAB UNLESS INDICATED ON PLAN BY DASHED CONDUIT.
- ANY MODIFICATIONS TO THE NUMBER, SIZE, AND TYPE OF WIRES OR CONDUITS FROM THOSE INDICATED ON THIS DRAWING ARE PROHIBITED.

SYSTEMS

- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR WIRING ALL ELECTRICAL ITEMS SHOWN ON THE DRAWINGS, EXCEPT FOR SECURITY DEVICES. PROVIDE ROUGH-IN ONLY FOR SECURITY DEVICES, CAMERAS AND CARD READERS.
- MAXIMUM NUMBER OF 4 INFORMATION OUTLET LOCATIONS PER CONDUIT HOME RUN TO MDF OR IDF IS PERMITTED. CONDUIT SHALL BE SIZED AS FOLLOWS:
 - 1 INFORMATION OUTLET LOCATION: 1"
 - 2 INFORMATION OUTLET LOCATIONS: 1 1/4"
 - 3 INFORMATION OUTLET LOCATIONS: 1 1/2"
- INSTALL CONDUIT WITH NO MORE THAN (2) 90° BENDS BETWEEN PULL BOXES, AND NO MORE THAN 100'-0" BETWEEN PULL BOXES. PULL BOXES SHALL BE INSTALLED FOR STRAIGHT THRU PULLS ONLY.
- ALL COMMUNICATIONS CABLES SHALL BE INSTALLED IN CONDUIT, CABLE TRAY, OR SUPPORTED BY CABLE HOOKS. PROVIDE BUSHINGS AT THE ENDS OF ALL CONDUIT WHERE STUBBED ABOVE ACCESSIBLE CEILINGS OR WHERE DROPPED CABLE TRAY OR SUPPORTABLE CABLE HOOKS ABOVE ACCESSIBLE CEILINGS FOR CABLE INSTALLATION WHERE NOT INSTALLED IN CONDUIT OR CABLE TRAY.
- FIRE ALARM WIRING DOES NOT NEED TO BE IN CONDUIT.

KEYNOTES

KEY	NOTE
E02	700 WATT SOLAR MODULE MOUNTED TO PRECAST ROOF. MOUNT PER PRECAST AND MODULE MANUFACTURER RECOMMENDATIONS
E03	NEW INVERTER TO BE CONNECTED TO EXISTING SOLAR EDGE INVERTERS ON EXISTING GROUND MOUNTED SOLAR INSTALLATION. FURNISH AND INSTALL MEDIA CONVERTERS AND UTILIZE EXISTING FIBER NETWORK TO CONNECT THE INVERTERS