GENERAL NOTES

1. SEE SHEET C2.0 FOR MAPPING AND DATUM REFERENCES

- 2. INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN BASED UPON AVAILABLE INFORMATION AND MAY BE INCOMPLETE, AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE. THE LOCATION OF ALL EXISTING UTILITIES SHOULD BE CONFIRMED PRIOR TO BEGINNING CONSTRUCTION. CALL "CALL BEFORE YOU DIG", DIAL 811 OR GO TO WWW.CBYD.COM. ALL UTILITY LOCATIONS THAT DO NOT MATCH THE VERTICAL OR HORIZONTAL CONTROL SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
- 3. SLR INTERNATIONAL CONSULTING INC. ("SLR")ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF MAPS AND DATA WHICH HAVE BEEN SUPPLIED BY OTHERS.
- 4. ALL UTILITY SERVICES ARE TO BE UNDERGROUND. THE EXACT LOCATION, MEANS OF CONSTRUCTION, AND SIZE OF SERVICE LINES ARE TO
- 5. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE FNGINFER.
- 6. SEDIMENT AND EROSION CONTROL MEASURES AS DEPICTED ON THESE PLANS AND DESCRIBED WITHIN THE SEDIMENT AND EROSION CONTROL NARRATIVE SHALL BE IMPLEMENTED AND MAINTAINED UNTIL PERMANENT COVER AND STABILIZATION IS ESTABLISHED. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL CONFORM TO THE "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, CONNECTICUT 2002, AND IN ALL CASES BEST MANAGEMENT PRACTICES SHALL PREVAIL.
- 7. ALL DISTURBED AREAS OUTSIDE OF THE CONSTRUCTION AREA SHALL BE REPAIRED IN ACCORDANCE WITH CITY OF MERIDEN REQUIREMENTS AND TO THE APPLICABLE SECTIONS OF THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND INCIDENTAL CONSTRUCTION, FORM 818 AND ALL ADDENDA AND IN ACCORDANCE WITH SPECIAL PROVISIONS
- 8. ALL STORM DRAIN PIPE SHALL BE SMOOTH LINED HDPE UNLESS OTHERWISE INDICATED.
- 9. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS INDICATE FINISHED GRADE.
- 10. ALL CONSTRUCTION MATERIALS AND METHODS SHALL CONFORM TO THE CITY OF MERIDEN REQUIREMENTS AND TO THE APPLICABLE SECTIONS OF THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND INCIDENTAL CONSTRUCTION, FORM 818 AND ALL SUBSEQUENT ADDENDA AND IN ACCORDANCE WITH SPECIAL PROVISIONS.
- 11. THE PLANS REQUIRE A CONTRACTOR'S WORKING KNOWLEDGE OF LOCAL, MUNICIPAL, AND STATE CODES FOR UTILITY SYSTEMS. ANY CONFLICTS BETWEEN MATERIALS AND LOCATIONS SHOWN, AND LOCAL REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE EXECUTION OF WORK. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH UTILITIES IMPACTED BY THIS PROJECT INCLUDING DEMOLITION AND NEW WORK. ALL UTILITY WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF EACH UTILITY COMPANY HAVING JURISDICTION IN THE PROJECT AREA. THE ENGINEER WILL NOT BE HELD LIABLE FOR COSTS INCURRED TO IMPLEMENT OR CORRECT WORK WHICH DOES NOT CONFORM TO LOCAL CODE.
- 12. ALL FUEL, OIL, PAINT, OR OTHER HAZARDOUS MATERIALS SHOULD BE STORED IN A SECONDARY CONTAINER AND REMOVED TO A LOCKED INDOOR AREA WITH AN IMPERVIOUS FLOOR DURING NON-WORK HOURS.
- 13. THE CONTRACTOR MUST MAINTAIN (REPAIR/REPLACE WHEN NECESSARY) THE SILTATION CONTROLS UNTIL ALL CONSTRUCTION ACTIVITY IS COMPLETED AND ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED.
- 14. THE CONTRACTOR IS RESPONSIBLE FOR SECURING WORK AREA.
- 15. COMPLIANCE WITH THE PERMIT CONDITIONS IS THE RESPONSIBILITY OF BOTH THE CONTRACTOR AND THE PERMITTEE

CITY OF MERIDEN GENERAL NOTES

- 1. ALL SITE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF MERIDEN STANDARDS AND SPECIFICATIONS.
- 2. THE CONTRACTOR MUST CONTACT "CALL-BEFORE YOU DIG" AT 1-800-922-4455 FOR THE LOCATION AND MARKING OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- EROSION AND SEDIMENT CONTROLS MUST COMPLY WITH THE LATEST SEDIMENT AND EROSION CONTROL MANUAL PUBLISHED BY THE CONNECTICUT DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION.
- 4. STREET CURBING, SIDEWALKS, AND PAVEMENT SHALL BE REPAIRED BY THE GENERAL CONTRACTOR AT NO COST TO THE CITY SHOULD THE CONTRACTOR OR SUB-CONTRACTORS DAMAGE THESE DURING SITE CONSTRUCTION.
- 5. THE CITY PUBLIC WORKS FACILITIES INSPECTOR MUST BE NOTIFIED BY THE CONTRACTOR A MINIMUM OF 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
- 6. A PRE-CONSTRUCTION MEETING MUST BE HELD PRIOR TO BEGINNING CONSTRUCTION TO INCLUDE THE GENERAL CONTRACTOR, UTILITY COMPANIES, SITE DESIGN ENGINEER, AND CITY STAFF. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING THIS MEETING.
- 7. UPON COMPLETION OF THE UNDERGROUND UTILITIES, AS-BUILT/RECORD MAPS SHALL BE SUBMITTED BY THE GENERAL CONTRACTOR TO THE CITY ENGINEERING DEPARTMENT IN ACCORDANCE WITH CITY STANDARDS. AFTER REVIEW AND FINAL APPROVAL, THE MAPS SHALL BE SIGNED AND SEALED BY A CONNECTICUT LICENSED SURVEYOR AND SUBMITTED BY PAPER/MYLAR COPIES AND ELECTRONICALLY.
- 8. THE IRRIGATION WATER SERVICE LINE AND IRRIGATION SYSTEM MUST BE PRESSURE TESTED AND DISINFECTED PER AWWA AND THE CITY OF MERIDEN STANDARDS AND SPECIFICATIONS.

CONSTRUCTION SEQUENCE

- 1. PRIOR TO COMMENCEMENT OF WORK A PRECONSTRUCTION MEETING SHALL BE HELD WITH CITY STAFF, ENGINEER, AND THE CONTRACTOR. AT THIS MEETING, ONE PERSON WILL BE PLACED IN CHARGE OF SEDIMENT AND EROSION CONTROL FOR THE ENTIRE SITE.
- 2. CONTRACTOR SHALL STAKE OUT LIMIT OF DISTURBANCE. NO DISTURBANCE IS TO TAKE PLACE BEYOND THE LIMITS OF WORK SHOWN.
- 3. INSTALL SILT FENCE AND RELATED SEDIMENT AND EROSION CONTROLS. IDENTIFY AREAS FOR TEMPORARY STOCKPILES FOR FILL (BOTH CONTAMINATED AND NON-CONTAMINATED) AND BORROW FOR APPROVAL BY THE CITY. SECURE SITE WITH FENCE AS SHOWN ON THE PLANS.
- 4. CLEAR AND GRUB SITE, STOCKPILE SOILS SEGREGATED IN LOCATIONS AS APPROVED BY THE CITY. THIS INCLUDES THE REMOVAL OF ALL PAVEMENT, UTILITIES, EXISTING FOUNDATIONS, AND ANY OTHER NON-REUSABLE MATERIAL.
- 5. ESTABLISH NEW ELECTRICAL SERVICE TO SITE AS APPROVED BY EVERSOURCE.
- 6. EXCAVATE TO SUBGRADE FOR PROPOSED BUILDING. COMMENCE BUILDING FOUNDATION WORK.
- 7. FULLY INSTALL AND CONNECT ALL PROPOSED UTILITIES TO BUILDING ACCORDING TO PLANS. COMPLETE ROAD REPAIR AT TRENCHING.
- 8. EXCAVATE TO SUBGRADE FOR REMAINDER OF THE SITE IMPROVEMENTS. INSTALL AND CONNECT ALL STORM DRAINAGE IN ACCORDANCE WITH THE UTILITY PLAN. INSTALL DEMARCATION LAYER AS INDICATED ON THE SITE DETAILS.
- 9. ESTABLISH FINISHED GRADE IN ACCORDANCE WITH THE PLANS.

Know what's **below**

www.cbyd.com

Call before you dig.

10. INSTALL FINAL SITE DETAILS, INCLUDING BUT NOT LIMITED TO, SIDEWALKS, PATIO, LANDSCAPING AND LAWN

PROJECT ENGINEER ARCI

SLR CONSULTING 99 REALTY DRIVE CHESHIRE, CT

ARCHITECT

STEIN TROOST LLC 1 MORGAN AVE. NORWALK, CT

MEP ENGINEER

PREPARED FOR:

142 EAST MAIN STREET

MERIDEN, CONNECTICUT 06450

CITY OF MERIDEN

PROGRESSIVE ENGINEERING, INC. 28 MAIN ST. EAST HARTFORD, CT

STRUCTURAL ENGINEER

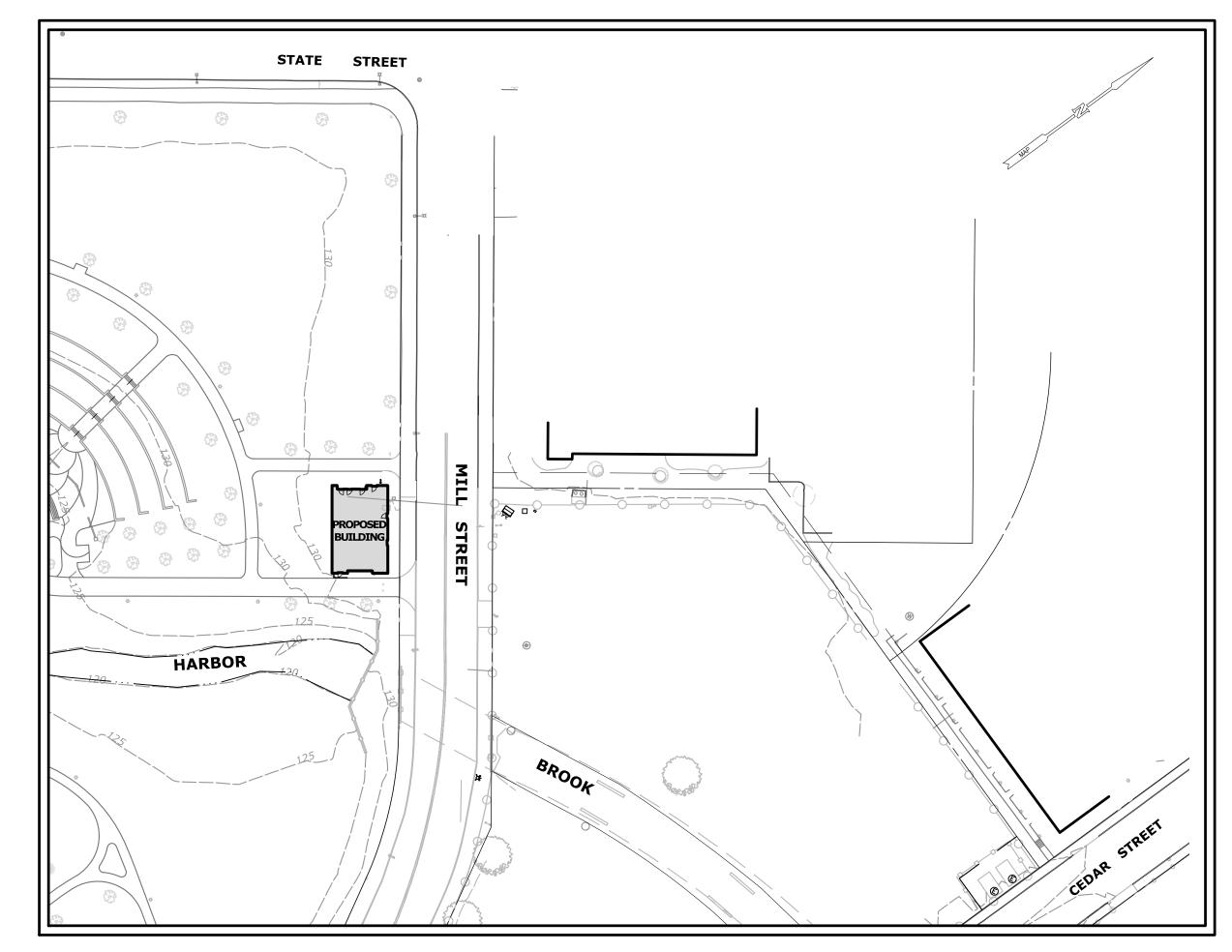
SZEWCZAK ASSOCIATES 200 FISHER RD. AVON, CT

ELECTRICAL ENGINEER

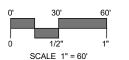
SG ENGINEERING 56 FOXCROFT COURT SOUTHINGTON, CT

MILL STREET MERIDEN, CONNECTICUT

BID DOCUMENTS OCTOBER 14, 2022

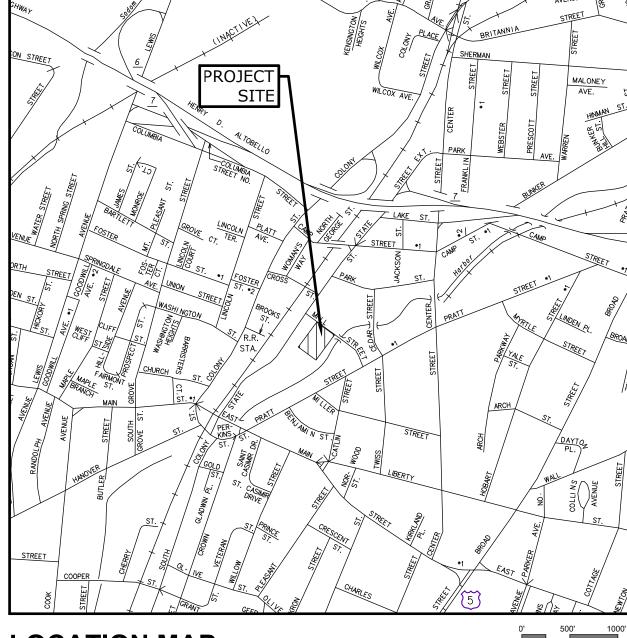


PROJECT SITE VICINITY MAP:



PREPARED BY:





LOCATION MAP:

LIST OF DRAWINGS

NAME TITLE CIVIL DRAWINGS C1.0 TITLE SHEET C2.0 SITE PLAN - EXISTING CONDITIONS AND REMOVALS C3.0 SITE PLAN - LAYOUT AND MATERIALS C4.0 SITE PLAN - GRADING AND UTILITIES C5.0 SITE PLAN - SEDIMENT & EROSION CONTROL C5.1 SEDIMENT & EROSION CONTROL NOTES & DETAILS C6.0 SITE DETAILS

ARCHITECTURAL DRAWINGS

SITE DETAILS

A1.0	FLAN
A1.1	ROOF PLAN
A2.0	ELEVATIONS
A3.0	BUILDING SECTIONS
A3.1	BUILDING SECTIONS
A4.0	WALL SECTIONS
A5.0	DETAILS
A5.1	DETAILS
A5.2	DETAILS
A6.0	INTERIOR ELEVATIONS

SCHEDULES

STRUCTURAL DRAWINGS

S0.0	STRUCTURAL GENERAL NOTES & DETAILS
S1.0	FOUNDATION PLAN
S2.0	ROOF FRAMING PLAN
S3.0	FOUNDATION SECTIONS
S4.0	STRUCTURAL SECTIONS

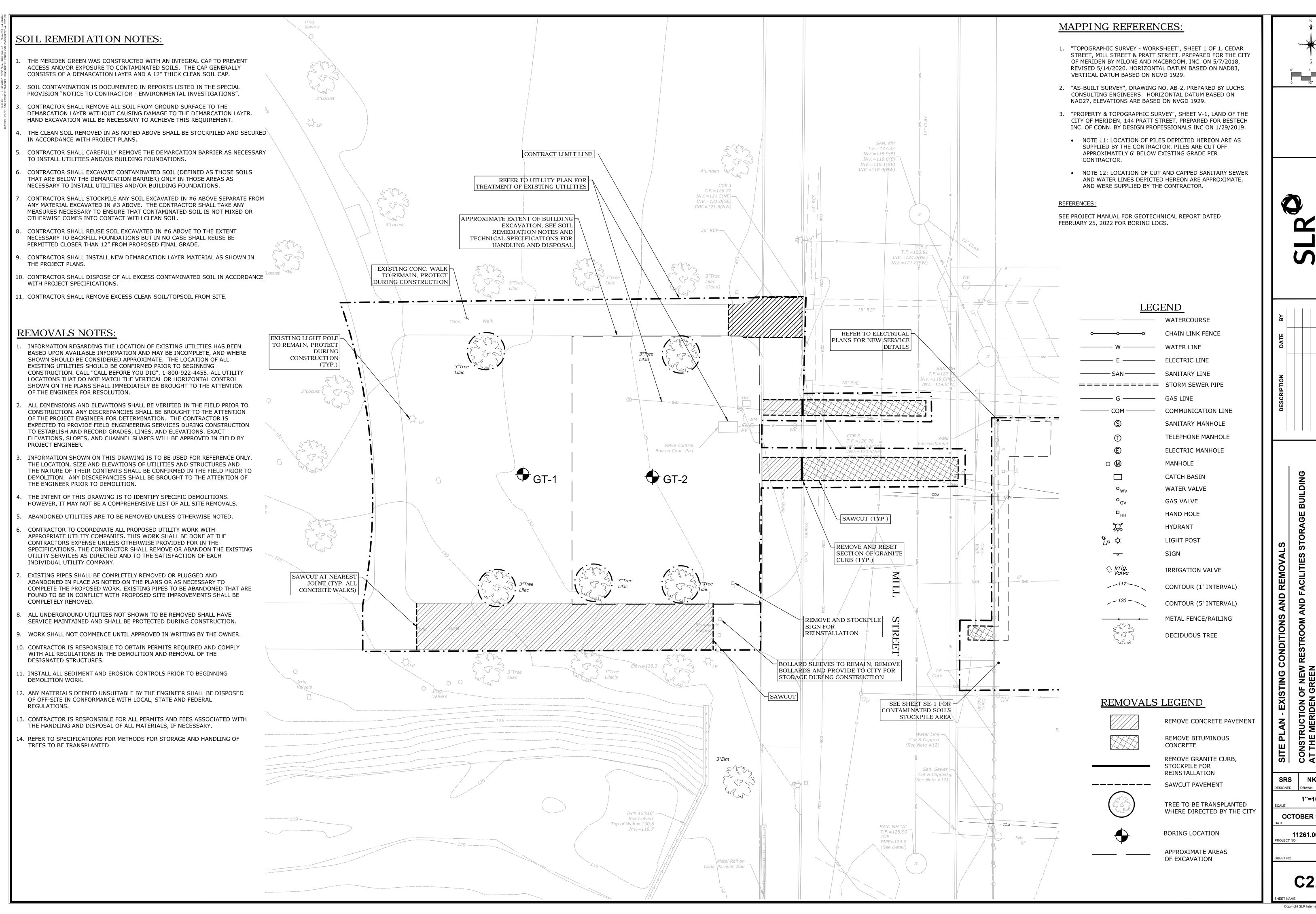
MEP DRAWINGS

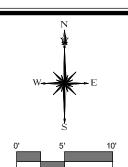
P1.0	FIRST FLOOR PLUMBING PLAN
P2.0	PLUMBING DETAILS
P3.0	PLUMBING SCHEDULES
P4.0	PLUMBING SCHEDULES & SPECIFICATIONS
M1.0	HVAC PLAN
E1.0	ELECTRICAL PLANS
E2.0	ELECTRICAL SYMBOLS
E3.0	ELECTRICAL SPECIFICATIONS

SITE ELECTRICAL DRAWINGS

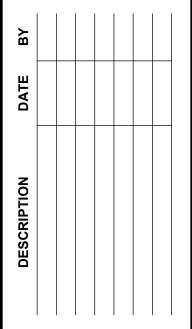
ES-0	ELECTRICAL SPECIFICATIONS & GENERAL INFORMATION
ES-1	ELECTRICAL DETAILS
ES-2	ELECTRICAL SERVICE DETAILS
ES-3	ELECTRICAL ONE-LINE DIAGRAM & SCHEDULES
ES-4	ELECTRICAL SITE PLAN - CURRENT CONDITIONS
ES-5	ELECTRICAL SITE PLAN - FUTURE CONDITIONS

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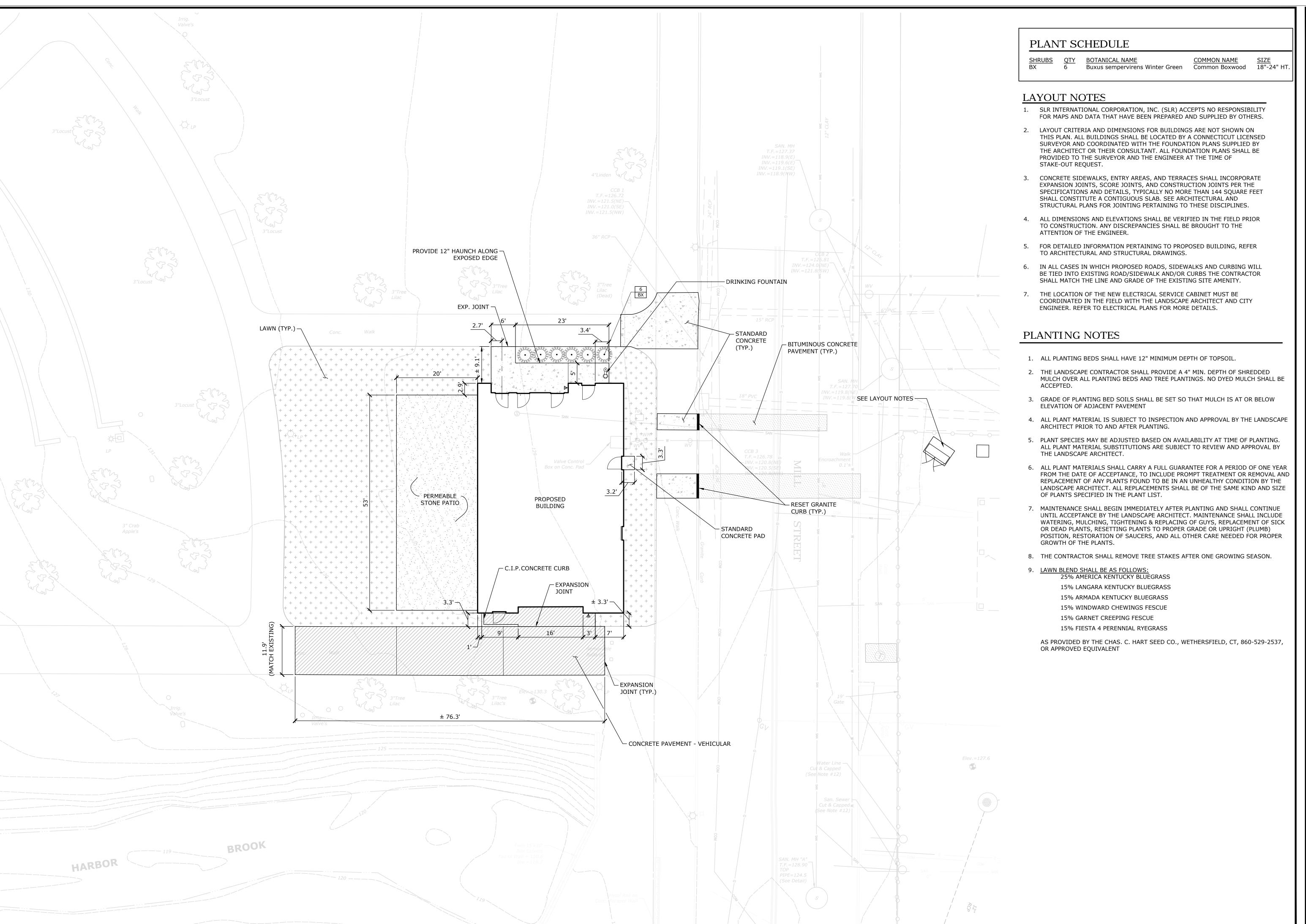


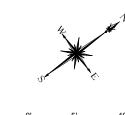


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OCTOBER 14, 2022

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SEALTY DRIVE CHESHIRE, CT 06410 SU3.271.1773 SLRCONSULTING.COM

DESCRIPTION DATE BY

BID DOCUMENTS

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CONSTRUCTION OF NEW RESTRO AT THE MERIDEN GREEN MILL STREET

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DESIGNED DRAWN CHECKE

1"=10'

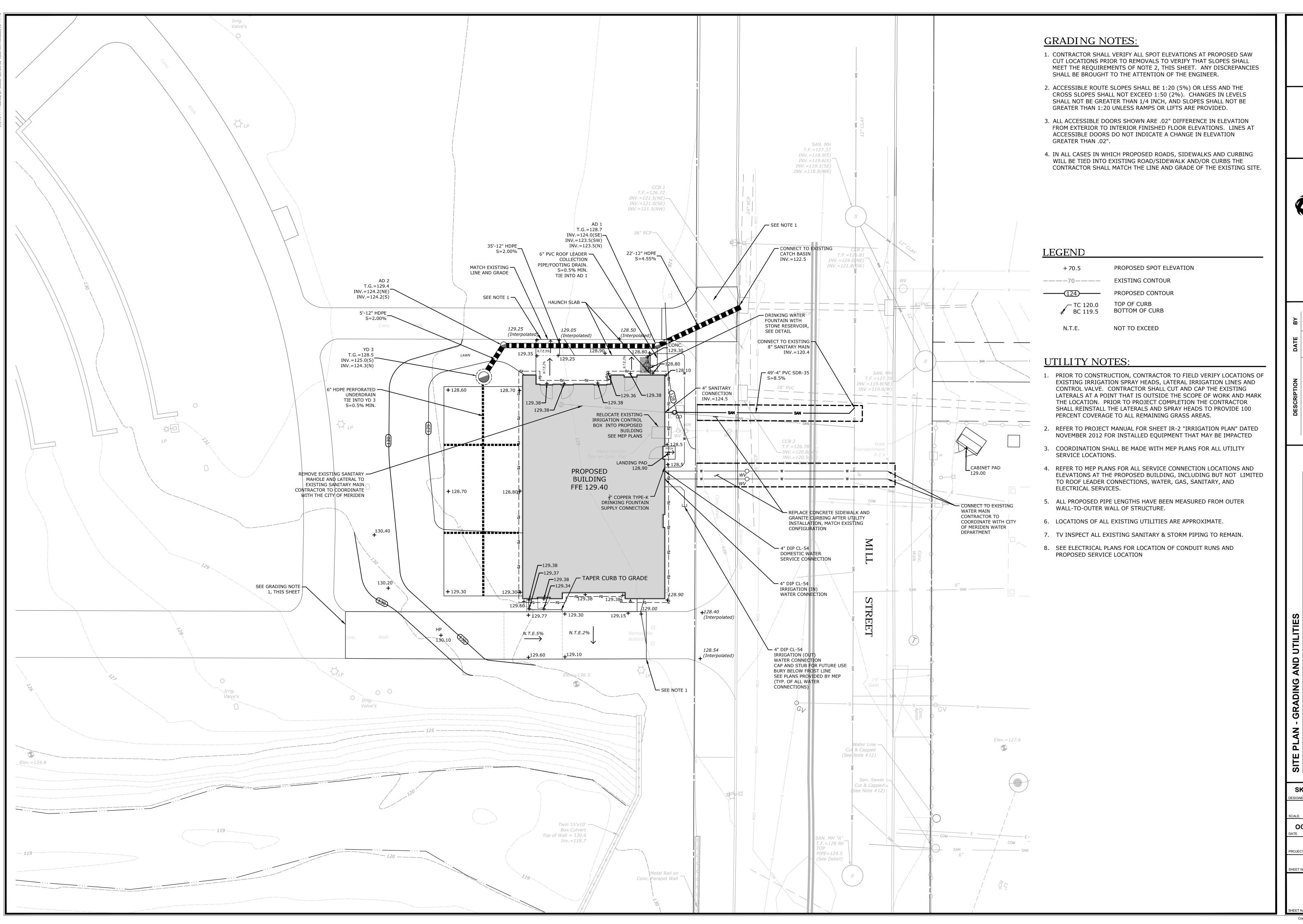
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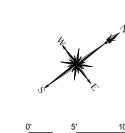
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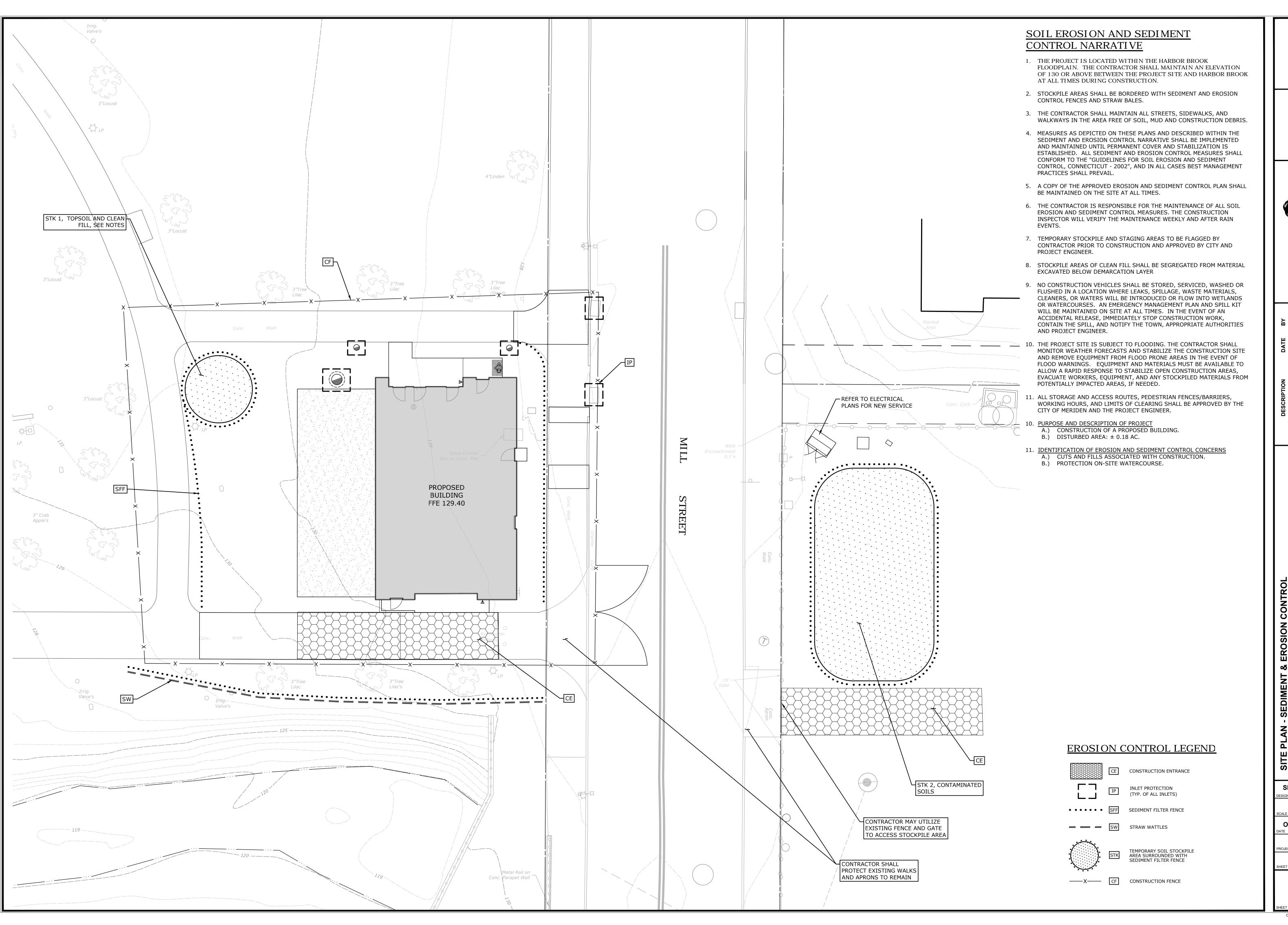
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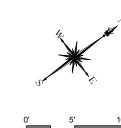
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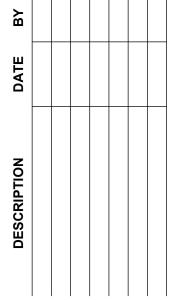
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CONSTRUCTION OF NEW AT THE MERIDEN GREEN

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1"=10'

OCTOBER 14, 2022

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SEDIMENT AND EROSION CONTROL SPECIFICATION

THESE GUIDELINES SHALL APPLY TO ALL WORK CONSISTING OF ANY AND ALL TEMPORARY AND/OR PERMANENT MEASURES TO CONTROL WATER POLLUTION AND SOIL EROSION, AS MAY BE REQUIRED, DURING THE CONSTRUCTION OF THE PROJECT. IN GENERAL, ALL CONSTRUCTION ACTIVITIES SHALL PROCEED IN SUCH A MANNER SO AS NOT TO POLLUTE ANY WETLANDS, WATERCOURSE, WATERBODY, AND CONDUIT CARRYING WATER, ETC. THE CONTRACTOR SHALL LIMIT, INSOFAR AS POSSIBLE, THE SURFACE AREA OF EARTH MATERIALS EXPOSED BY CONSTRUCTION METHODS AND IMMEDIATELY PROVIDE PERMANENT AND TEMPORARY POLLUTION CONTROL MEASURES TO PREVENT

CONTAMINATION OF ADJACENT WETLANDS, WATERCOURSES, AND WATERBODIES, AND TO PREVENT, INSOFAR AS POSSIBLE, EROSION ON THE SITE.

- 1. THE RESHAPING OF THE GROUND SURFACE BY EXCAVATION AND FILLING OR A COMBINATION OF BOTH, TO OBTAIN PLANNED GRADES, SHALL PROCEED IN
- ACCORDANCE WITH THE FOLLOWING CRITERIA: a. THE CUT FACE OF EARTH EXCAVATION SHALL NOT BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2:1).
- THE PERMANENT EXPOSED FACES OF FILLS SHALL NOT BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2:1).
- c. THE CUT FACE OF ROCK EXCAVATION SHALL NOT BE STEEPER THAN ONE HORIZONTAL TO FOUR VERTICAL (1:4)
- d. PROVISION SHOULD BE MADE TO CONDUCT SURFACE WATER SAFELY TO STORM DRAINS TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES AND FILL
- e. EXCAVATIONS SHOULD NOT BE MADE SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTY WITHOUT PROTECTING SUCH PROPERTY FROM
- EROSION, SLIDING, SETTLING, OR CRACKING f. NO FILL SHOULD BE PLACED WHERE IT WILL SLIDE OR WASH UPON THE PREMISES OF ANOTHER OWNER OR UPON ADJACENT WETLANDS,
- WATERCOURSES, OR WATERBODIES. q. PRIOR TO ANY REGRADING, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PLACED AT THE ENTRANCE TO THE WORK AREA IN ORDER TO REDUCE MUD AND

- 1. TOPSOIL SHALL BE SPREAD OVER ALL EXPOSED AREAS IN ORDER TO PROVIDE A SOIL MEDIUM HAVING FAVORABLE CHARACTERISTICS FOR THE ESTABLISHMENT, GROWTH, AND MAINTENANCE OF VEGETATION.
- 2. UPON ATTAINING FINAL SUBGRADES, SCARIFY SURFACE TO PROVIDE A GOOD BOND

OTHER SEDIMENTS FROM LEAVING THE SITE.

REMOVE ALL LARGE STONES, TREE LIMBS, ROOTS AND CONSTRUCTION DEBRIS. 4. APPLY SOIL AMENDMENTS AS FOLLOWS:

TOPSOIL SHOULD HAVE PHYSICAL, CHEMICAL, AND BIOLOGICAL CHARACTERISTICS FAVORABLE TO THE GROWTH OF PLANTS.

LIME: ACCORDING TO SOIL TEST OR AT THE RATE OF 2 TONS PER ACRE.

- TOPSOIL SHOULD HAVE A SANDY OR LOAMY TEXTURE. TOPSOIL SHOULD BE RELATIVELY FREE OF SUBSOIL MATERIAL AND MUST BE FREE OF LARGE STONES, LUMPS OF SOIL, ROOTS, TREE LIMBS, TRASH, OR CONSTRUCTION DEBRIS. IT SHOULD BE FREE OF ROOTS OR RHIZOMES SUCH AS THISTLE, NUTGRASS, AND OUACKGRASS.
- 4. AN ORGANIC MATTER CONTENT OF SIX PERCENT (6%) IS REQUIRED. AVOID LIGHT COLORED SUBSOIL MATERIAL
- SOLUBLE SALT CONTENT OF LESS THAN 400 PPM IS REQUIRED. THE TOPSOIL SHALL BE WARRANTED BY SELLER TO BE FREE OF DETECTABLE RESIDUES OF CHEMICAL PESTICIDES, HERBICIDES, PETROLEUM PRODUCTS, OR OTHER UNSUITABLE TOXINS.

APPLICATION:

AVOID SPREADING WHEN TOPSOIL IS WET OR FROZEN. SPREAD TOPSOIL UNIFORMLY TO A DEPTH OF AT LEAST FOUR INCHES (4"), OR TO THE DEPTH SHOWN ON THE LANDSCAPING PLANS.

TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED ON ALL UNPROTECTED AREAS THAT PRODUCE SEDIMENT, AREAS WHERE FINAL GRADING HAS BEEN COMPLETED, AND TEMPORARY VEGETATIVE COVER SHALL BE APPLIED IF AREAS WILL NOT BE PERMANENTLY SEEDED BY SEPTEMBER 1

GENERAL:

- INSTALL REQUIRED SURFACE WATER CONTROL MEASURES. REMOVE LOOSE ROCK, STONE, AND CONSTRUCTION DEBRIS FROM AREA. APPLY SOIL AMENDMENTS AS FOLLOWS:
- LIME: ACCORDING TO SOIL TEST OR AT THE RATE OF 1 TONS PER ACRE. ROCK DUST: ACCORDING TO SOIL TEST OR AT THE RATE OF 1 TONS PER ACRE 4. UNLESS HYDROSEEDED, WORK IN LIME TO A DEPTH OF 4 INCHES WITH A DISK OR ANY SUITABLE EQUIPMENT. DO NOT WORK FINISHED COMPOST INTO THE SOIL -
- APPLY IT EVENLY TO SOIL SURFACE AS A SEED BED. TILLAGE SHOULD ACHIEVE A REASONABLY UNIFORM LOOSE SEEDBED. WORK ON CONTOUR IF SITE IS SLOPING.

SITE PREPARATION:

- SELECT APPROPRIATE SPECIES FOR THE SITUATION. NOTE RATES AND SEEDING DATES (SEE VEGETATIVE COVER SELECTION & MULCHING)
- APPLY SEED UNIFORMLY ACCORDING TO THE RATE INDICATED BY BROADCASTING, DRILLING, OR HYDRAULIC APPLICATION.
- UNLESS HYDROSEEDED, COVER RYEGRASS SEEDS WITH NOT MORE THAN 1/4 INCH OF SOIL USING SUITABLE EQUIPMENT.
- MULCH IMMEDIATELY AFTER SEEDING IF REQUIRED. (SEE VEGETATIVE COVER SELECTION & MULCHING SPECIFICATION BELOW.) APPLY STRAW AND ANCHOR TO SLOPES GREATER THAN 3%%% OR WHERE NEEDED.

PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED AS VARIOUS SECTIONS OF THE PROJECT ARE COMPLETED IN ORDER TO STABILIZE THE SOIL, REDUCE DOWNSTREAM DAMAGE FROM SEDIMENT AND RUNOFF, AND TO ENHANCE THE AESTHETIC NATURE OF THE SITE. IT WILL BE APPLIED TO ALL CONSTRUCTION AREAS SUBJECT TO EROSION WHERE FINAL GRADING HAS BEEN COMPLETED AND A PERMANENT COVER IS NEEDED.

SITE PREPARATION:

- INSTALL REQUIRED SURFACE WATER CONTROL MEASURES. REMOVE LOOSE ROCK, STONE, AND CONSTRUCTION DEBRIS FROM AREA.
- PERFORM ALL PLANTING OPERATIONS PARALLEL TO THE CONTOURS OF THE SLOPE.
- APPLY TOPSOIL AS INDICATED ELSEWHERE HEREIN. APPLY SOIL AMENDMENTS AS FOLLOWS:
- LIME: ACCORDING TO SOIL TEST OR AT THE RATE OF 1 TONS PER ACRE. ROCK DUST: ACCORDING TO SOIL TEST OR AT THE RATE OF 1 TONS PER ACRE 6. UNLESS HYDROSEEDED, WORK IN LIME TO A DEPTH OF 4 INCHES WITH A DISK OR ANY SUITABLE EQUIPMENT. DO NOT WORK FINISHED COMPOST

VEGETATED COVER SELECTION AND MULCHING

TEMPORARY VEGETATIVE COVER:

PERENNIAL RYEGRASS 5 LBS./1,000 SQ.FT. (LOLIUM PERENNE)

DUTCH WHITE CLOVER (TRIFOLIUM REPENS) 1/4 LBS PER 1000 SF. OR 6LBS/AC.

* PERMANENT VEGETATIVE COVER:

DUTCH WHITE CLOVER 30% BARON KENTUCKY BLUEGRASS 30%

JAMESTOWN II CHEWINGS FESCUE 20% PALMER PERENNIAL RYEGRASS 20%

* LOFTS - "TRIPLEX GENERAL" MIX OR APPROVED EQUAL. RECOMMENDED RATE/TIME

SPRING SEEDING: 4/1 to 5/31 FALL SEEDING: 8/16 to 10/15

TEMPORARY MULCHING:

STRAY 70-90 LBS./1,000 SQ.FT. (TEMPORARY VEGETATIVE AREAS) WOOD FIBER IN HYDROMULCH SLURRY 25-50 LBS./1,000 SQ. FT.

SEEDING.

- 1. SMOOTH AND FIRM SEEDBED WITH CULTIPACKER OR OTHER SIMILAR EQUIPMENT PRIOR TO SEEDING (EXCEPT WHEN HYDROSEEDING).
- SELECT ADAPTED SEED MIXTURE FOR THE SPECIFIC SITUATION. NOTE RATES AND THE SEEDING DATES (SEE VEGETATIVE COVER SELECTION & MULCHING SPEC.
- 3. APPLY SEED UNIFORMLY ACCORDING TO RATE INDICATED, BY BROADCASTING,
- DRILLING, OR HYDRAULIC APPLICATION. 4. COVER GRASS AND LEGUME SEED WITH NOT MORE THAN 1/4 INCH OF SOIL WITH
- SUITABLE EQUIPMENT (EXCEPT WHEN HYDROSEEDING). MULCH IMMEDIATELY AFTER SEEDING, IF REQUIRED, ACCORDING TO TEMPORARY MULCHING SPECIFICATIONS. (SEE VEGETATIVE COVER SELECTION & MULCHING
- SPECIFICATION BELOW) USE PROPER INOCULAT ON ALL LEGUME SEEDLINGS, USE FOUR (4) TIMES NORMAL
- RATES WHEN HYDROSEEDING. USE SOD WHERE THERE IS A HEAVY CONCENTRATION OF WATER AND IN CRITICAL AREAS WHERE IT IS IMPORTANT TO GET A QUICK VEGETATIVE COVER TO PREVENT

MAINTENANCE:

1. TEST FOR SOIL ACIDITY EVERY THREE (3) YEARS AND LIME AS REQUIRED.

1. TEMPORARY PERVIOUS BARRIERS USING BALES OF HAY OR STRAW, HELD IN PLACE WITH STAKES DRIVEN THROUGH THE BALES AND INTO THE GROUND OR GEOTEXTILE FABRIC FASTENED TO A FENCE POST AND BURIED INTO THE GROUND, SHALL BE INSTALLED AND MAINTAINED AS REQUIRED TO CHECK EROSION AND REDUCE SEDIMENTATION.

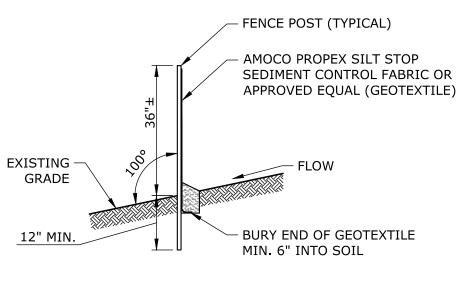
- BALES SHOULD BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
- EACH BALE SHALL BE EMBEDDED INTO THE SOIL A MINIMUM OF FOUR (4") INCHES. BALES SHALL BE SECURELY ANCHORED IN PLACE BY WOOD STAKES OR REINFORCEMENT BARS DRIVEN THROUGH THE BALES AND INTO THE GROUND. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD THE PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
- 4. GEOTEXTILE FABRIC SHALL BE SECURELY ANCHORED AT THE TOP OF A THREE FOOT (3') HIGH FENCE AND BURIED A MINIMUM OF FOUR INCHES (4") TO THE SOIL. SEAMS BETWEEN SECTIONS OF FILTER FABRIC SHALL OVERLAP A MINIMUM OF TWO FEET (2').

INSTALLATION AND MAINTENANCE:

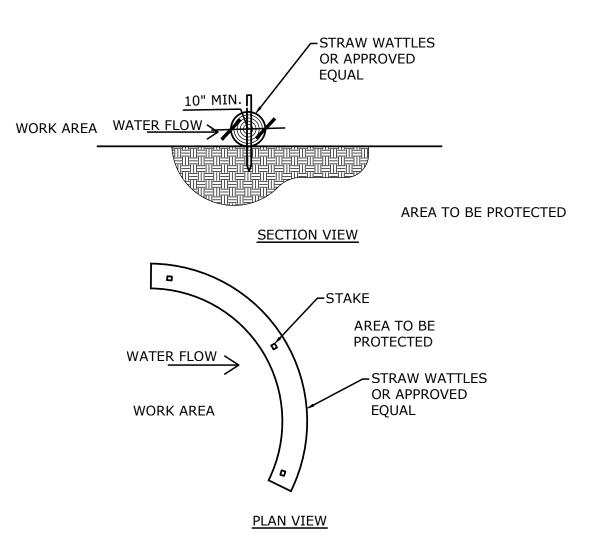
- BALED EROSION BARRIERS SHALL BE INSTALLED AT ALL STORM SEWER INLETS. BALED EROSION BARRIERS AND GEOTEXTILE FENCE SHALL BE INSTALLED AT THE LOCATION INDICATED ON THE PLAN AND IN ADDITIONAL AREAS AS MAY BE DEEMED
- APPROPRIATE DURING CONSTRUCTION. ALL EROSION CHECKS SHALL BE MAINTAINED UNTIL ADJACENT AREAS ARE
- STABILIZED INSPECTION SHALL BE FREQUENT (AT MINIMUM MONTHLY AND BEFORE AND AFTER HEAVY RAIN) AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- EROSION CHECKS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORMWATER FLOW OR DRAINAGE.

- FILTER FABRIC ON COMPACTED SUBGRADE - NO 3. (2") BROKEN OR CRUSHED STONE. 12" MINIMUM THICKNESS 1. CONSTRUCTION ENTRANCE PAD SHALL BE INSTALLED AND MAINTAINED DURING OPERATIONS WHICH GENERATE VEHICULAR TRACKING OF MUD.

CONSTRUCTION ENTRANCE PAD (CE)

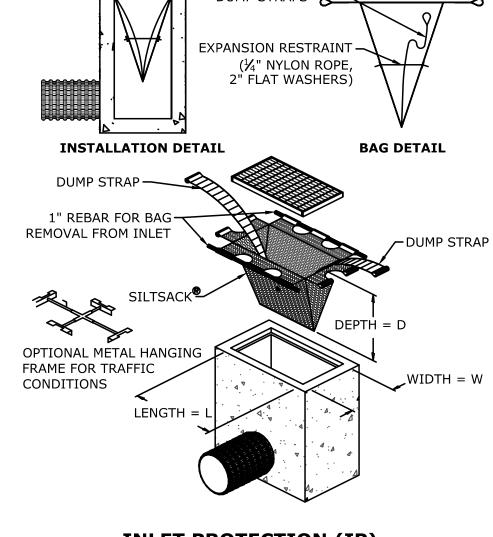


SEDIMENT FILTER FENCE (SFF)



NOTE: STRAW BALES MAY BE UTILIZED WITH APPROVAL BY

STRAW WATTLES (SW) NOT TO SCALE



SELVAGE KNUCKLED -TOP RAIL 1.660" O.D. -10' MIN. INSTALL FENCE SCREENING ON — ALL PANELS (SEE NOTE 1) FASTENERS 24" ANCHOR PANEL WITH HEAVY -O.C. AT POSTS GAGE WIRE CLIPS AT ALL GROMMETS. POST, 1.900" O.D. 2" MESH, 11 GAUGE, → GALVANIZED CHAIN LINK FENCE FABRIC, TOP AND BOTTOM SELVAGE KNUCKLED ➤ POST 1.900" O.D. ∠ 2 PEG LINE STABILIZER BOTTOM RAIL 1.660" O.D. BRACKET (TYP) 1 PEG END STABILIZER BRACKET

PANELIZED FENCE NOTES:

- 1. FENCE SCREENING (SCRIM) SHALL BE GREEN OR BLACK.
- 2. EMBEDDED FENCE MAY NOT BE USED. 3. WHERE PANELIZED FENCE IS APPROVED, EACH STABILIZER BRACKET SHALL BE SECURED WITH TWO (2)

ANCHOR WEIGHTS (TYP)

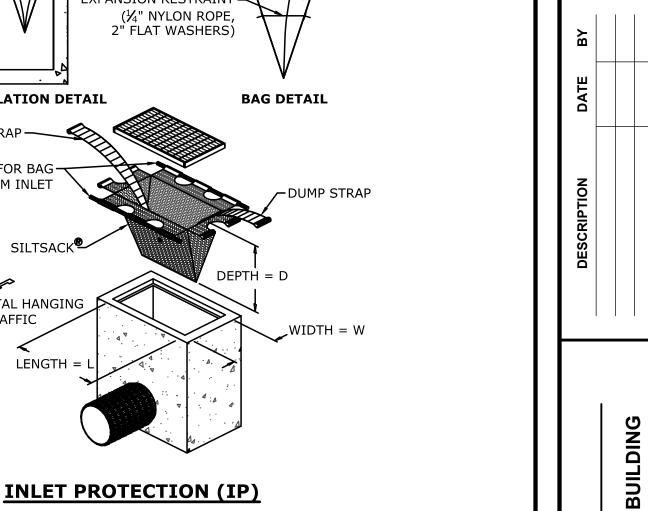
- SANDBAGS, OR PANEL WEIGHTS, MIN. 50 POUNDS EACH. 4. PANELIZED FENCE SHALL HAVE NO SANDBAGS ON THE EXTERIOR OF THE FENCE AND SHALL BE INTERNALLY
- 5. NOTE THAT ADDITIONAL WEIGHT OR TIES MAY BE REQUIRED TO SECURE SCRIMMED PANELS TO PREVENT
- OVERTURNING BY WIND AND POTENTIAL DAMAGE TO SURROUNDING OBJECTS. 6. CONTRACTOR SHALL PROVIDE GATES WHERE APPROVED BY THE ENGINEER.

CONSTRUCTION FENCE (CF)

EROSION CONTROL MAINTENANCE INTERVALS CONTROL OBJECTIVE FAILURE INDICATORS REMOVAL EROSION CONTROL INSPECTION/MAINTENANCE MEASURE INTERCEPT, AND REDIRECT/DETAIN PHYSICAL DAMAGE OR DECOMPOSITION INSPECT AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH SMALL AMOUNTS OF SEDIMENT FROM - EVIDENCE OF OVERTOPPED OR UNDERCUT SILT FENCE MAY BE REMOVED AFTER SILT FENCE (SF) A RAINFALL OF 0.5 INCHES OR MORE. ACCUMULATED SEDIMENT MUST BE REMOVED ONCE SMALL DISTURBED AREAS. UPHILL AND SENSITIVE AREAS HAVE (RELATED: IP, STK) DECREASE VELOCITY OF SHEET FLOW. ITS DEPTH IS EQUAL TO ½ THE TRENCH HEIGHT. INSPECT FREQUENTLY DURING PUMPING - EVIDENCE OF SIGNIFICANT FLOWS EVADING BEEN PERMANENTLY STABILIZED. PROTECT SENSITIVE SLOPES OR SOILS OPERATIONS IF USED FOR DEWATERING OPERATIONS. FROM EXCESSIVE WATER FLOW. - REPETITIVE FAILURE INSPECT AT THE END OF EACH WORK DAY AND IMMEDIATELY REPAIR DAMAGES. CONSTRUCTION ENTRANCE MAY BE PERIODIC ADDITION OF STONE, OR LENGTHENING OF ENTRANCE MAY BE REQUIRED AS REMOVED ONCE THE SITE HAS BEEN REDUCE THE TRACKING OF SEDIMENT OFF-SITE CONSTRUCTION ENTRANCE (CE) SEDIMENT IN ROADWAY ADJACENT TO SITE CONDITIONS DEMAND. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PERMANENTLY STABILIZED, AND ALL ONTO PAVED SURFACES. PAVED SURFACES AS A RESULT OF INEFFICIENCY OF CONSTRUCTION ENTRANCE SHALL B OTHER SECTIONS OF ROADWAY HAVE BEEN PERMANENTLY PAVED. INLET PROTECTION MAY BE INSPECT AFTER ANY RAIN EVENT. IF FILTER BAG INSIDE CATCH BASIN CONTAINS MORE REMOVED ONCE THE SITE HAS BEEN PROHIBIT SILT IN CONSTRUCTION-RELATED RUNOFF FAILED HAY BALES / SILT FENCE INLET PROTECTION (IP) THAN 6" OF SEDIMENT, REMOVE SEDIMENT FROM BAG. CHECK SURROUNDING SILT FENCE PERMANENTLY STABILIZED, AND ALL FROM ENTERING STORM DRAINAGE SYSTEM. SIGNIFICANT SILT PRESENCE IN STORM AND HAY BALES PER NOTED ABOVE. SECTIONS OF ROADWAY HAVE BEEN DRAINAGE SYSTEM OUTFLOW. PERMANENTLY PAVED. INSPECT SILT FENCE AT THE END OF EACH WORK DAY AND IMMEDIATELY REPAIR EVIDENCE OF STOCK PILE DIMINISHING STOCKPILE PROTECTION MAY BE STOCKPILE PROTECTION RETAIN SOIL STOCKPILE IN LOCATIONS SPECIFIED, DAMAGES. PERIODIC REINFORCEMENT OF SILT FENCE, OR ADDITION OF HAY BALES MAY UE TO RAIN EVENTS REMOVED ONCE THE STOCKPILE IS AND REDUCE WATER-TRANSPORT.

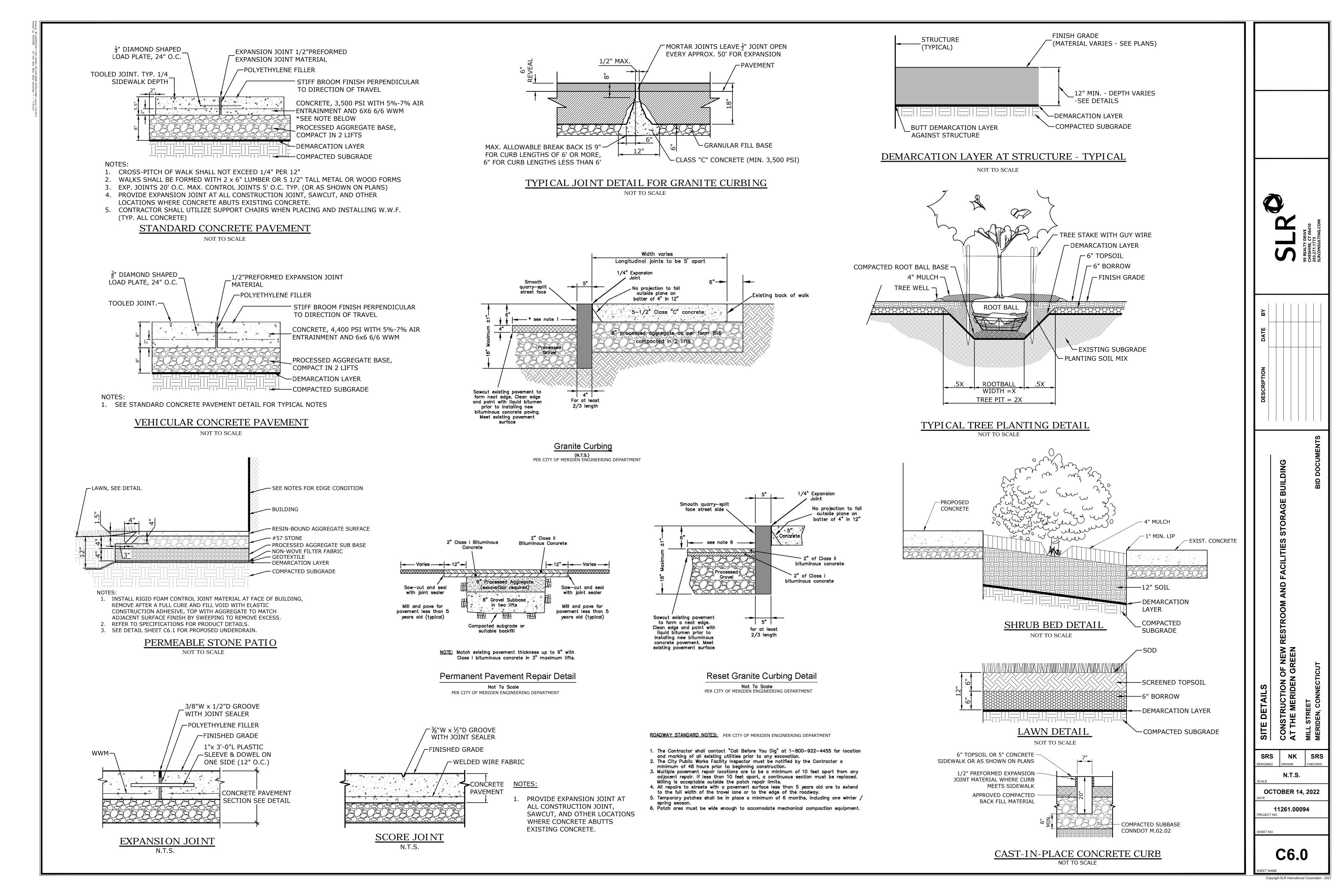
FAILURE OF SILT FENCE

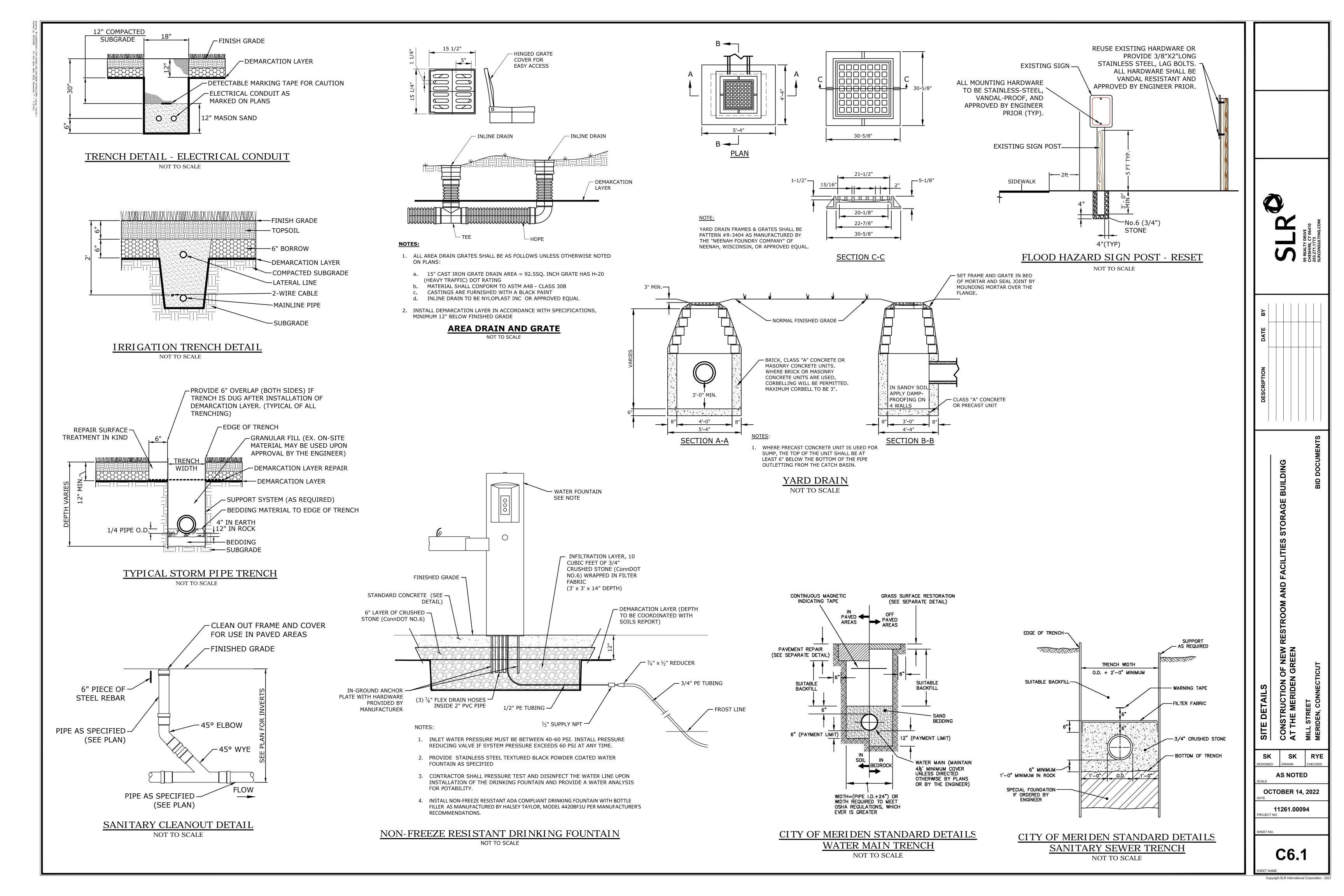
USED OR REMOVED.

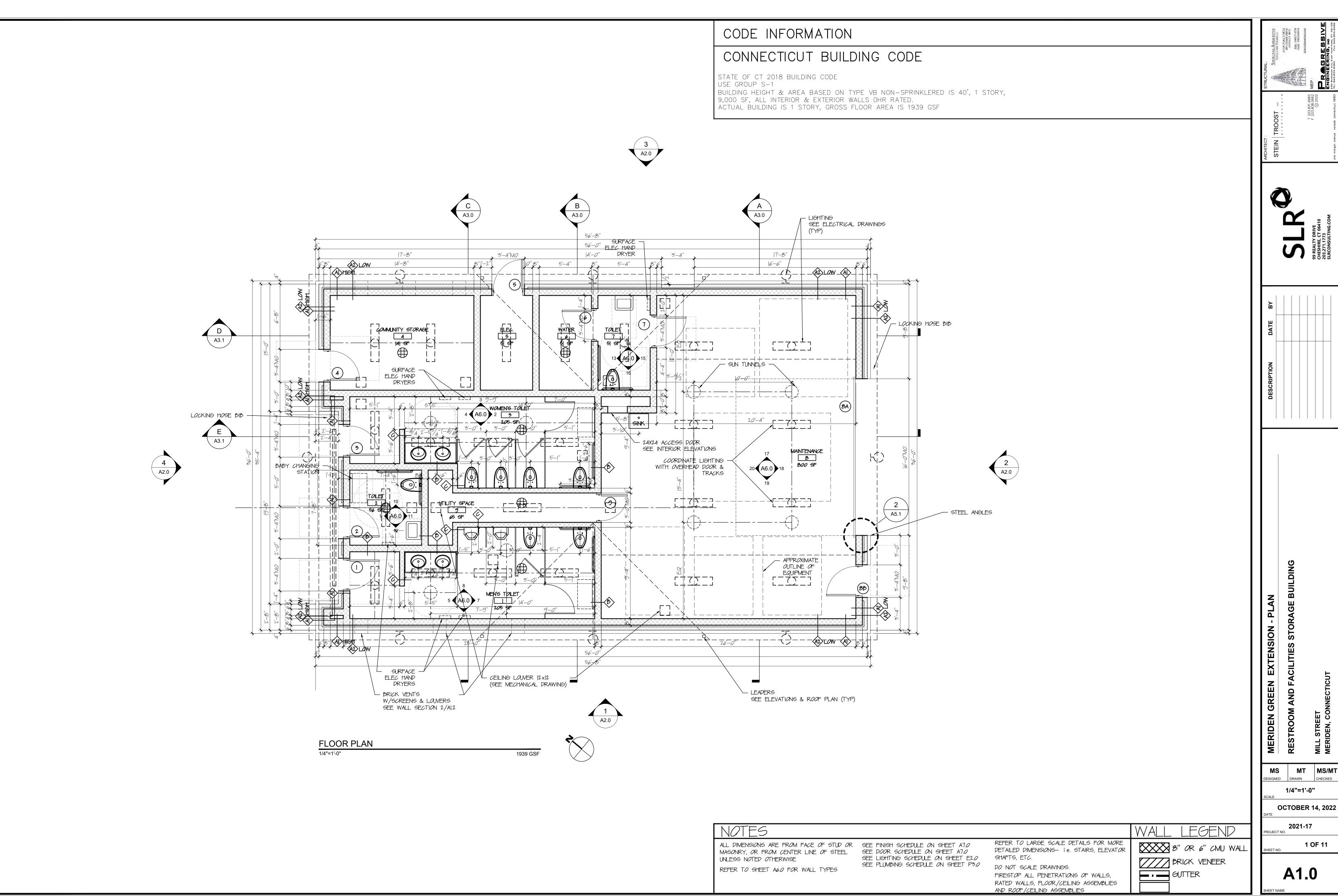


OF NEW CONSTRUCTION O AT THE MERIDEN

> SK RYE **AS NOTED OCTOBER 14, 2022** 11261.00094



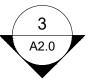


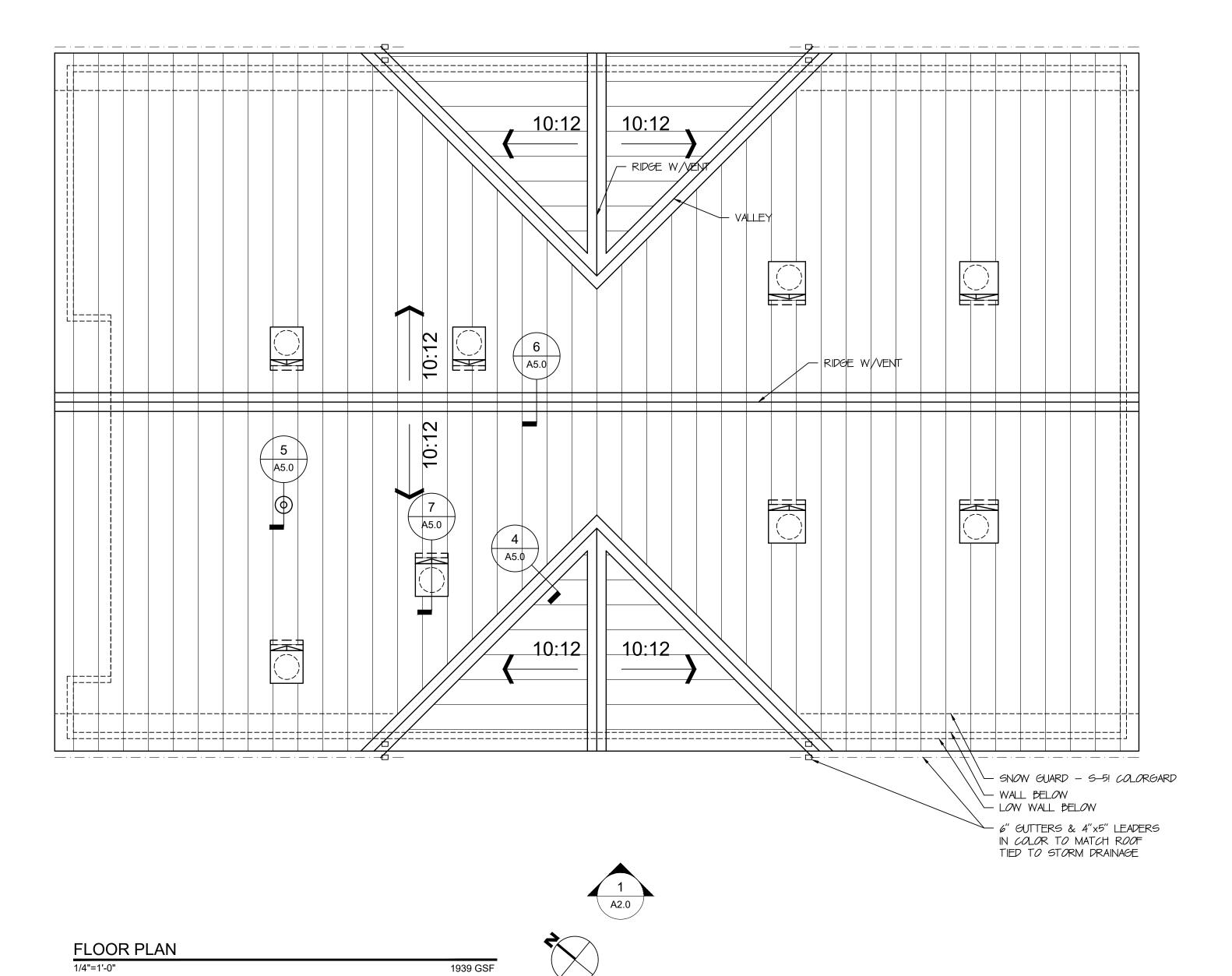


1/4"=1'-0" **OCTOBER 14, 2022**

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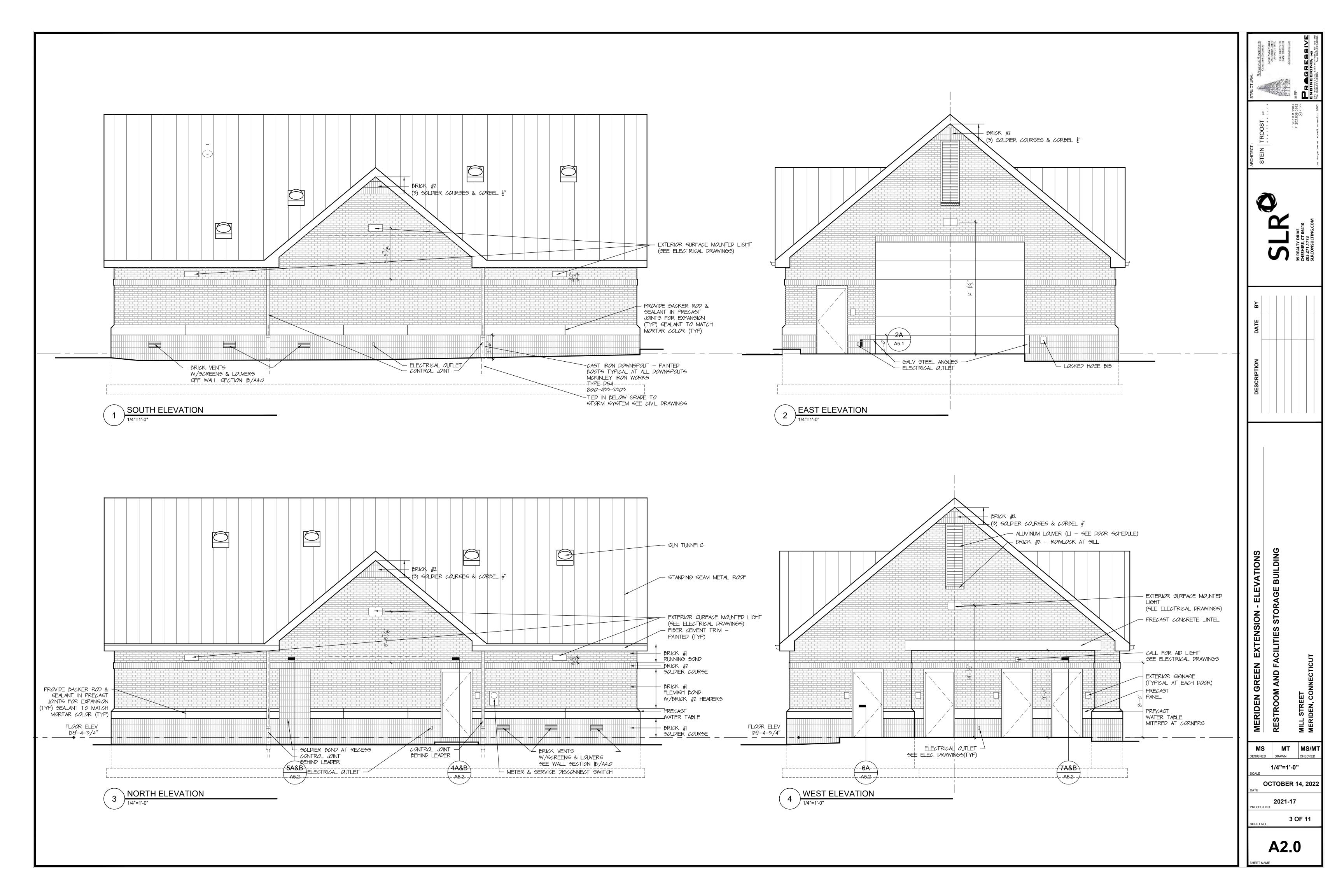
MERIDEN GREEN EXTENSION - ROOF PLAN RESTROOM AND FACILITIES STORAGE BUILDING

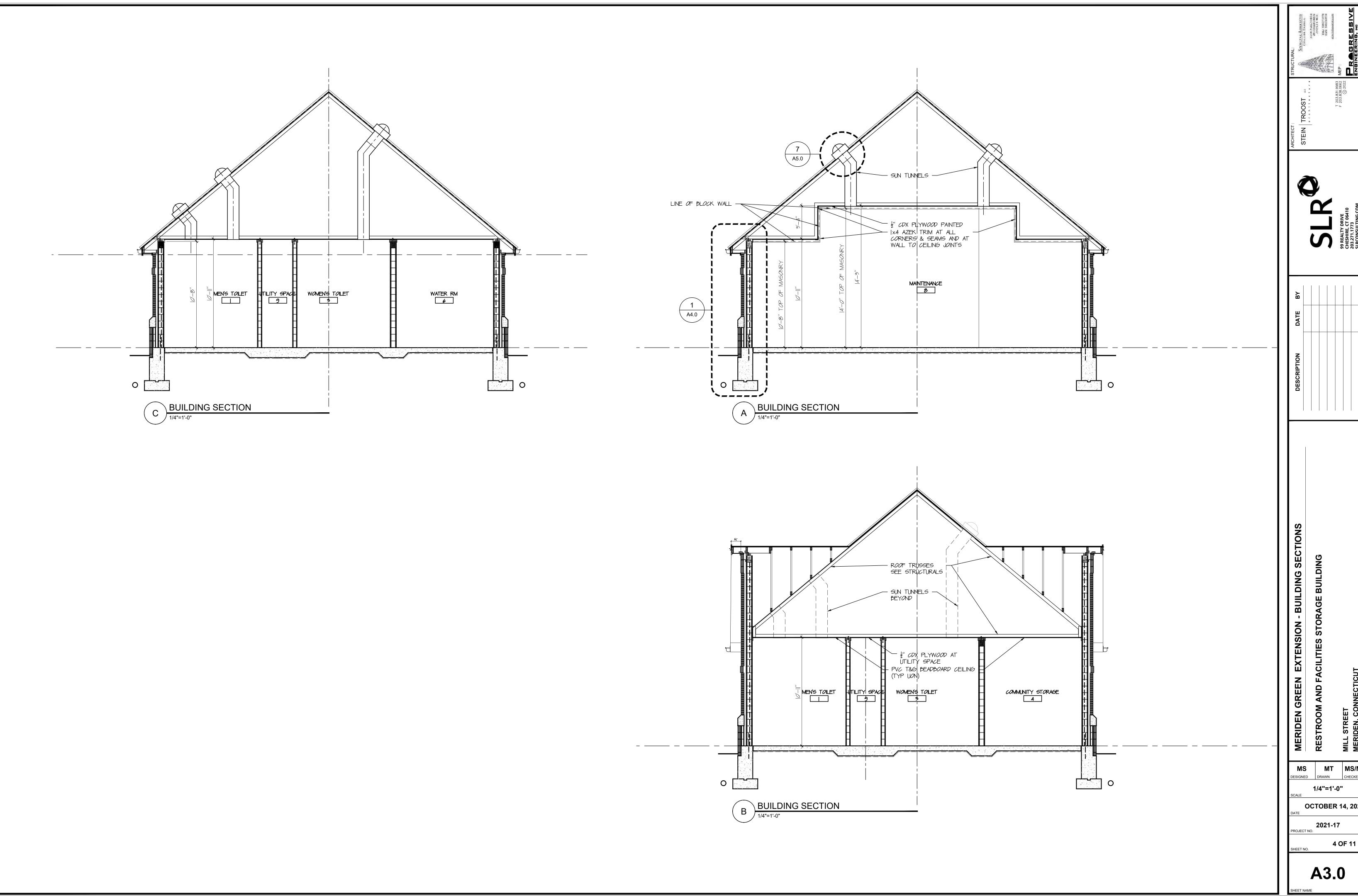
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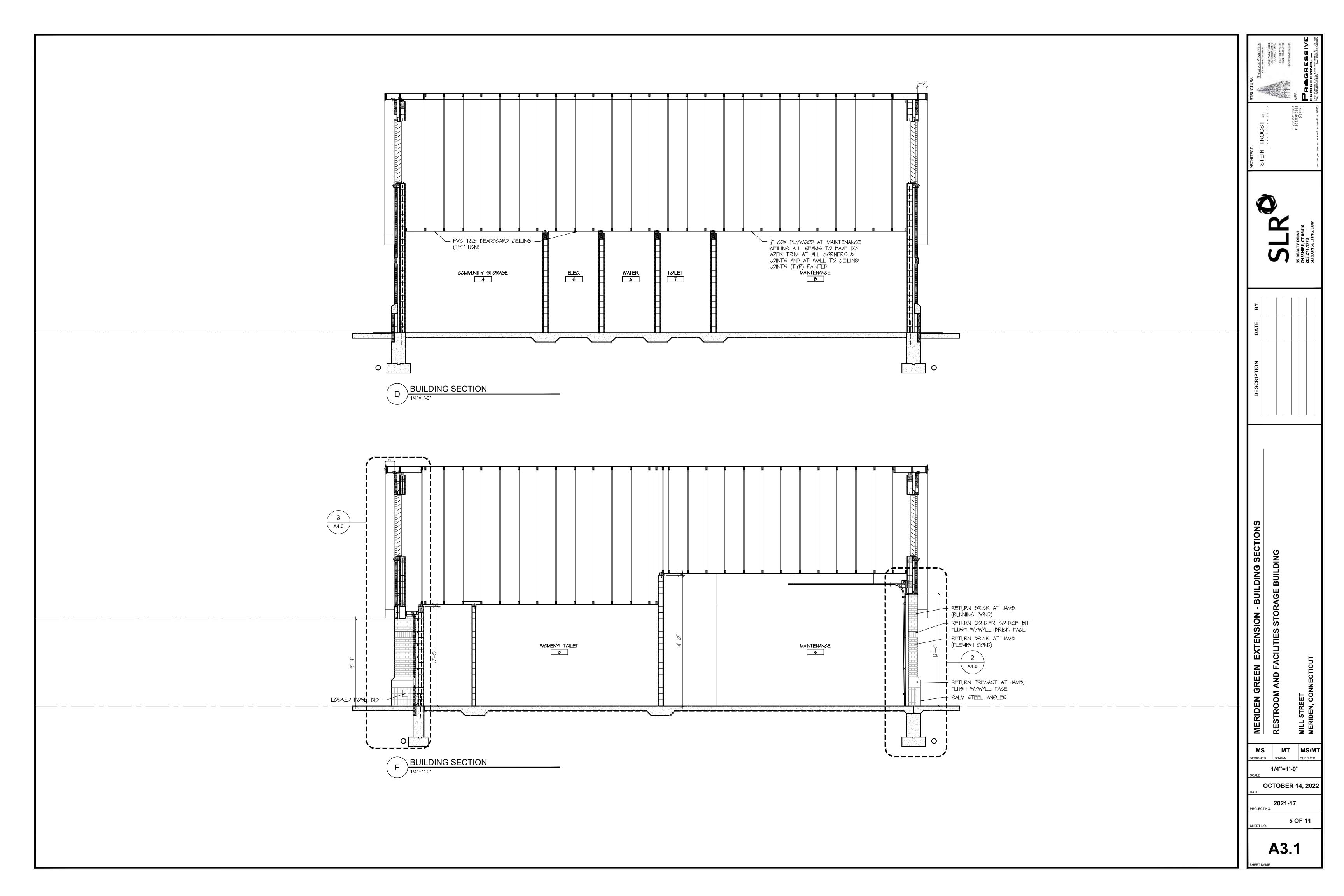


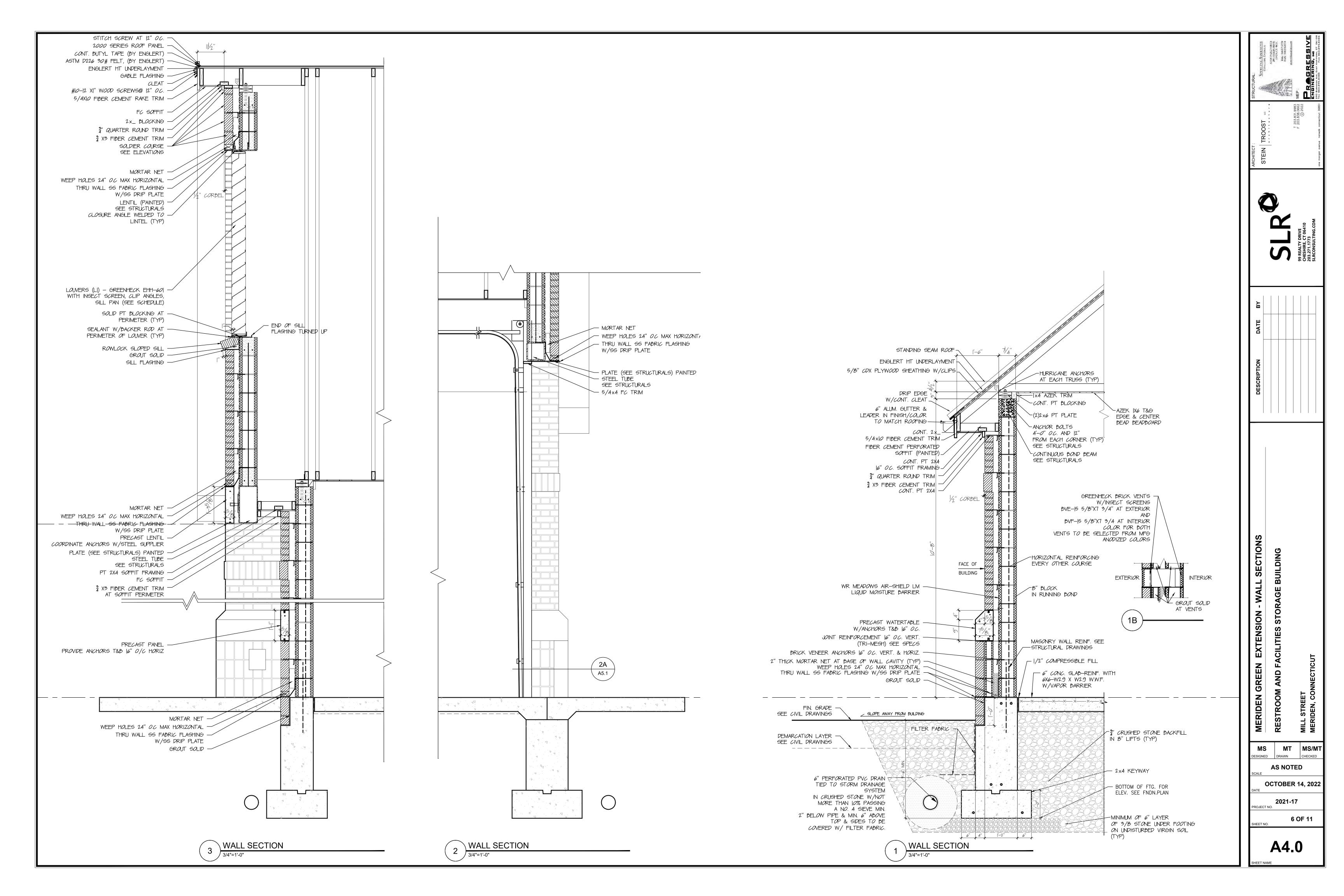
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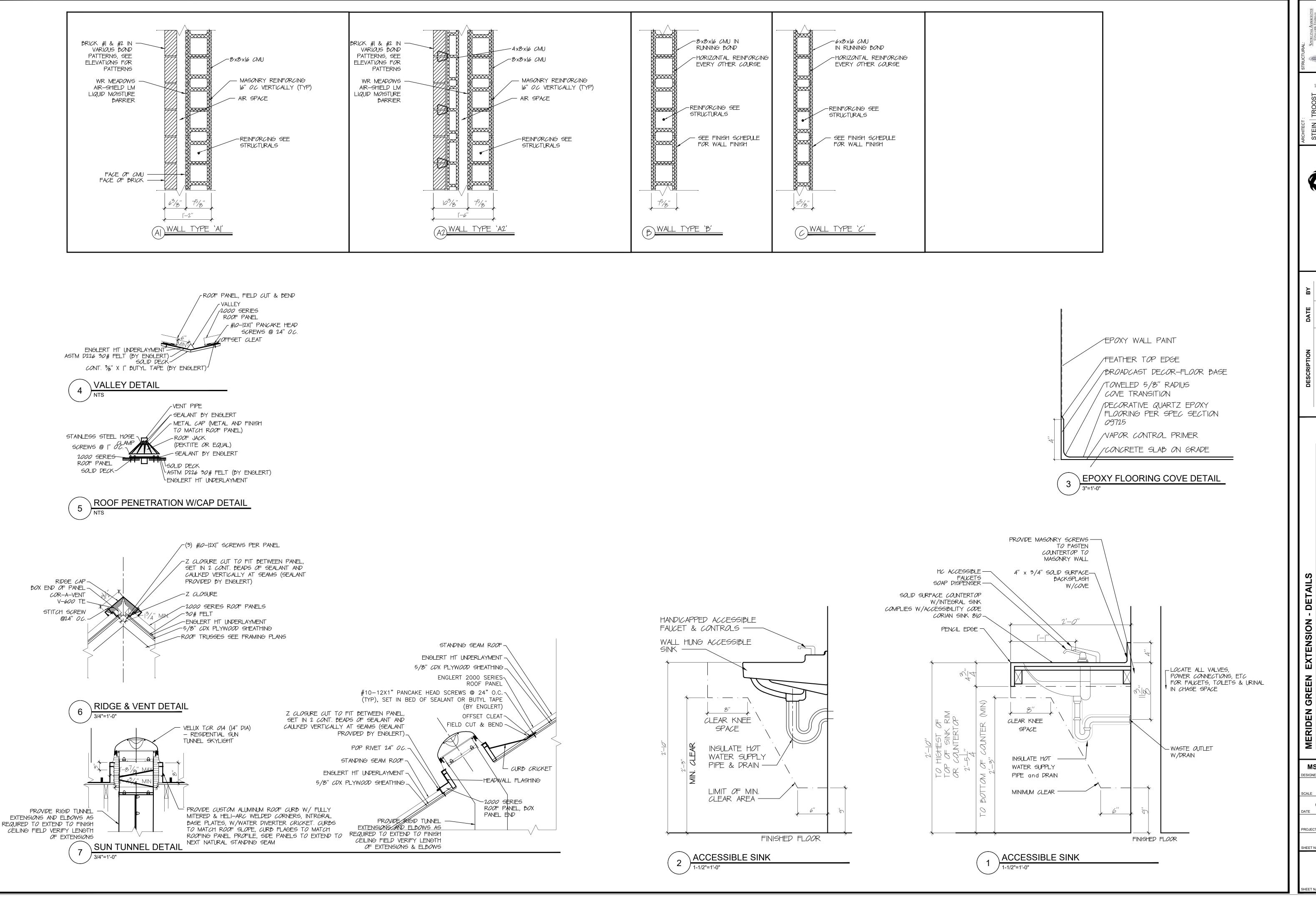
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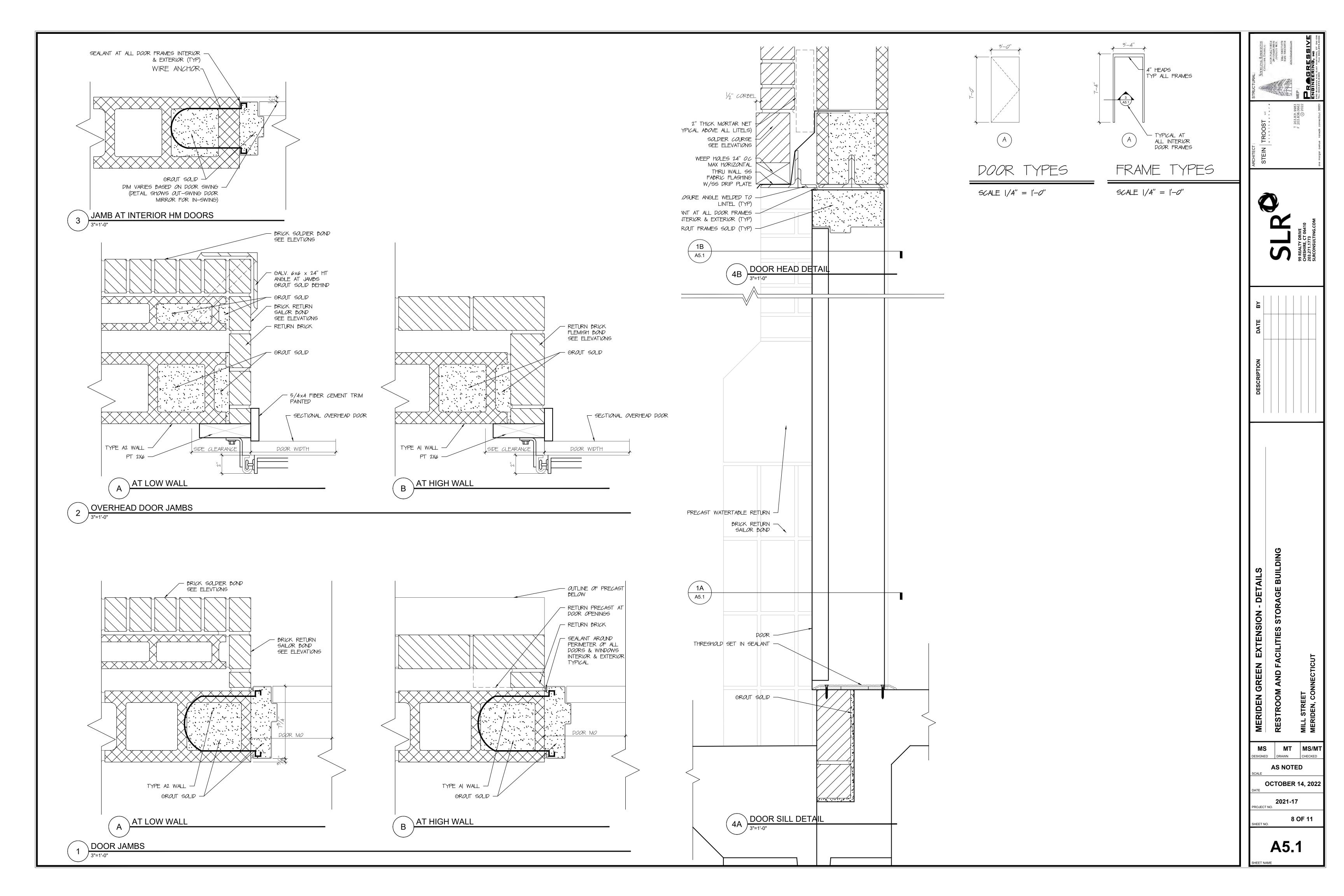


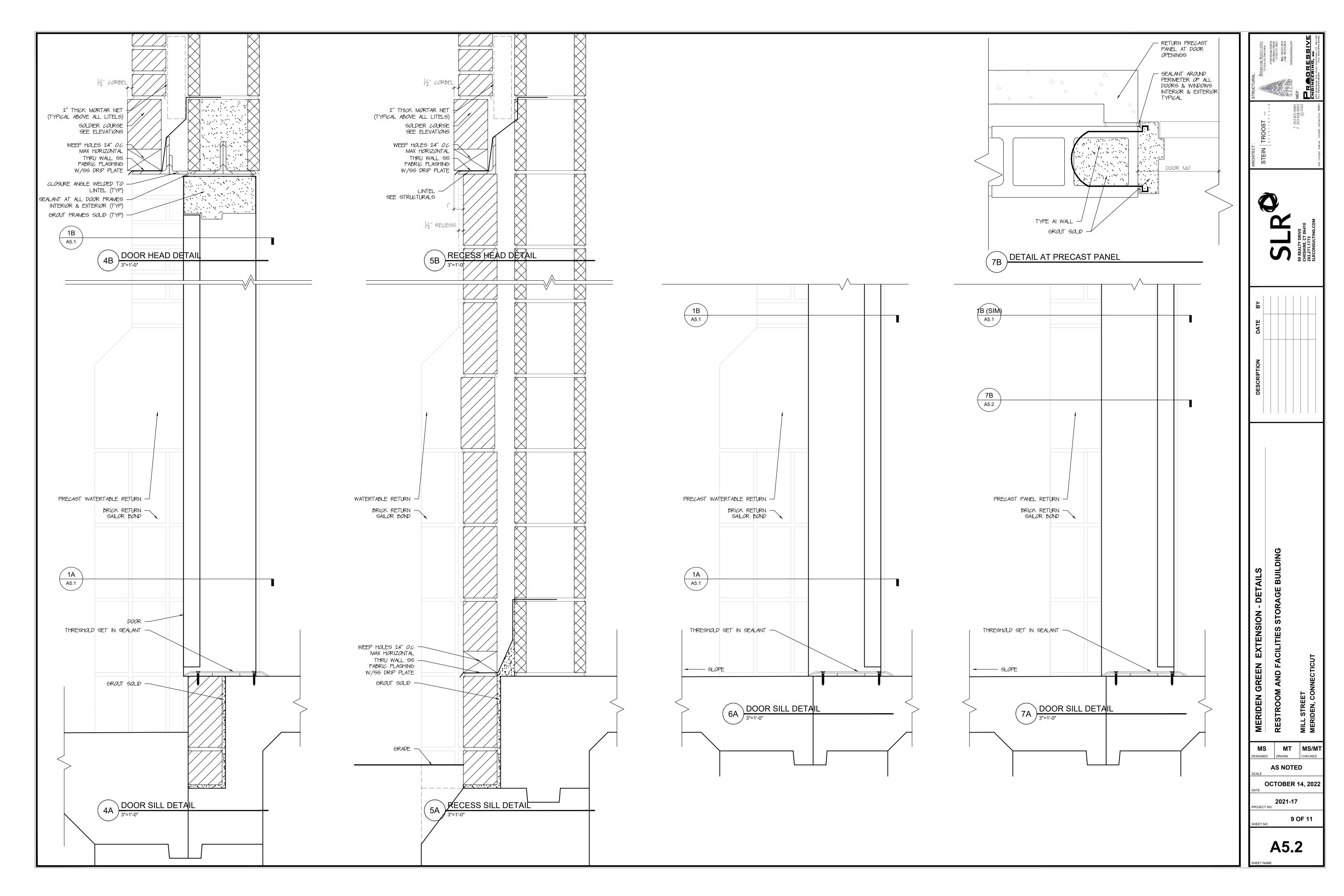


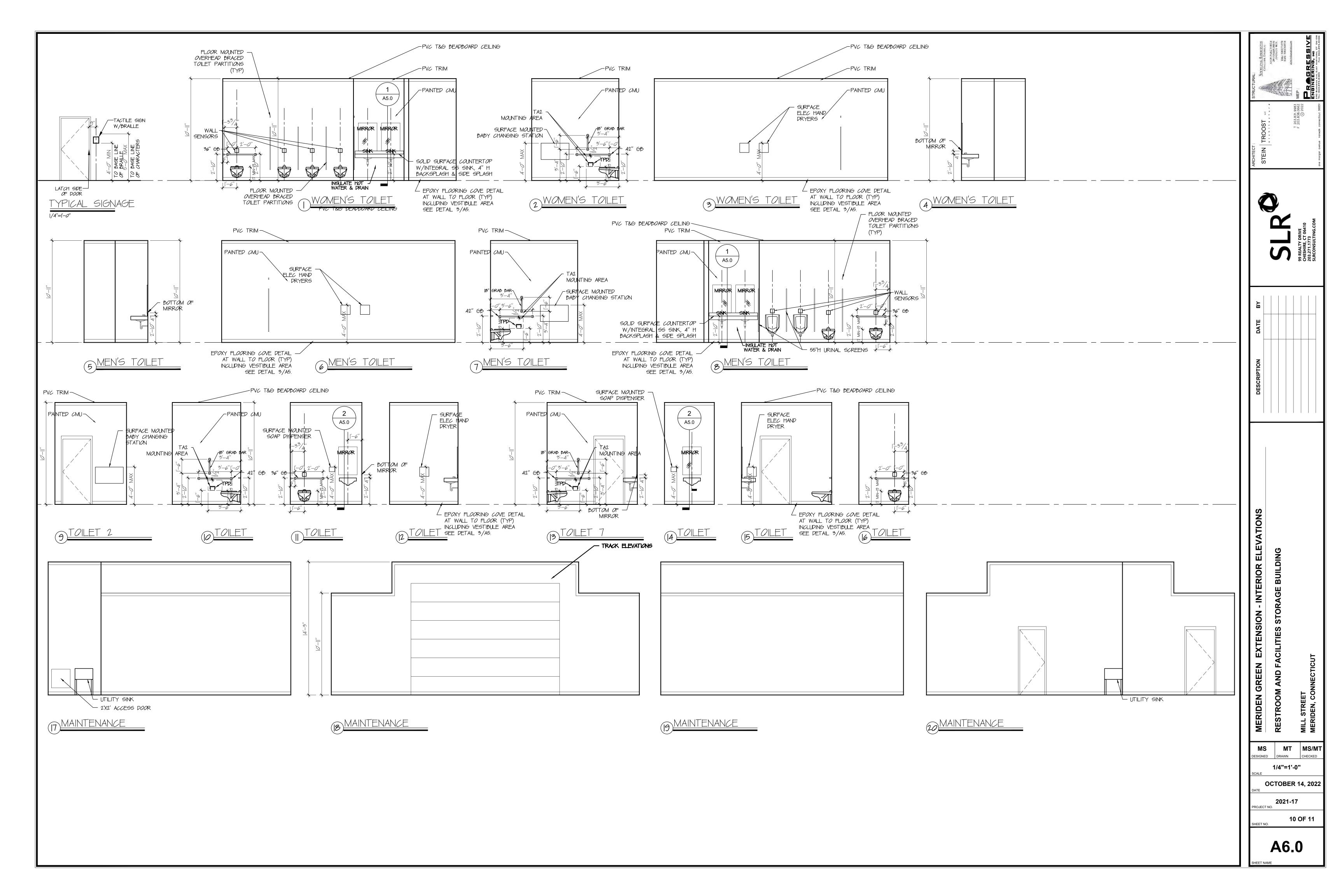
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FINISH KEY SCHEDLUE					
Flooring					
Flooring #	Туре	Manufacturer	Style & Color #	Description	Comment
EPF-1	EPOXY FLOORING	Dur-A-Flex, Inc,	DUR-A-QUARTZ Q28-21	self leveling broadca	st colored quartz
SC-1	SEALED CONCRETE				
Toilet Partition					
SS#	Туре	Manufacturer	Color	Description	
TP-1	HDPE	SCRANTON	BLACK - EX (TEXTURE)		
Solid surface					
SS#	Туре	Manufacturer	Color	Description	
SS-1		CORIAN	DESIGNER WHITE		Counterrtop & intragral bow l
D : (
Paint	 				
Paint #	Туре	Manufacturer	Color	Description	Comment
ED 1	EPOXY WALL PAINT	Sherwin-Williams	SW7071(GREY SCREEN)		CMU INTERIOR WALLS
EP-1	EPOXY WALL PAINT	Sherwin-vviillans	SVV/U/ I(GREY SCREEN)		CIVID INTERIOR VVALES
					DOORS, FRAMES, LINTELS &
P-1	SEMI-GLOSS	Sherwin-Williams	TBS		EXPOSED METAL
P-2	LOW LUSTRE	Sherwin-Williams	w hite		INTERIOR CEILINGS & TRIM
P-3	SATIN	Sherwin-Williams	w hite		Exterior trim
P-4	SATIN	Sherwin-Williams	w hite		Exterior soffit
EXTERIOR COLORS					
	Manufacturer	Color			
EXTERIOR BRICK #1	Glen Gery	Ravenna			
EXTERIOR BRICK #2	Glen Gery	Sycamore			
MORTAR	Specmix	Suede			
METAL ROOF	Englert	Everglade moss			
GUTTERS & LEADERS	Englert	Everglade moss			
DOWNSPOUT BOOTS		Painted to match leaders/	roof		
EXTERIOR TRIM	Fiber cement	w hite			
SOFFIT	Fiber cement	w hite			
OVERHEAD DOOR		w hite			
ALUMINUM LOUVER	Greenheck	TBS custom (AAMA 2605	5)		
EXTERIOR DOORS &					
FRAMES		TBS			

DOOR NUMBER	LOCATION	DOOR	DOOR		DOOR	DOOR	FRAME	FRAME		HARDWARE	COMMENTO
	LOCATION	WIDTH	HEIGHT	THICKNESS	MAT/TYPE	FINISH	MAT/TYP	FINISH	CLOSER	SEI	COMMENTS
1	MENS TIOLET	3'-0"	7'-0"	1-3/4	нм-а	PAINT	HM-A	PAINT	YES	001	
2	TIOLET	3'-0"	7'-0"	1-3/4	НМ-А	PAINT	НМ-А	PAINT	YES	002	
3	WOMENS TIOLET	3'-0"	7'-0"	1-3/4	HM-A	PAINT	НМ-А	PAINT	YES	001	
4	COMMUNITY STORAGE	3'-0"	7'-0"	1-3/4	НМ-А	PAINT	HM-A	PAINT	YES	003	
5	ELECTRIC	3'-0"	7'-0"	1-3/4	НМ-А	PAINT	HM-A	PAINT	YES	003	
6	WATER	3'-0"	7'-0"	1-3/4	HM-A	PAINT	HM-A	PAINT	YES	004	
7	TOILET	3'-0"	7'-0"	1-3/4	HM-A	PAINT	НМ-В	PAINT		006	
8A	MAINTENANCE	16'-0"	12'-0"			MFG				005	INSULATED SECTIONAL OVERHEAD DOOR
8B	MAINTENANCE	3'-0"	7'-0"	1-3/4	HM-A	PAINT	HM-A	PAINT	YES	007	
9	UTILITY SPACE	3'-0"	7'-0"	1-3/4	HM-A	PAINT	HM-A	PAINT		008	
NUMBER	LOCATION	WIDTH	HEIGHT	THICKNESS							COMMENTS
LOUVERS (L1)	GABLE ENDS SEE ELEVATIONS	2'-0"	6'-7"	6"							GREENHECK EHH-601 WITH INSECT SCREEN, CLIP ANGLES, SILL PAN, CUSTOM COLOR W/AAMA 2605 FINISH

FINISH SCHEDULE

MERIDEN GREEN

ROOM		FLR	FLR			DOOR	CEILIN		COUNTERTOP		
NO.	ROOM NAME	FIELD	BASE	WALLS	DOOR	FRAME	G	TRIM	S & CABINETS	COMMENTS	ROOM SIGNAGE
1	MENS TOILET	EPF-1	EPF-1	EP-1	P-1	P-1	P-2	P-2	SS-1	SEE INTERIOR ELEVATIONS & PLANS	MENS TOILET W/ BABY A CHANGING STATION w/Braille
2	TOILET	EPF-1	EPF-1	EP-1	P-1	P-1	P-2	P-2		SEE INTERIOR ELEVATIONS & PLANS	FAMILY TOILET W/ BABY B CHANGING STATION w/Braille
3	WOMENS TOILET	EPF-1	EPF-1	EP-1	P-1	P-1	P-2	P-2	SS-1	SEE INTERIOR ELEVATIONS & PLANS	WOMENS TOILET W/ BABY C CHANGING STATION w/Braille
4	COMMUNITY STORAGE	EPF-1	EPF-1	EP-1	P-1	P-1	P-2	P-2			D COMMUNITY STORAGE w/Braille
5	ELECTRIC ROOM	SC-1	NONE	NONE	P-1	P-1	P-2	P-2			E ELECTRIC ROOM w/Braille
6	WATER ROOM	SC-1	NONE	NONE	P-1	P-1	P-2	P-2			F WATER ROOM w/Braille
7	STAFF TOILET	EPF-1	EPF-1	EP-1	P-1	P-1	P-2	P-2		SEE INTERIOR ELEVATIONS & PLANS	G STAFF TOILET w/Braille
8	MAINTENANCE	SC-1	NONE	NONE	P-1	P-1	P-2	P-2		SEE INTERIOR ELEVATIONS & PLANS	H MAINTENANCE w/Braille
9	UTILITY SPACE	SC-1	NONE	NONE	P-1	P-1	P-2	P-2			I UTILITY w/Braille

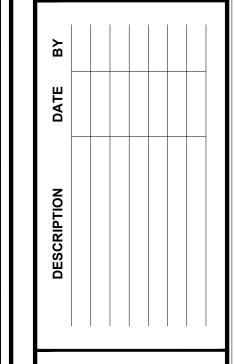
ANY CONCRETE CURING COMPOUNDS OR HARDENERS TO BE USED MUST BE APPROVED BY EPOXY FLOORING MANUFACTURER



STEIN TROOST uc

1 203.831.9983
F 203.838.0662
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MERIDEN GREEN EXTENSION - SCHEDULES
RESTROOM AND FACILITIES STORAGE BUILDING

MS MT MS/MT CHECKED

NTS
SCALE

OCTOBER 14, 2022
DATE

2021-17
PROJECT NO.

11 OF 11
SHEET NO.

STRUCTURAL_GENERAL_NOTES

A. GENERAL

- SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION AND DETAILS. ALSO, SEE STRUCTURAL SPECIFICATIONS.
- THE STRUCTURE HAS BEEN DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE CONSTRUCTION OF THE BUILDING HAS BEEN COMPLETED. THE STABILITY OF THE STRUCTURE PRIOR TO TOTAL COMPLETION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. JOBSITE SAFETY AND CONSTRUCTION PROCEDURES ARE SOLELY THE RESPONSIBILITY OF TH CONTRACTOR. LACK OF COMMENT BY THE ENGINEER IS NOT TO BE INTERPRETED AS APPROVAL OF THOSE ASPECTS OF WORK.

B. FOUNDATION

- 1. ALL FOUNDATION EXCAVATIONS SHALL BE TO REQUIRED ELEVATION OR UNDISTURBED SOIL. ALL FOUNDATIONS EXCAVATIONS SHALL BE TO
- BOTTOM OF EXTERIOR FOOTING TO BE A MINIMUM 3'-6" BELOW FINISHED GRADE. ALL FOOTINGS SHALL BE A MINIMUM OF 1'-6" BELOW EXISTING GRADE, UNLESS ON STRUCTURAL FILL.
- STRUCTURAL FILL SHALL BE APPROVED STRUCTURAL GRAVEL COMPACTED IN 8" LAYERS TO 95% OF MODIFIED OPTIMUM DENSITY, CONFORM TO CONNECTICUT DOT FORM 813 SECTION M.02 GRADING "C".
- ALL FOUNDATION EXCAVATIONS AND STRUCTURAL FILL SHALL BE TESTED AND INSPECTED TO ENSURE THE ALLOWABLE SOIL BEARING PRESSURE AND DENSITY OF FOUNDATION BEARING MATERIALS.
- BOTH SIDES OF FOUNDATION WALLS SHALL BE BACKFILLED SIMULTAN-EOUSLY TO PREVENT OVERTURNING OR LATERAL MOVEMENT OF WALLS.
- 6. DO NOT BACKFILL AGAINST RETAINING BASEMENT WALLS UNTIL CONCRETE HAS ACHIEVED 75% OF 28 DAY SPECIFIED STRENGTH.

C. CONCRETE WORK AND REINFORCING

UNLESS OTHERWISE NOTED.

- 1. ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 301 LATEST EDITION. 2. WALL FOOTING ARE TO BE 12 INCHES DEEP WITH 6-INCH PROJECTIONS,
- 3. ALL FOUNDATION WALLS ARE TO BE KEYED TO FOOTINGS.
- 4. SLABS ARE TO BE KEYED TO SUPPORTING WALLS.
- WHERE VERTICAL REINFORCING BARS ARE CALLED FOR IN WALLS, AT COLUMN LOCATIONS OR PIERS, SUCH BARS ARE TO BE DOWELED INTO
- 6. POCKET WALLS WHERE NECESSARY FOR COLUMNS AND SLABS.
- 8. REINFORCING TO BE LAPPED 36 BAR DIAMETERS AT ALL CORNERS, SPLICES, DOWELS, ETC.

7. PROVIDE MINIMUM OF 2 INCHES COVER AROUND COLUMN BASE PLATES.

- 9. PROVIDE TWO (2) #5 BARS ON ALL SIDES AND DIAGONALLY AT CORNERS OF OPENINGS THROUGH CONCRETE WALLS. BARS TO EXTEND 2'-0" BEYOND
- 10. UNLESS OTHERWISE NOTED, ALL FOUNDATION WALLS ARE TO BE REIN-FORCED WITH TWO (2) #5 BARS, CONTINUOUS TOP AND BOTTOM.
- 11. HORIZONTAL WALL CONSTRUCTION JOINTS WILL NOT BE PERMITTED, EXCEPT WHERE SHOWN.
- 12. ALL JOINTS IN STRUCTURAL SLABS SHALL BE MADE AT CENTER OF SPAN WITH VERTICAL BULKHEADS AND HORIZONTAL KEYS, UNLESS OTHERWISE SHOWN OR APPROVED.
- 13. AIR-ENTRAIN ALL EXPOSED CONCRETE.
- 14. PADS ARE REQUIRED FOR ALL FLOOR STANDING EQUIPMENT. COORDINATE SIZE AND LOCATION OF EQUIPMENT PADS WITH MECHANICAL AND ELECT-
- 15. THE GENERAL CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS. INCLUDING DIMENSIONS AND LOCATIONS, OF ALL OPENINGS, EMBEDDED ITEMS, ETC., FOR MECHANICAL AND ELECTRICAL TRADES.
- 16. COVER FOR REINFORCING:
- CONCRETE PLACED ON EARTH FORMED CONCRETE EXPOSED TO GROUND OR WEATHER: 1) #6 BARS OR LARGER
- 2) #5 BARS OR SMALLER C) FORMED CONCRETE NOT EXPOSED TO GROUND OR WEATHER:

D. STEEL

- ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF "THE AISC SPECIFICATIONS FOR THE DESIGN FABRICATION AND ERECTION OF STRUCTURAL STEEL
- FABRICATE AND ERECT ALL BEAMS WITH MILL CAMBER UP.
- 4. PROVIDE WEB STIFFENER PLATES FOR BEAMS CONTINUOUS OVER COLUMNS OR BELOW SUPPORTED COLUMNS.
- WHEREVER WELDING IS EMPLOYED, EITHER IN FABRICATION OR ERECTION ALL SUCH WELDING SHALL BE PERFORMED BY QUALIFIED WELDERS IN COMPLETE ACCORD WITH THE "STRUCTURAL WELDING CODE - STEEL" OF THE AMERICAN WELDING CODE.
- 9. FURNISH LOOSE ANGLE LINTELS, UNLESS OTHER LINTELS ARE SPECIFIC-ALLY INDICATED, FOR ALL OPENINGS IN MASONRY WALLS FOR DOORS, WINDOWS, DUCTS, PASS-THROUGHS, ETC. FOR EACH FOUR (4) INCHES OF MASONRY, FURNISH ONE ANGLE AS FOLLOWS:

SPAN	
UP TO 4'-6" '-6" TO 5'-6"	

LINTEL L3-1/2 X 3-1/2 X 5/16 L4 X 3-1/2 X 5/16 L5 X 3-1/2 X 5/16 5'-6" TO 6'-6" 6'-6" TO 7'-6"

FOR SIX (6") INCH WALLS, USE TWO (2) ANGLES WITH 2-1/2-1NCH LEGS OUTSTANDING. FOR FOUR (4") INCH WALLS, USE ST3 X 6.25. MINIMUM SIX (6") INCH LONG BEARING FOR ALL LINTELS.

FOR EIGHT (8") CMU BEARING WALLS WITH OPENINGS 7'-6" TO 10'-0" WIDE, USE TWO (2) L6 X 3-1/2 X 1/2 ANGLES, BACK-TO-BACK, WITH A 3/8" X 7-5/8" WIDE PLATE WELDED TO THE BOTTOM OF THE ANGLES.

- 10. PROVIDE SHOP COAT OF PAINT.
- 11. SUBMIT SHOP DRAWINGS, INCLUDING LINTEL SCHEDULE AND SHOP PAINT.

MASONRY CONSTRUCTION

- ALL MASONRY CONSTRUCTION SHALL BE IN ACCORDANCE WITH TMS 402-13, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES".
- 2. ALL MASONRY SHALL BE LAID IN RUNNING BOND.
- 3. MORTAR SHALL BE TYPE S CONFORMING TO ASTM C270.
- GROUT SHALL CONFORM TO ASTM C476 WITH A MINIMUM CEMENT CONTENT OF 7.0 SACKS OF PORTLAND CEMENT PER CUBIC YARD.
- 5. PROVIDE BOND BEAMS OR REINFORCED GROUTED UNITS WITH 2-#5 HORI-ZONTAL CONTINUOUS REINFORCEMENT IN ALL MASONRY WALLS AT:
 - THE BOTTOM AND TOP OF WALL OPENINGS AND SHALL EXTEND NOT LESS THAN 24 INCHES NOR LESS THAN 40 BAR DIAMETER PAST THE
- B) STRUCTURALLY CONNECTED ROOF LEVELS AND AT THE TOP OF WALLS

- C) AT THE BOTTOM OF THE WALL OR IN THE TOP OF THE FOUNDATIONS WHEN DOWELED TO THE WALL.
- D) AT MAXIMUM SPACING OF 10 FEET UNLESS UNIFORMLY DISTRIBUTED
- JOINT REINFORCEMENT IS PROVIDED. 6. PROVIDE MINIMUM OF ONE #5 CONTINUOUS VERTICAL REINFORCEMENT IN
- A) MINIMUM OF 48 INCHES ON CENTER UNLESS OTHERWISE NOTED

ALL MASONRY WALLS AT:

INCHES, WHICHEVER IS GREATER.

- B) ALL SIDES AND EDGES OF MASONRY OPENINGS AND SHALL EXTEND NOT LESS THAN 24 INCHES NOR LESS THAN 40 BAR DIAMETER PAST THE
- 7. ALL MASONRY CELLS CONTAINING REINFORCING SHALL BE FILLED SOLID WITH GROUT. GROUT SHALL BE SAME TYPE AS MORTAR.
- 8. ALL VERTICAL MASONRY REINFORCEMENT SHALL BE DOWELED (12 INCHES) MINIMUM INTO SUPPORTING FOUNDATION WALL OR FOOTING, UNLESS OTHER-
- 9. REINFORCEMENT SHALL BE HELD IN PLACE USING POSITIONERS AT THE START, END AND SPLICES OF EACH BAR. PROVIDE ADDITIONAL SUPPORTS
- AT INTERVALS NOT GREATER THAN 192 BAR DIAMETERS OR 10'-0". 10. SPLICE REINFORCEMENT A MINIMUM LAP OF 48 BAR DIAMETERS OR 12
- 11. SINGLE WYTHE JOINT REINFORCEMENT TO BE TRUSS TYPE, 3/16" DIAMETER SIDE RODS WITH 9 GAGE CROSS TIES CONFORMING TO ASTM A82, PLACED HORIZONTALLY WITH A MAXIMUM VERTICAL SPACING OF 16 INCHES. WIRE REINFORCEMENT TO BE GALVANIZED.
- 12. CONCRETE MASONRY UNITS SHALL BE OF SIZE AND SHAPE INDICATED ON PLANS. TYPICAL 8 INCH THICK UNIT SHALL BE 8X8X16 MODULAR WITH TWO
- CELLS AND SHALL HAVE A NET/GROSS AREA RATIO OF 53%. 13. DO NOT USE ADMIXTURES CONTAINING CHLORIDES, NITRITES OR NITRATES.
- 14. ALL HORIZONTAL BOND BEAM REINFORCEMENT SHALL BE CONTINUOUS AT MASONRY CONTROL JOINTS.

STRUCTURAL WOOD FRAMING

- 1. ALL STRUCTURAL WOOD FRAMING SHALL CONFORM TO AND BE ERECTED IN ACCORDANCE WITH THE LATEST RECOMMENDATIONS OF THE NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION AND THE AMERICAN NSTITUTE OF TIMBER CONSTRUCTION.
- 2. PLYWOOD SHALL BE IN ACCORDANCE WITH THE AMERICAN PLYWOOD ASSOCIATION (APA) SPECIFICATIONS.
- ALL WOOD FRAMING IN CONTACT WITH CONCRETE SHALL BE PRESSURE
- 4. ALL NAILS, SCREWS, SPIKES, ETC., TO BE COMMON STEEL.
- JOIST HANGERS, FRAMING ANGLES AND CLIPS SHALL BE EQUAL TO THOSE MANUFACTURED BY THE SIMPSON COMPANY, SAN LEANDRO, CALIFORNIA.
- 6. CARPENTRY SHALL BE ERECTED TRUE TO LINES, LEVELS AND DIMEN-SIONS SHOWN OR REQUIRED; SHALL BE SQUARED, ALIGNED AND PLUMBED; SECURELY FASTENED IN PLACE IN AN APPROVED MANNER.
- 7. ALL JOINTS SHALL BE NEATLY AND ACCURATELY MADE, FITTED TIGHT, BLOCKED OR OTHERWISE PUT TOGETHER SO AS TO AVOID OPENING OR
- 8. MEMBERS OF ROUGH WOODWORK SHALL BE SECURELY FASTENED TOGETHER AND TO SUPPORTING CONSTRUCTION; NAILED, SPIKED, LAG SCREWED OR
- 9. ALL NAILED CONNECTIONS SHALL BE SECURED IN ACCORDANCE WITH THE "CONNECTICUT STATE BUILDING CODE" 2018 (CSBC) NAILING
- 10. FOR BOLTED CONNECTIONS, DRILL HOLES 1/16" LARGER IN DIAMETER THAN THE BOLTS BEING USED. DRILL STRAIGHT AND TRUE FROM ONE SIDE ONLY. BOLT THREADS SHALL NOT BEAR ON WOOD. USE WASHERS
- 11. FOR LAG-SCREWS AND WOOD SCREWS, PRE-BORE HOLES SAME DIAMETER AS ROOT OF THREADS: ENLARGE HOLES TO SHANK DIAMETER FOR LENGTH F SHANK. SCREW, DO NOT DRIVE, ALL LAG SCREWS AND WOOD SCREWS

WOOD TRUSSES

1-1/2"

3/4"

- ALL WOOD TRUSSES SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH "CODE OF STANDARD PRACTICE FOR THE METAL PLATE CONNECTED WOOD TRUSS INDUSTRY
- TRUSSES SHALL BE BRACED DURING ERECTION IN ACCORDANCE WITH "COMMENTARY AND RECOMMENDATION FOR BRACING WOOD TRUSSES" - 2018 PUBLISHED BY SBCA.
- 3. TEMPORARY TRUSS BRACING SHALL NOT BE REMOVED UNTIL PERMANENT LATERAL TRUSS BRACING IS INSTALLED AND ALL OTHER IMPROVEMENTS
- 4. PERMANENT TRUSS BRACING SHALL BE ANCHORED TO SOLID END WALLS OR

CROSS-BRACED AT BRACING ENDS.

- PERMANENT TRUSS BRACING SHALL BE PROVIDED IN THE PLANE OF THE TRUSS BOTTOM CHORD AND SHALL CONSIST OF BOTH LATERAL BRACING SPACED AT NO MORE THAN 10 FEET ON CENTER AND DIAGONAL BRACED BAYS AT BUILDING ENDS AND INTERMEDIATE INTERVALS OF NOT GREATER THAN 20 FEET ON CENTER.
- 6. PERMANENT TRUSS BRACING SHALL BE PROVIDED IN THE PLANE OF THE TRUSS WEB AND SHALL CONSIST OF DIAGONAL BRACING SPACED AT NOT MORE THAN 16 FEET ON CENTER FOR THE ROOF TRUSSES AND 8 FEET ON CENTER FOR FLOOR TRUSSES.
- PERMANENT DIAGONAL TRUSS BRACING SHALL BE PROVIDED IN THE PLANE OF THE TRUSS WEB AT ALL ENDS OF LATERAL BRACING AS REQUIRED FOR INDIVIDUAL MEMBER STABILITY AS INDICATED ON TRUSS DESIGN DRAWINGS. PROVIDE "T-BRACE" ON ALL WEB MEMBERS WHERE LATERAL BRACING EXTENDS LESS THAN FOUR (4) CONSECUTIVE TRUSS MEMBERS.
- 8. PERMANENT TRUSS BRACING SHALL BE AT LEAST A NOMINAL 2 X 4.
- 9. NO SPLICES, CUTS OR OTHER MODIFICATIONS SHALL BE MADE TO TRUSS MEMBERS UNLESS APPROVED BY THE ENGINEER OR SHOWN ON THE SHOP

FIELD MEASUREMENTS

CONTRACTOR SHALL VERIFY IN THE FIELD ALL MEASUREMENTS, CONDI-TIONS AND ELEVATIONS NECESSARY FOR HIS WORK AND SHALL ASSUME RESPONSIBILITY FOR THEIR ACCURACY.

FINISH GRADE VARIES

FOR ELEV. SEE SITE

1-#5 CONT.---

DRAWINGS-

DESIGN DATA STRESSES USED **CODES USED** SOIL BEARING CAPACITY (See Geotechnical Report) 2018 CONNECTICUT STATE BUILDING 2015 INTERNATIONAL BUILDING **FOOTINGS** 0.5 Tons/SF CODE WITH SUPPLEMENT **CONCRETE** Foundations: "Minimum Design Loads for Footings f'c = 3,000 psif'c = 4,500 psi**Buildings and Other Structures**" **Exterior Foundation Walls** AISC 360-10 Interior Slab on Grade f'c = 3,000 psi"Specifications for Structural f'c = 5,000 psiExterior Slabs Steel or Buildings' ACI 318-14 Concrete Masonry Units fm = 2,000 psi"Building Code Requirements **Reinforcing Steel** Fy - 60 ksi for Structural Concrete" TMS 402-13/ACI 530-13/ASCE 5-13 STRUCTURAL STEEL "Building Code Requirements WIDE FLANGE BEAMS AND GIRDERS for Masonry" A992 F y= 50.0 ksi TMS 602-13/ACI 530.1-13/ASCE 6-13 TUBE STEEL SECTIONS "Specification for Masonry Structures" A500 GR. B F y= 46.0 ksi AISI COLD-FORMED STEEL DESIGN A53 GR. B F y= 35.0 ksi **MANUAL S100-12 MISCELLANEOUS SHAPES** "Specification for the Design of Cold-CHANNELS, ANGLES, AND PLATES Formed Steel Structural Members" A36 F y= 36.0 ksi **COLD FORMED STEEL** ANSI/AWC NDS - 2015 F y= 33.0 ksi 18 & 20 GAUGE MATERIAL "National Design Specification for Wood Construction (2012 F y= 50.0 ksi 16 GAUGE & HEAVIER MATERIAL

DESIGN PARAMETERS - WIND, SNOW, AND EARTHQUAKE

SNOW DATA

BUILDING RISK CATEGORY ASCE 7, Table 1.5-1 **CATEGORY II** GROUND SNOW LOAD Appendix 'N' - CT Building Code $P_g = 30 \text{ psf}$ ASCE 7, Section 7.3, Equation (7.3-1) $P_f = 25 \text{ psf (30 psf min.)}$ FLAT ROOF SNOW LOAD SNOW EXPOSURE FACTOR ASCE 7, Table 7.2 $C_{e} = 1.0$ $C_t = 1.2$ (UNHEATED) ASCE 7, Table 7.3 THERMAL FACTOR SNOW IMPORTANCE FACTOR ASCE 7, Table 1.5-2 $I_s = 1.0$

WIND DATA

BUILDING RISK CATEGORY ASCE 7, Table 1.5-1 CATEGORY II ULTIMATE DESIGN WIND SPEED Appendix 'N' - CT Building Code 125 MPH NOMINAL DESIGN WIND SPEED 93 MPH Appendix 'N' - CT Building Code WIND EXPOSURE CATEGORY ASCE 7, Section 26.7.3 WIND IMPORTANCE FACTOR ASCE 7, Table 1.5-2 ASCE 7, Table 26.11-1 INTERNAL PRESSURE COEFFICIENT COMPONENTS AND CLADDING SCE 7, Section 30.4 - "Part 1" ULTIMATE BASIC VELOCITY PRESSURE ASCE 7, Section 27.3.2

 $I_{w} = 1.0$ GCpi = +/- 0.18 (Enclosed)**REFER TO SCHEDULE** $q_{55} = 20.8 PSF$ $K_d = 0.85$ $K_z = 0.62$

 $K_{zt} = 1.0$

h = 20 ft

 $C_{d} = 2.5$

W = 2.5

 $C_s = 0.087$

EQUIVALENT LATERAL FORCE

SEISMIC DATA

DEFLECTION AMPLIFICATION FACTOR

SEISMIC RESPONCE COEFFICIENT

ANALYSIS PROCEDURE UTILIZED

OVERSTRENGTH FACTOR

-6" CONCRETE SLAB REINFORCED

WITH 6X6 W2.9XW2.9 WWF ON

A A A

COMPACTED STRUCTURAL FILL

TYPICAL FROST WALL DETAIL

SCALE: NONE

BUILDING RISK CATEGORY	ASCE 7, Table 1.5-1	CATEGORY II
SEISMIC IMPORTANCE FACTOR	ASCE 7, Table 1.5-2	$I_e = 1.00$
MAPPED SPECTRAL RESPONCE ACCELERATIO	N	
SHORT PERIOD	IBC Appendix N	$S_s = 0.183$
PERIOD OF 1 second	IBC Appendix N	$S_1 = 0.063$
SITE CLASSIFICATION	Geotechnical Engineers Report	E
DESIGN SPECTRAL RESPONSE ACCELERATION		
SHORT PERIOD	ASCE 7, Section 11.4.4	$S_{ds} = 0.305$
PERIOD OF 1 second	ASCE 7, Section 11.4.4	$S_{d1} = 0.147$
SEISMIC DESIGN CATEGORY	ASCE 7, Tables 11.6-1 & 2	С
BASIC STRUCTURAL SYSTEM	"INTERMEDIATE MASONRY SHEA	R WALLS"
BASIC SEISMIC -FORCE RESISTING SYS.	ASCE 7, Table 12.1-1-H	STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
RESPONSE MODIFICATION FACTOR	ASCE 7, Table 12.2-1-H	R = 3.5

ASCE 7. Table 12.2-1-H

ASCE 7. Table 12.2-1-H

ASCE 7, Section 12.8.1

ASCE 7, Section 12.8

-construction - CONTROL JOINT JOINT SLAB ON GRADE SLAB ON GRADE -SAW CUT DEPTH -1**/**2 DIA. X1'**-6"** FOR DEPTH & REINF FOR DEPTH & REINF SHALL BE 1/4 DEPTH OF SLAB AT 24" O/C DOWELS. (IF ANY) SEE PLAN -(IF ANY) SEE PLAN-DOWELS TO BE WELL GREASED.

COMPONENTS AND CLADDING DESIGN WIND PRESSURES (PSF)

EFFECTIVE WIND AREA IN SQUARE FEET (SF)

< 100 SF

(+) 12.9 | (-) -21.8

(+) 12.9 | (-) 36.0

(+) 12.9 (-) 54.1

(-) 49.5

VALUES IN THE CHART ARE BASED ON ASCE7-10 USING WIND LOAD PARAMETERS LISTED IN THE DESIGN DATA,

a: 10 PERCENT OF LEAST HORIZONTAL DIMENSION "L" OR "B" OR 0.4h, WHICH EVER IS SMALLER, BUT NOT

(-) 25.6

(-) 30.8

(+) 16.0

(-) 32.9 | (+) 16.0 |

NEGATIVE VALUES (-) INDICATE WIND PRESSURES ACTING AWAY FROM THE SURFACES.

LESS THAN EITHER 4 PERCENT OF LEAST HORIZONTAL DIMENSION "L" OR "B" OR 3 FEET.

3. POSITIVE VALUES (+) INDICATE WIND PRESSURES ACTING TOWARDS THE SURFACES.

> 100 SF

+) 10.0 | (-)27.0

(-) 37.0

+) 10.0 | (-) 28.7

(-) 37.0

+) 10.0 | (-) 45.3

(-) 20.4

(+) 12.9 (-) 25.6

(-) 22.5

(+)12.9

 $V_{ult} = 125 MPH$

ZONE

h: EAVE HEIGHT

5. KEY PLAN FOR WIND ZONES

OVHG.

OVHG.

MAIN

OVHG.

MAIN | (+) 15.0 | (-) 24.5 |

MAIN | (+) 15.0 | (-) 39.1

(+) 17.1

(+) 17.1

Kd=0.85, Kzt=1.0, GCpi=(+/-)0.18, AND THE MEAN ROOF HEIGHT

4

ZONES FOR WALLS

| (+) 15.0 | (-) 57.8

(-)62.0

(-) 26.6

SECTION

SLOPED

ROOF

MAIN ROOF AREAS

ASCE-10 FIGURE

REFERENCE

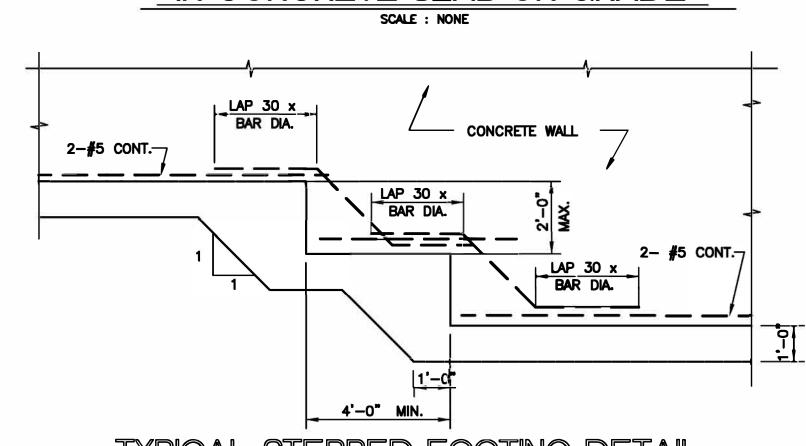
30.4-2A

30.4-2A

30.4-2A

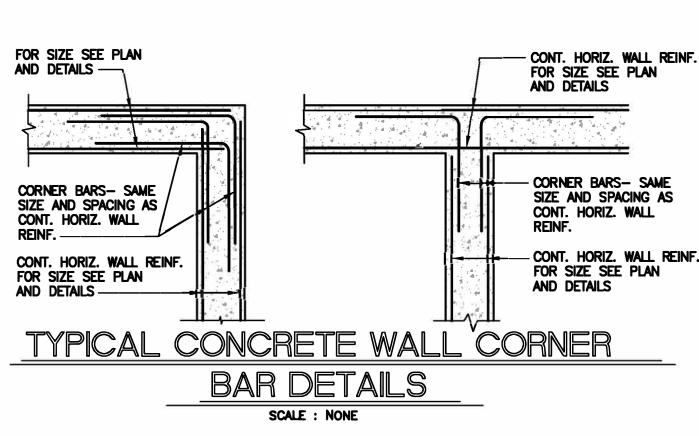
30.4-1

TYPICAL CONTROL JOINT DETAILS IN CONCRETE SLAB ON GRADE

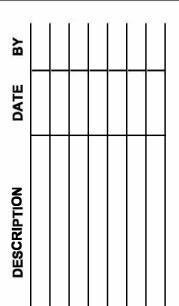


TYPICAL STEPPED FOOTING DETAIL SCALE: NONE CONCRETE WALL BEYOND INVERT ELEVATION -SEE SITE AND MECHANICAL -2-#5 CONT. SEE TYPICAL STEPPED ------BOTTOM OF FOOTING AS FOOTING DETAIL FOR REQUIRED FOR PIPE INVERT STEP REQUIREMENTS -TYPICAL WALL PENETRATION DETAIL

SCALE: NONE







DE NOTES GENERAL

STRUCTURAL EXTENSION GREE

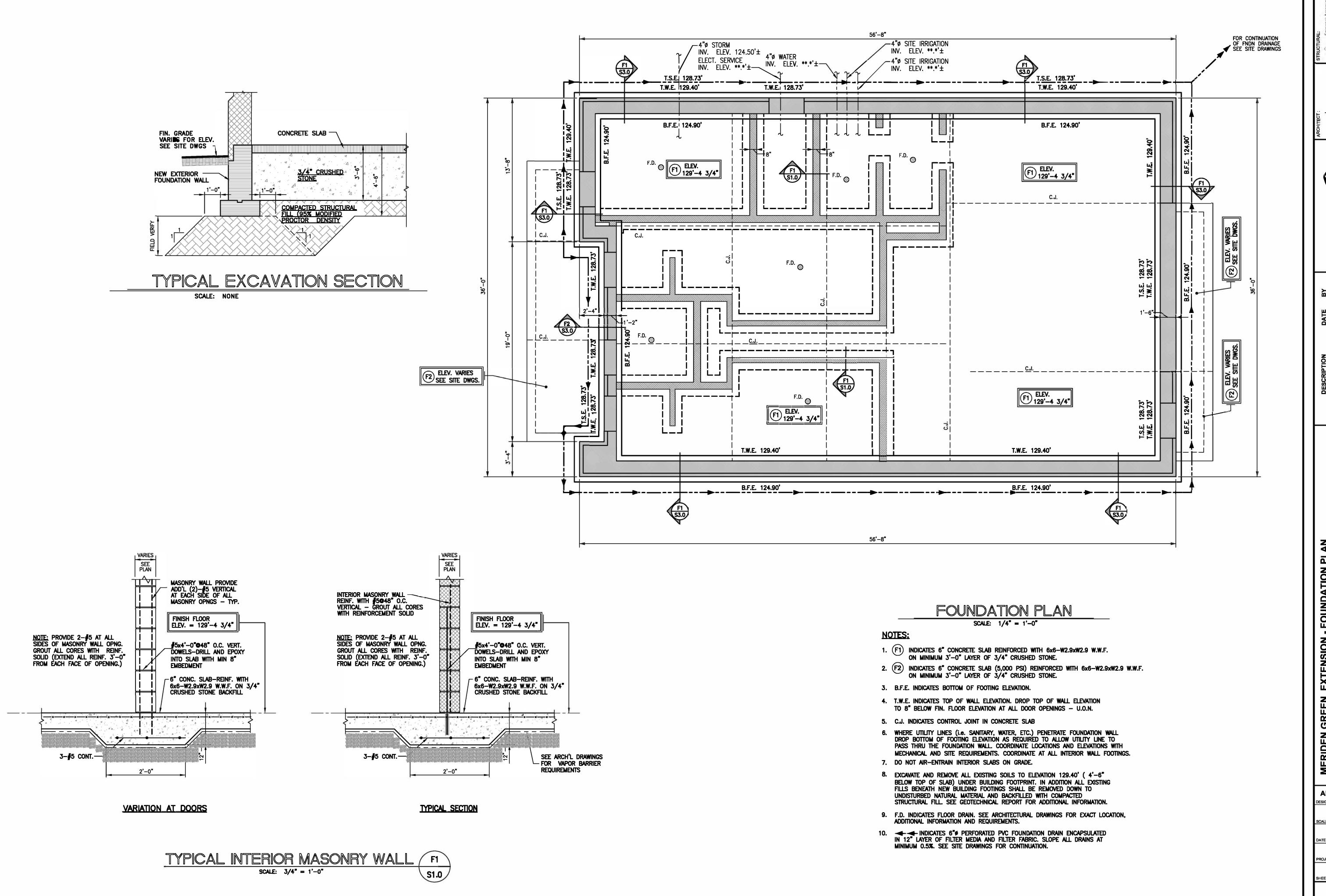
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ME ARC | ROT | ARC **AS NOTED**

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1 OF 5



203.831.9983 203.838.0662 © 2022

- FOUNDATION **EXTENSION** AND RESTROOI

> ARC ROT ARC DESIGNED DRAWN CHECKED **AS NOTED**

OCTOBER **14**, **2022**

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UNDER SNOW LOADINGS.

- I. LOADS SHALL DETERMINED USING THE "CONNECTICUT STATE BUILDING CODE" 2018 (CSBC)
- 2. BASIC SNOW LOAD = 30 PSF. SNOW LOAD DISTRIBUTION AND COEFFICIENTS TO BE DETERMINED USING THE "CONNECTICUT STATE BUILDING CODE" 2018 (CSBC), CONSIDERING SHEDDING, STACKING AND SLIDING SNOW AS REQUIRED BY CSBC.
- SLIDING SNOW AS REQUIRED BY CSBC.

 3. THE ALLOWABLE WOOD STRESSES MAY BE INCREASED 15% WHEN USED
- 4. FOR TRUSS BRACING REQUIREMENTS SEE STRUCTURAL GENERAL NOTES AND WOOD TRUSS COUNCIL OF AMERICA & TRUSS PLATE INSTITUTE BUILDING DOCUMENT "BCSI 1-03".
- 5. ALL TRUSSES SHALL BE DESIGNED TO INCLUDE MINIMUM SCBBC WIND LOADS OF 100 MPH. SHOW ALL WIND LOAD REACTIONS (UPLIFT, SHEARS, ETC.) ON DETAILED TRUSS SHOP DRAWINGS.
- 6. WOOD TRUSSES ARE TO BE DESIGNED FOR ANY REACTIONS RESULTING
- FROM ADDITIONAL MEMBERS SUPPORTED BY WOOD TRUSSES.

 7. BOTTOM CHORD TO BE DESIGNED FOR A MINIMUM LOADING OF 10 PSF.
- 8. ALL TRUSS DESIGNS SHALL BE PREPARED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF CONNECTICUT. ALL SUBMISSIONS SHALL BEAR REGISTRATION SEAL OF DESIGN ENGINEER.
- 9. ALL TRUSS SUBMITTALS SHALL INCLUDE THE FOLLOWING:
- A. ALL TRUSS LOCATIONS, SPACING, BEARING DETAILS, MEMBER
- SIZES, PITCH, SPANS AND DIMENSIONS. B. SIZE, SPECIES AND STRESS OF GRADE LUMBER.
- C. LOADING CONDITIONS AND STRESS INCREASES.D. NOMINAL SIZES AND LOCATIONS OF CONNECTOR PLATES AT ALL
- JOINTS.
 E. ACTUAL AXIAL LOADS IN EACH MEMBER.
- F. CAMBER REQUIREMENTS.
 G. LOCATION OF PERMANENT LATERAL BRACING AS REQUIRED BY THE
- DRAWINGS.
 H. LOCATION OF TEMPORARY LATERAL BRACING AS REQUIRED FOR
- ERECTION.
- I. MANUFACTURER'S DATA OR FABRICATOR'S SHOP DRAWING FOR METAL TRUSS HANGERS AND THEIR LOCATIONS.

 J. MANUFACTURER'S DATA FOR HURRICANE ANCHORS WITH ALL
- ANCHOR LOCATIONS SHOWN IN PLAN.
- 11. PROVIDE TRUSS TOP CHORD EXTENSIONS AS REQUIRED FOR ROOF OVERHANG. SEE ARCHITECTURAL DRAWINGS FOR REQUIREMENTS
- 12. PROVIDE "PIGGY BACK" TRUSS CONFIGURATION AS REQUIRED FOR TRUSS HANDLING AND SHIPPING REQUIREMENTS.
- 13. PROVIDE MULTIPLE TRUSSES AS REQUIRED FOR LOADING AND BEARING.
- 14. PROVIDE GABLE END TRUSSES AT ALL EXTERIOR WALL GABLE ENDS.
 MULTIPLE (STRUCTURAL AND GABLE) END TRUSSES SHALL BE SUPPLIED
 AS REQUIRED FOR SPAN AND LOADING.
- 15. PROVIDE VERTICAL WEB MEMBERS © 16" O.C. (WITHIN STRUCTURAL GABLE AND TRUSS GIRDER) DIAGONAL WEBS FOR THE ATTACHMENT OF SHEATHING SEE ARCHITECTURAL DRAWING FOR ADDITIONAL
- 16. PROVIDE MULTIPLE SUPPORT STUDS (3 MIN.) AT ALL TRUSS GIRDER AND BEAM ENDS AS REQUIRED FOR TRUSS/BEAM END REACTIONS. CONTINUE ALL MULTIPLE STUDS TO FOUNDATION WALL OR FOOTING.
- 17. "VT-..." INDICATES TRUSSES TO BE TRUSS SUPPLIER'S TYPICAL INFILL VALLEY TRUSS CONFIGURATION WITH CONTINUOUS TOP AND BOTTOM TRUSS CHORDS. MATCH ADJACENT ROOF SLOPES. PRECUT JACK RAFTERS SHALL NOT BE USED.
- 18. "EJ-..", "HJ-.." AND "HG-.." INDICATE TYPICAL END JACKS, HIP JACKS AND HIP GIRDER TRUSS CONFIGURATIONS REQUIRED AT CORNER HIP ROOF PROFILES. MATCH ADJACENT ROOF SLOPE AND END REQUIREMENTS.
- 19. "RTG-..." INDICATES TYPICAL WOOD ROOF TRUSS GIRDER FRAMING
 MEMBER MATCH ADJACENT ROOF SLOPE AND END CONFIGURATION
- 20. TRUSS SUPPLIER SHALL PROVIDE ALL REQUIRED HANGERS, ANCHORS, AND CLIPS RATED FOR ALL ANTICIPATED TRUSS OR BEAM END REACTIONS, FRAMING INTO AND/OR SUPPORTED BY ALL TRUSSES AND/OR BEAMS. HURRICANE RESTRAINT ANCHORS SHALL BE SUPPLIED AT ALL SUPPORT AND BEARING LOCATIONS OF ALL ROOF TRUSSES.
- 21. TRUSS SUPPLIER SHALL VERIFY AND COORDINATE ALL TRUSS SPACING AND DIMENSIONS WITH ALL SUPPORT MEMBER (WALL/BEAM/TRUSS GIRDER, ETC.) WIDTHS, PLIES AND ACTUAL LOCATIONS IN FIELD TO MAINTAIN PROPER AND ACCEPTED BEARING OF ALL ROOF TRUSS FRAMING MEMBERS. SEE ARCH'L DRAWINGS FOR ALL WALL LOCATIONS
- 22. ALL TRUSS CHORD AND WEB MEMBERS SHALL BE AT LEAST A NOMINAL
- 23. SEE TRUSS GENERAL NOTES ON THIS DRAWING.

- VERIFY ALL DIMENSIONS IN FIELD.

R8 S4.0	**************************************	R2 \$4.0 R7 R7 S4.0	R2 S4.0	R1 S4.0 S4.0 S4.0 SEE NOTE #11	R8 S4.0
"4-'2E" "8-'61 R3 S4.0	R6 S4.0 SSH R6 S4.0 R6	R6 S4.0 R7 S4.0	"RT-2A"	#11	R4 S4.0
2,-8"	R1 S4.0	ROOF FRAMING	R2 S4.0	R1 S4.0	

NOTES

- 1. TOP OF PLATE SHALL BE AT ELEVATION 140'-3 3/4" (+10'-11" A.F.F.) UNLESS OTHERWISE NOTED "T.P.E. +......".
- 2. ROOF SHEATHING SHALL BE EXTERIOR GRADE PLYWOOD WITH INTERMEDIATE CLIPS AND THICKNESS AS FOLLOWS:

 A) SLOPES GREATER THAN 3 ON 12 5/8" PLYWOOD

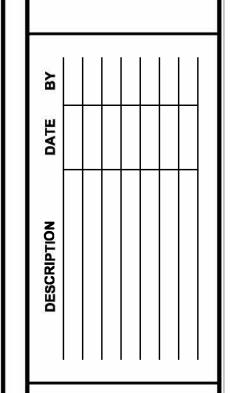
 B) SLOPES LESS THAN 3 ON 12 3/4" PLYWOOD
- 3. PROVIDE HURRICANE ANCHORS AT ALL TRUSS AND RAFTER SUPPORTS OF RATED CAPACITY AS REQUIRED BY TRUSS DETAIL DESIGN.
- 4. "VT— " INDICATES VALLEY TRUSS SET TO BE TRUSS MANUFACTURERS STANDARD VALLEY TRUSS WITH CONTINUOUS TOP AND BOTTOM CHORDS. COORDINATE CONFIGURATION WITH ARCHITECTURAL AND MECHANICAL REQUIREMENTS TYPICAL.
- 5. PROVIDE 2x8 24" O.C. OUTLOOKERS WITH CONTINUOUS 2x8 FASCIA PLATE AT ALL RAKE ENDS WITH SIMPSON STRONG—TIE "U—SERIES" JOIST HANGERS UNLESS OTHERWISE NOTED. DROP TOP CHORD OF EXTERIOR/GABLE TRUSS AS REQUIRED.
- 6. PROVIDE MULTIPLE ROOF TRUSSES AT ALL MECHANICAL UNIT LOCATIONS AS REQUIRED FOR UNIT LOADS. PROVIDE SOLID BRIDGING AND BLOCKING ON ALL SIDES OF ALL UNITS AND EQUIPMENT SUPPORTED ON ROOF TRUSSES COORDINATE WITH MECHANICAL SUPPLIER.
- 7. COORDINATE ROOF TRUSS WEB CONFIGURATIONS WITH MECHANICAL UNIT CLEARANCE REQUIREMENTS SEE MECHANICAL AND ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
- 8. COORDINATE ALL MECHANICAL EQUIPMENT (DUCTS, CHIMNEY, LOUVERS, HATCH OPENINGS, ETC.) PENETRATIONS WITH ROOF FRAMING. PROVIDE MULTIPLE MEMBER FRAMING AT ALL FRAMING SPACING REQUIREMENTS GREATER THAN 24" O.C. ON ALL SIDES OF OPENINGS. ALSO SEE NOTE \$11.
- 9. PROVIDE LADDER FRAMING AT 24" O.C. AT TOP AND BOTTOM CHORDS OF ALL TRUSSES WHERE SPACING EXCEEDS 24" O.C. AS INDICATED:

 2'-0" TO 4'-0"
 2 X 4 © 24" O.C.
 4'-0" TO 8'-0"
 2 X 6 © 24" O.C.
- ALL FRAMING SHALL HAVE JOIST HANGERS EACH END.
- 10. "L-+" INDICATES STEEL LINTEL AS INDICATED IN LINTEL SCHEDULE ON THIS DRAWING.
- 11. PROVIDE RAISED CEILING IN CENTER PORTION OF THE MAINTENANCE AREA SUCH THAT BOTTOM OF TRUSS SHALL BE AT ELEVATION 143'-7 3/4" (+14'-3" A.F.F).
- 12. PROVIDE 3/8" END PLATE WELDED TO ENDS OF TUBE BEAM.



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REEN EXTENSION - ROOF FRAMING PLAN
AND FACILITIES STORAGE BUILDING

MERIDEN CON MERIDEN CON MERIDEN, CON

AS NOTED

OCTOBER 14, 2022

2021-17

3 OF 5

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BP-2 8"x3/4"x10" SEE NOTES #5 NOTES: 1. PROVIDE POCKETS AS REQUIRED FOR ALL BEAMS BEARING ON WALLS. FILL ALL BEAM POCKETS SOLID TO MATCH ADJACENT CONSTRUCTION AFTER BEAM IS IN PLACE. 2. PROVIDE (2) - 1/2" DIAMETER ANCHOR BOLTS AT

BEARING PLATE MARK

BP-1

BEARING PLATE SCHEDULE

6"x3/4"x14"

REMARKS

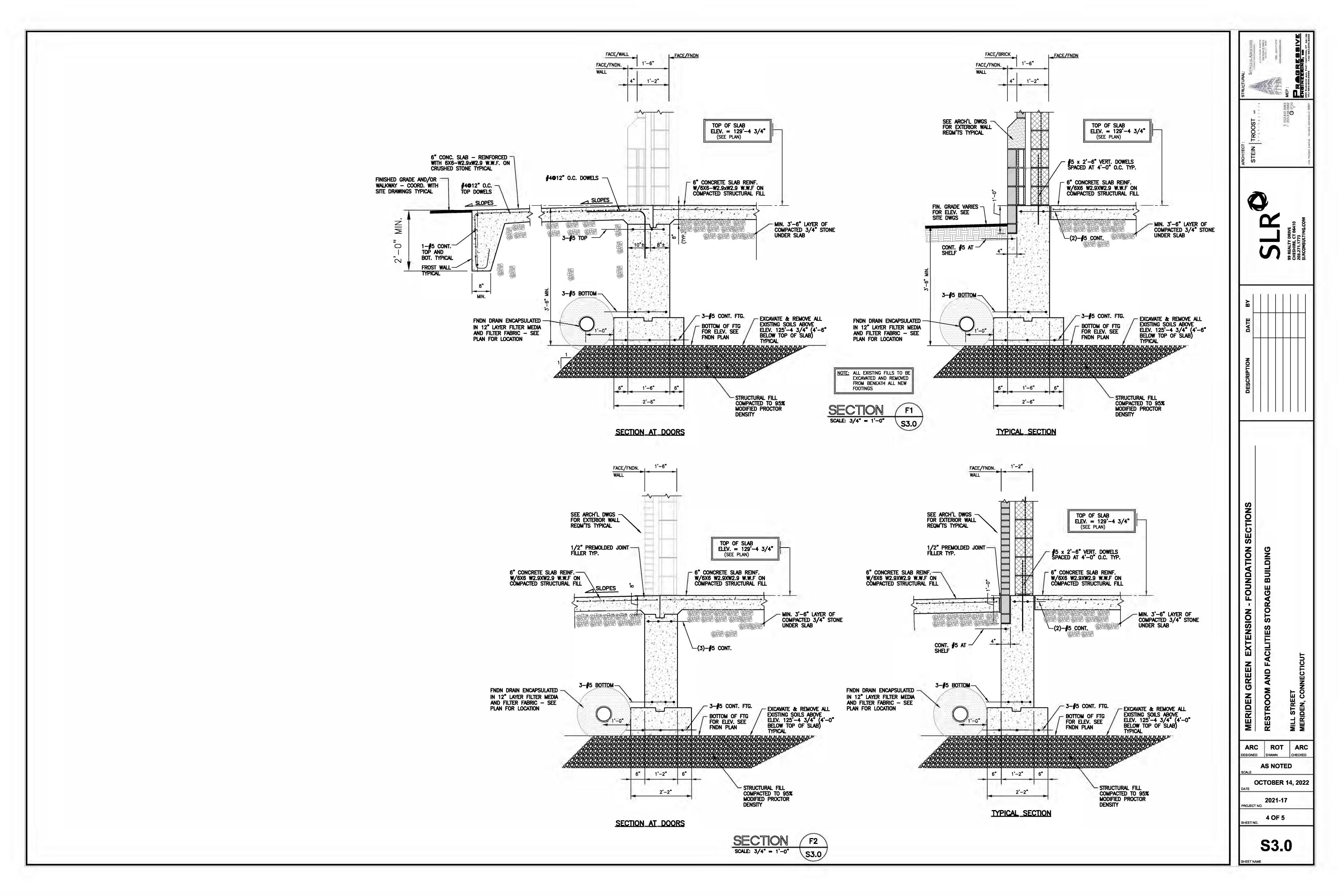
OFFSET PL 3" TO INSIDE

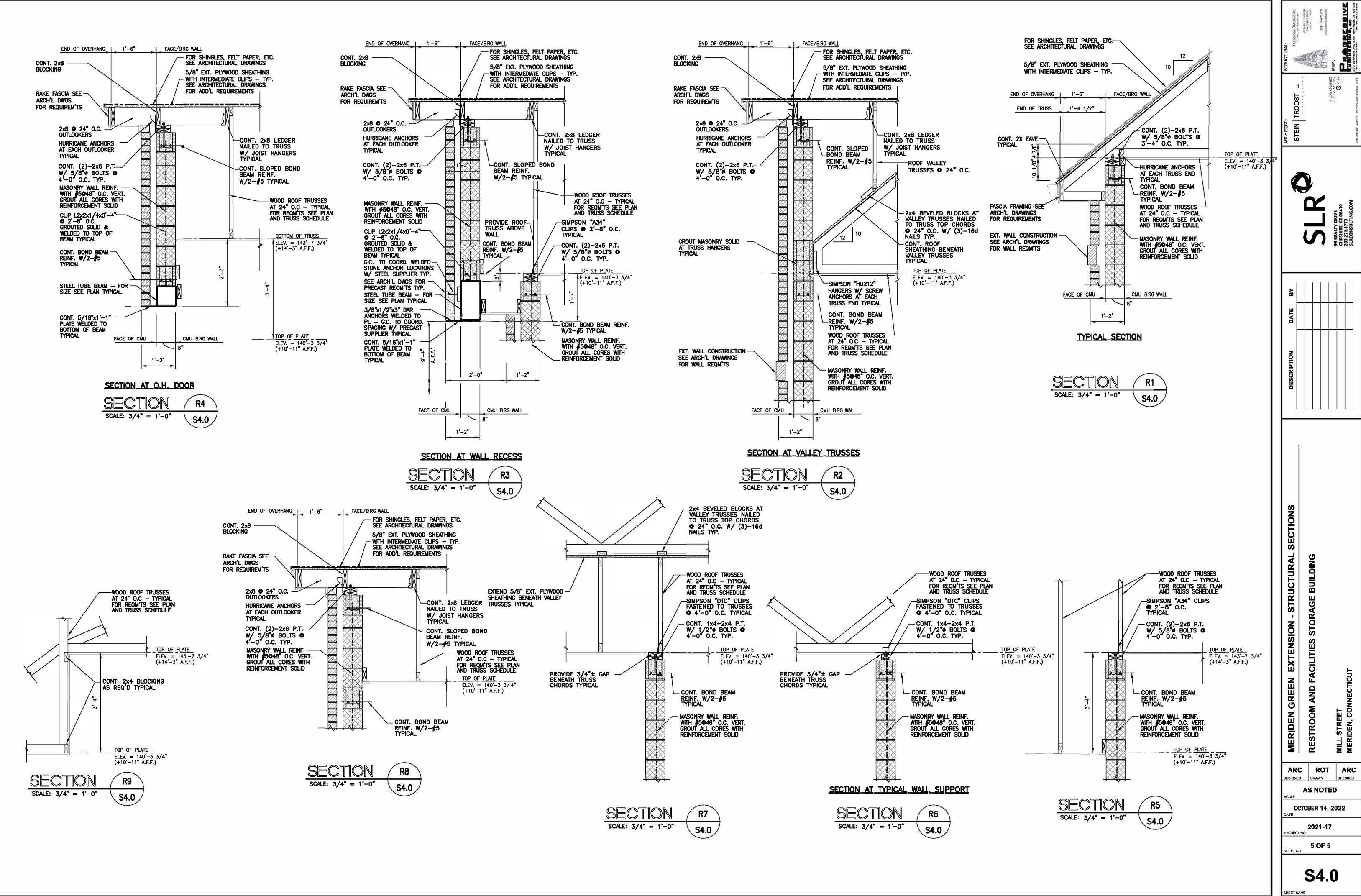
- EACH BEARING PLATE BEARING ON MASONRY.
- 3. PROVIDE MINIMUM OF 1" NON-SHRINK GROUT UNDER ALL BEARING PLATES.
- 4. GROUT SOLID MASONRY SOLID FOR 16" WIDTH WITH (2)—#5 GROUTED SOLID BENEATH ALL PLATES TYPICAL.
- 5. PROVIDE (2) 1/2" x 12" LONG HEADED BOLTS WELDED TO BOTTOM OF PLATE TO BE GROUTED SOLID IN MASONRY.

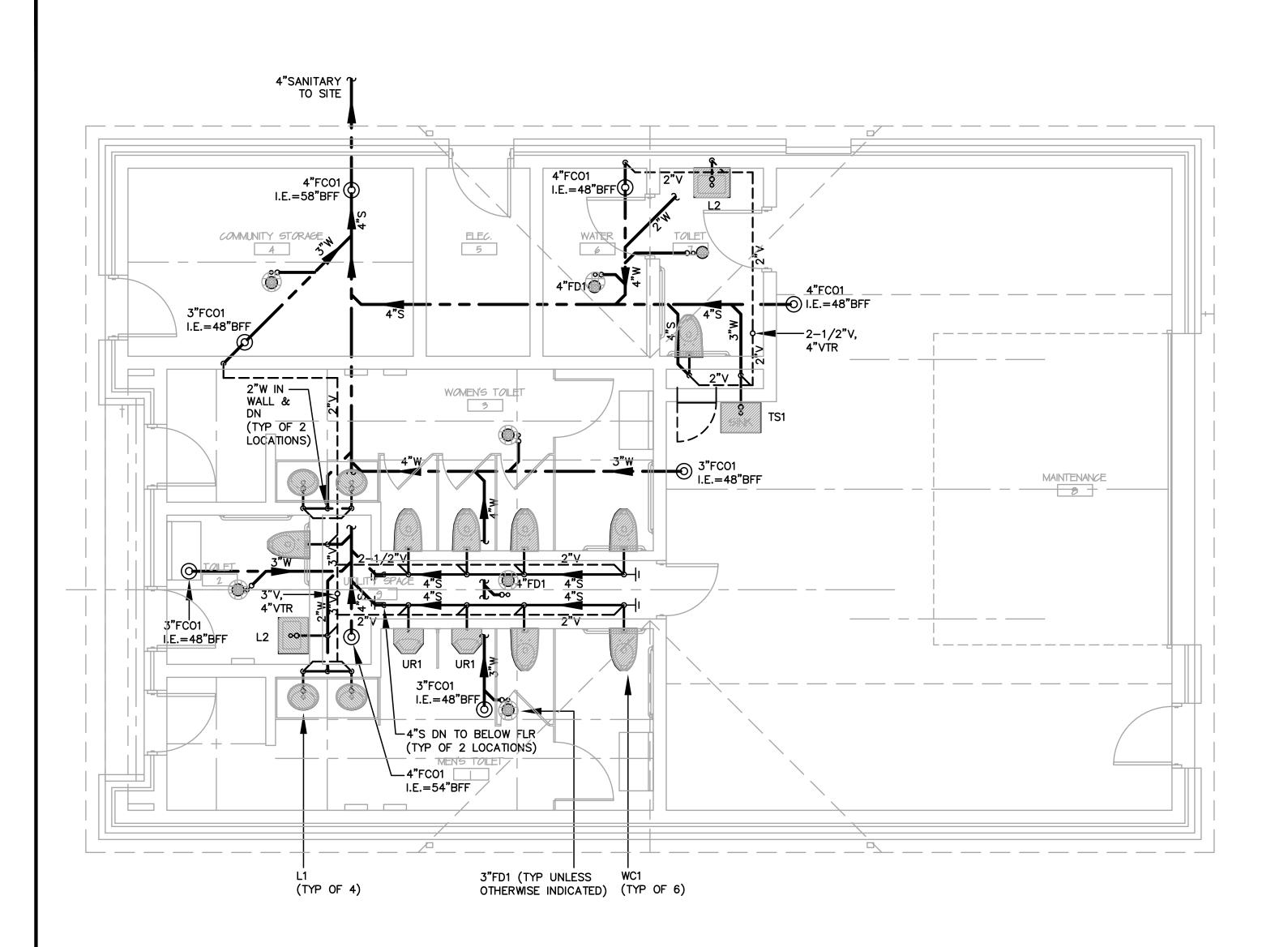
LINTEL SCHEDULE								
SPAN	LINTEL SIZE							
UP TO 4'-6"	L3 1/2"x3 1/2"x5/16"							
4'-6" TO 5'-6"	L4"x3 1/2"x5/16"							
5'-6" TO 6'-6"	L5"x3 1/2"x5/16"							
6'-6" TO 7'-6"	L6"x3 1/2"x3/8"							

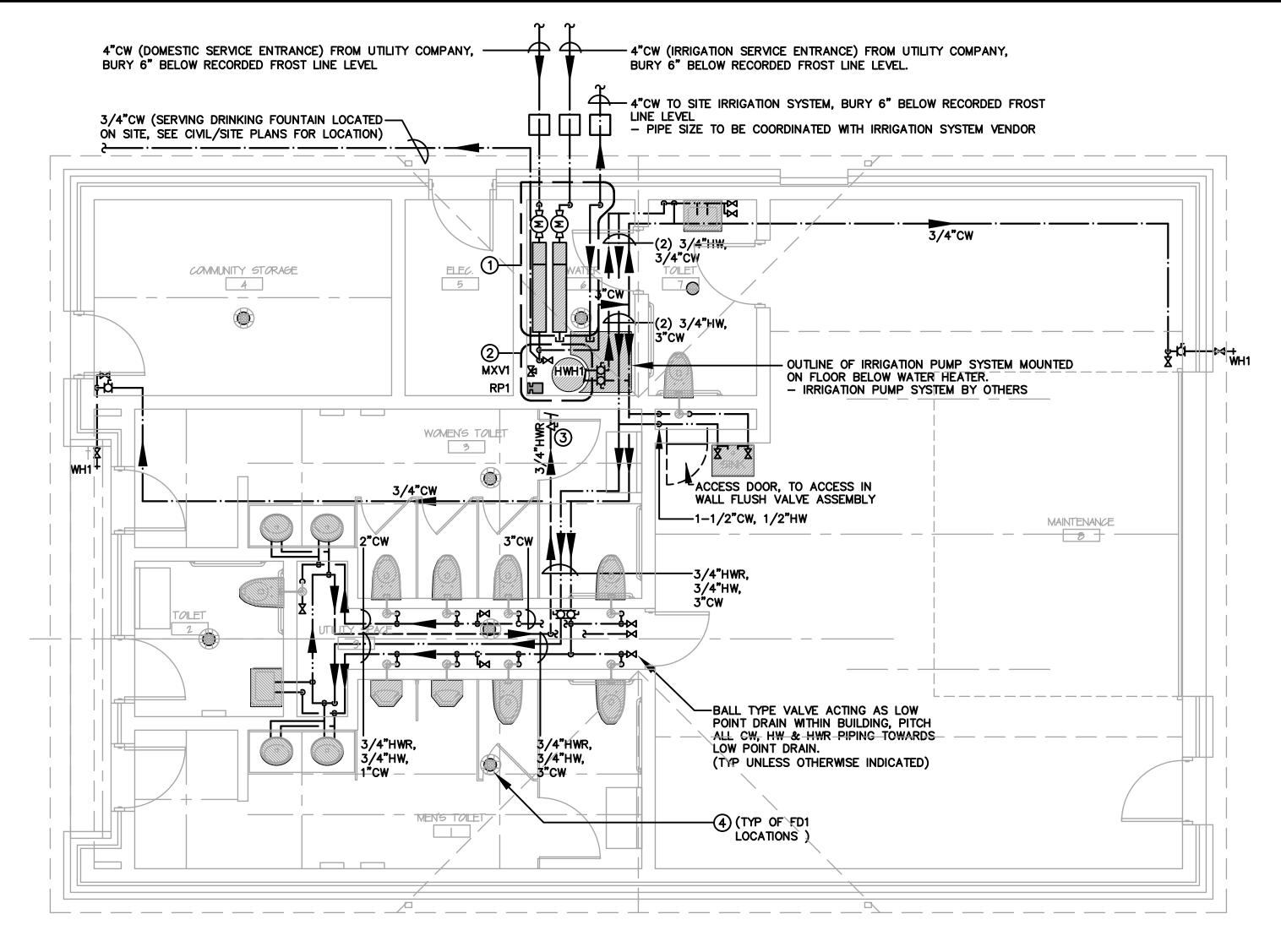
NOTES:

- 1. PROVIDE MINIMUM OF EIGHT (8") INCH LONG BEARING TYPICAL FOR SPANS OF 10'-6" OR LESS.
- 2. FOR EIGHT (8") CMU BEARING WALLS WITH OPENINGS 7'-6" TO 10'-0" WIDE, USE TWO (2) L6 X 3-1/2 X 1/2 ANGLES, BACK-TO-BACK, WITH A 3/8" X 7-5/8" WIDE PLATE WELDED TO THE BOTTOM OF THE ANGLES.
- 3. ALL LINTELS AT EXTERIOR WALLS SHALL BE SAND BLASTED AND RECEIVE A HIGH PERFORMANCE ZINC PRIMER. SEE ARCHITECTURAL DRAWINGS FOR TOP COAT REQUIREMENTS AND SPECIFICATIONS.
- 4. PROVIDE L2x2x1/4 CLOSURE ANGLE WELDED TO BACK OF LINTELS WHICH SUPPORT BRICK VENEER SEE ARCHITECTURAL DRAWINGS FOR EXACT REQUIREMENTS.









FLOOR PLAN - DRAINAGE & VENT PIPING

!"=1'-0" 1939 GSF

SEASONAL BUILDINGS / WINTERIZATION NOTES:

- 1. P-TRAPS LOCATED ABOVE GRADE SERVING PLUMBING FIXTURES SHALL HAVE CLEANOUT PLUG AT BASE OF P-TRAP TO ALLOW FOR WATER REMOVAL AND WINTERIZATION.
- 2. P-TRAPS BELOW GRADE SHALL BE BURIED 6" BELOW FROST LINE. WHERE BELOW GRADE P-TRAPS ARE NOT LOCATED BURIED BELOW FROST LINE, CONTRACTOR SHALL INFORM OWNER A WINTERIZATION TYPE GLYCOL (QUANTITY AS RECOMMENDED BY MANUFACTURER) SHALL BE POURED INTO ALL P-TRAPS TO PREVENT WATER WITHIN P-TRAP FROM FREEZING AND DAMAGE TO PIPING.
- 3. ENTIRE PIPING DISTRIBUTION SYSTEM SHALL BE DRAINABLE TO ACCOMMODATE WINTERIZATION.
 WATER SYSTEMS; PROVIDE DRAIN VALVES AT SYSTEM LOW POINTS FOR WATER REMOVAL AND WINTERIZATION.
 DRAINAGE SYSTEMS: PROVIDE P—TRAPS WITH REMOVABLE CLEANOUT PLUG AT BASE OF P—TRAP FOR WATER REMOVAL AND WINTERIZATION.
- 4. ALL EQUIPMENT SHALL BE DRAINABLE TO ALLOW FOR REMOVAL OF WATER AND WINTERIZATION.
- 5. DOMESTIC WATER SERVICE ENTRANCE PIPING FEEDING BUILDING LOCATED IN UNHEATED AREA SHALL BE DRAINABLE TO ALLOW FOR WATER REMOVAL AND WINTERIZATION. PROVIDED ELECTRIC HEAT TRACING & INSULATION FOR UNDRAINABLE PIPING LOCATED WITHIN UNHEATED AREA TO PREVENT WATER WITHIN PIPING FROM FREEZING AND DAMAGE TO PIPING DURING WINTER MONTHS.

GENERAL PLUMBING SUPPLY, DRAINAGE & VENT PIPING NOTES:

- 1. PIPING SHALL NOT BE ROUTED ABOVE ELECTRICAL EQUIPMENT.
- 2. ROUTE ALL BELOW SLAB PIPING TO AVOID STRUCTURE & DEVICES OR CONDUIT OF OTHER TRADES.
- 3. SANITARY/WASTE PIPING BELOW FLOOR SLAB SHALL BE 3" UNLESS OTHERWISE INDICATED.
- 4. SANITARY/WASTE BRANCH PIPING TO EACH INDIVIDUAL FIXTURE/DEVICE TO BE SIZE INDICATED ON PLUMBING FIXTURE SCHEDULE OR PLUMBING SPECIALTIES SCHEDULE.
- 5. VENT PIPING SHALL BE 1-1/2" UNLESS OTHERWISE INDICATED. BRANCH PIPING TO EACH INDIVIDUAL FIXTURE/DEVICE TO BE SIZE INDICATED ON PLUMBING FIXTURE SCHEDULE OR PLUMBING SPECIALTIES SCHEDULE.
- 6. VENT THRU ROOF "VTR" LOCATIONS SHALL BE LOCATED A MINIMUM OF 25LF FROM ALL FRESH AIR INTAKES, SOFFITS, ETC.
- 7. DOMESTIC CW&HW BRANCH SUPPLY PIPING SHALL BE 1/2" AND HWR PIPING TO BE 3/4" UNLESS OTHERWISE INDICATED. BRANCH PIPING TO EACH INDIVIDUAL FIXTURE TO BE SIZE INDICATED ON PLUMBING FIXTURE SCHEDULE.
- 8. PROVIDE FIRE CAULK AT ALL PIPE PENETRATIONS THRU FIRE RATED WALLS/FLOORS/CEILINGS ETC.; FIRE CAULK TO HAVE FIRE RATING EQUIVALENT OR BETTER THAN WALL FIRE RATING.

DRAWING KEY NOTES:

NOTE:

1. SEE PLUMBING DRAINAGE & VENT PIPING PLAN(S) FOR FIXTURE TYPE TAGS " P# ".

FLOOR PLAN - SUPPLY PIPING

- 1) SEE DOMESTIC COLD WATER SERVICE ENTRANCE PIPING DETAIL.
- 2 WATER HEATER MOUNTED ABOVE FLOOR ON SHELF.

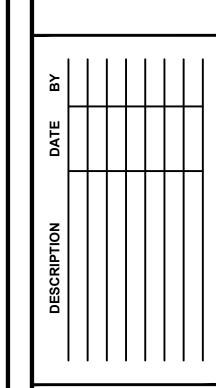
 SEE WATER HEATER PIPING DETAIL.

1939 GSF

- 3 SEE HOT WATER RECIRCULATION PIPING DETAIL FOR DEVICES AND SPECIALTIES.
- (4) SEE WATERLESS TRAP PRIMER DETAIL.

STEIN TROOST LE TAGASI, 1963 P F 203, 334, 0662 P G 2022

S REALTY DRIVE CHESHIRE, CT 06410 203.271.1773 SLRCONSULTING.COM



FIRST FLOOR PLUMBING PLAN
RESTROOM AND FACILITIES STORAGE BUILDING
MILL STREET

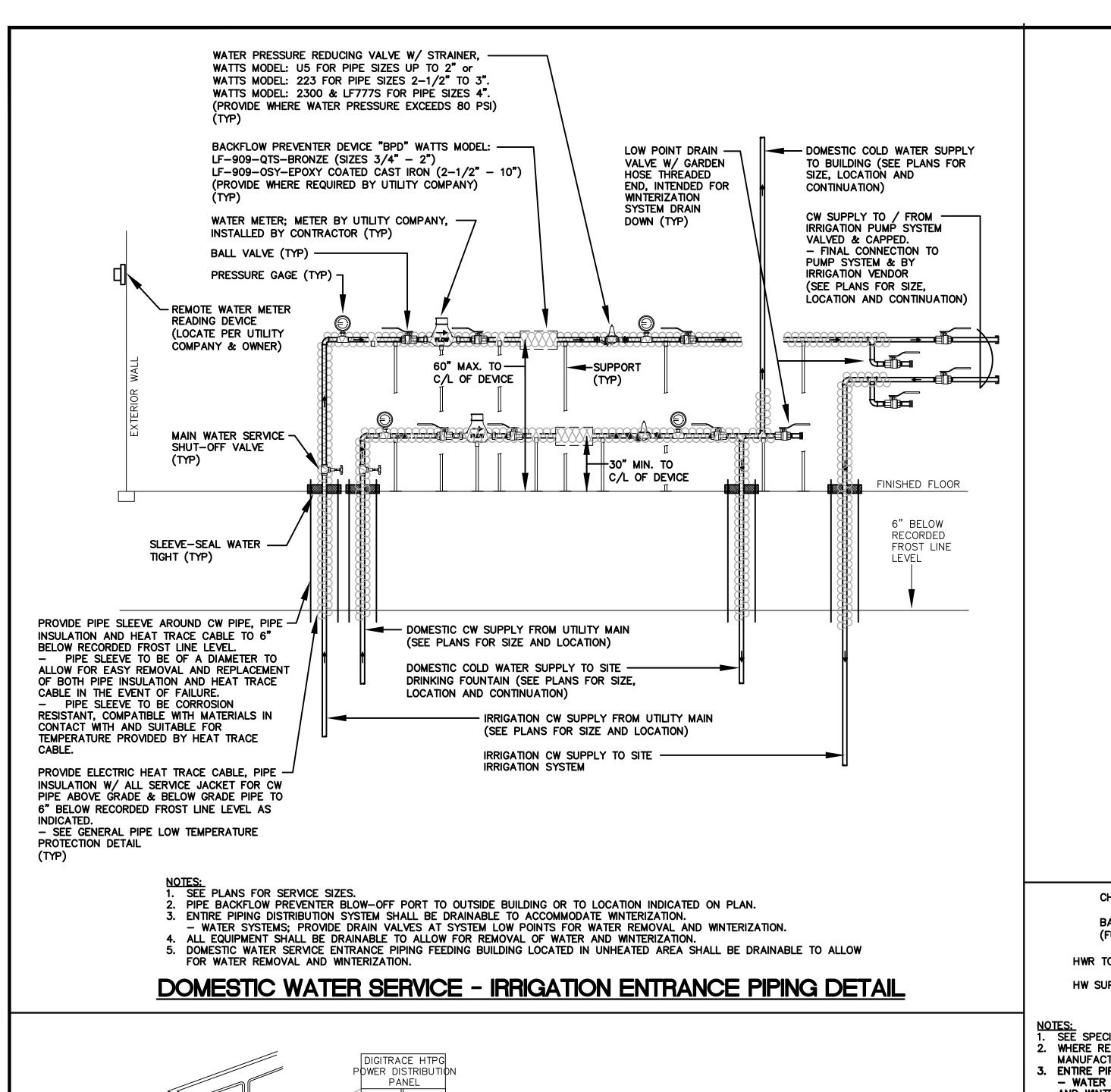
--- RAC --SIGNED DRAWN CHECK

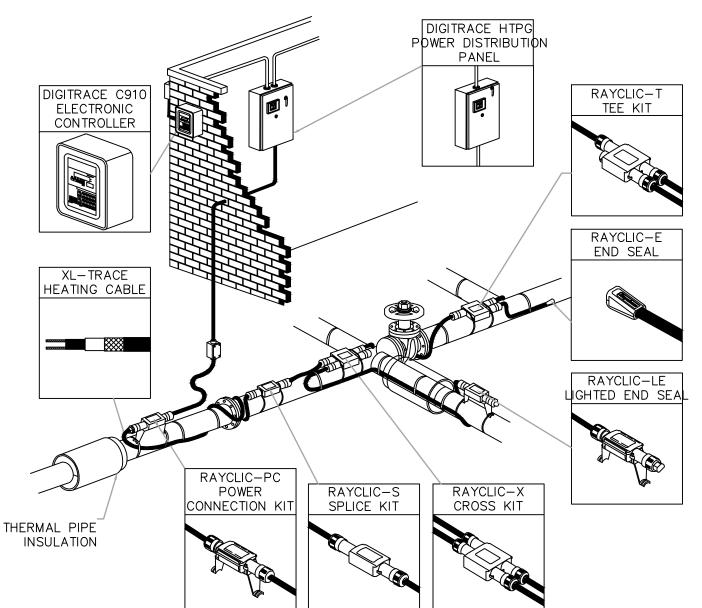
1/4"= 1' - 0"

OCTOBER 14, 2022

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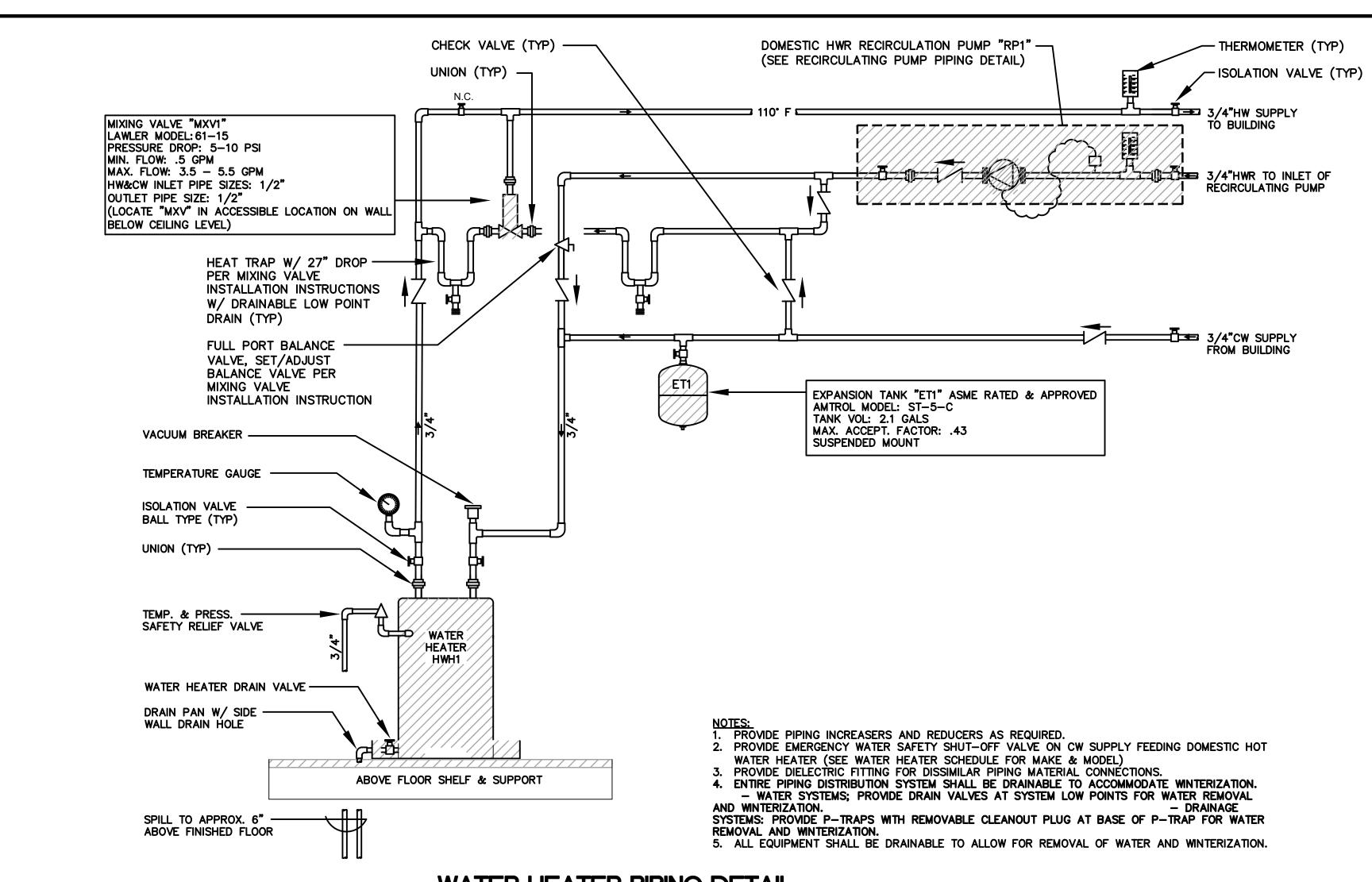
P1.0



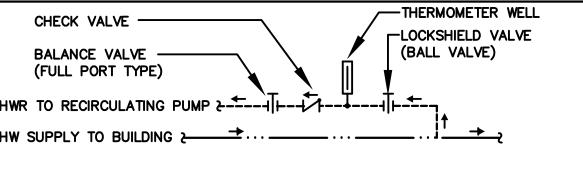


1. HEAT TRACE SYSTEM IS BASED ON RAYCHEM BY PENTAIR THERMAL MANAGEMENT COMPANY. 2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION

3. RAYCLIC-PC AND FTC-XC POWER CONNECTION KITS INCLUDE RAYCLIC-E END SEAL. **GENERAL PIPE LOW TEMPERATURE** PROTECTION DETAIL



WATER HEATER PIPING DETAIL



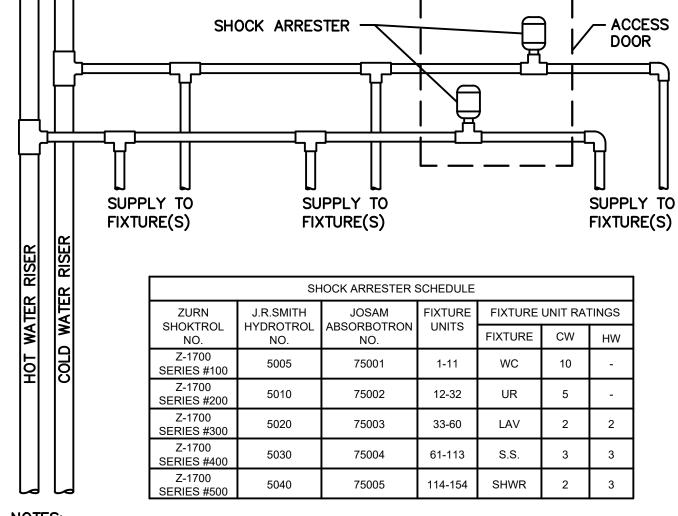
NOTES:

1. SEE SPECIFICATIONS FOR BALANCING PROCEDURES.

2. WHERE RECIRCULATION SYSTEMS INCLUDE MIXING VALVE; REFER TO MIXING VALVE MANUFACTURERS INSTALLATION INSTRUCTIONS FOR BALANCING PROCEDURES.

. ENTIRE PIPING DISTRIBUTION SYSTEM SHALL BE DRAINABLE TO ACCOMMODATE WINTERIZATION. — WATER SYSTEMS; PROVIDE DRAIN VALVES AT SYSTEM LOW POINTS FOR WATER REMOVAL AND WINTERIZATION.

HOT WATER RECIRCULATION PIPING DETAIL



NOTES:

1. ARRESTERS SHALL BE ACCESSIBLE FOR REPLACEMENT BY WAY OF ACCESS DOOR.

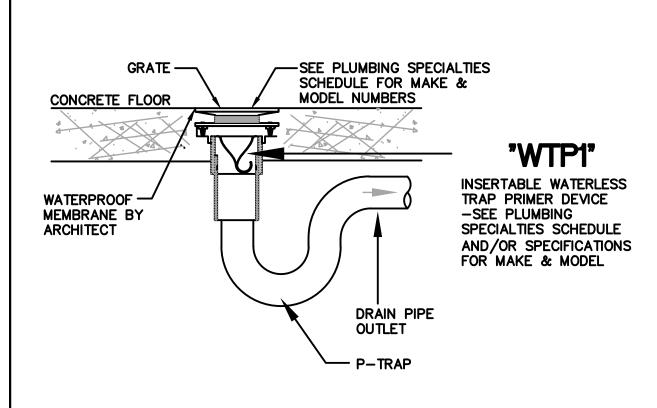
1. ARRESTERS SHALL BE ACCESSIBLE FOR REPLACEMENT BY WAY OF ACCESS DOOR. 2. APPROVED ARRESTERS SHALL BE INSTALLED ON WATER DISTRIBUTION SYSTEMS IN WHICH QUICK CLOSING VALVES ARE INSTALLED. MULTIPLE ARRESTER INSTALLATIONS SHALL BE AS PER PLUMBING AND DRAINAGE INSTITUTE STANDARDS.

SHOCK ARRESTER INSTALLATION DETAIL

- IN-LINE HOT WATER - UNION (TYP) - CHECK VALVE AQUASTAT (SEE HOT WATER RECIRCULATION PUMP -SCHEDULE FOR MAKE, MODEL & DESCRIPTION) NOTES:

1. ENTIRE PIPING DISTRIBUTION SYSTEM SHALL BE DRAINABLE TO ACCOMMODATE WINTERIZATION. - WATER SYSTEMS; PROVIDE DRAIN VALVES AT SYSTEM LOW POINTS FOR WATER REMOVAL

HOT WATER RECIRCULATING PUMP PIPING DETAIL

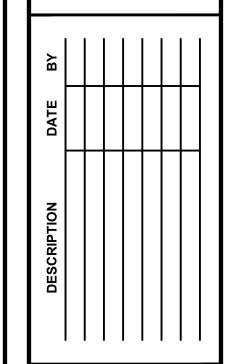


CONCRETE FLOOR SLAB-ON-GRADE CONSTRUCTION

WATERLESS TRAP PRIMER DETAIL







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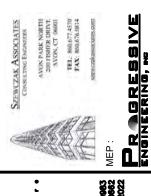
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				ſ	PLUMBI	NG FIX	TURE S	CHE	DULF	E				
NO.	FIXTURE	MFG.	FIXTURE TYPE &	TRIM TYPE & MODEL NO.	SUPPLY PIPE MODEL NO.	P-TRAP MODEL NO.	FIXTURE CARRIER &		•	PIPE SIZES	1	· · · · · ·	FIXTURE/TRIM DESCRIPTION & REMARKS	NOTES:
wc1	WATER CLOSET	KOHLER	MODEL NO. KINGSTON K-4323 (Wall Mounted Water Closet w/ Back Spud for Concealed Flush Valve Installations (1.28-1.60 GPF)	SLOAN CROWN OPTIMA 152-1.28 ES-S, EL-154(120VAC) TRANSFORMER SENSOR OPERATED ELECTRIC POWERED	_	_	SUPPORT NO. WALL MOUNTED W/ FIXTURE CARRIER J.R.SMITH 0211DY DOUBLE BACK TO BACK MIN. FIN. TO FIN. WALL © 22" or J.R.SMITH 0211Y SINGLE MIN. FIN. TO FIN. WALL © 14-1/2"	D –	4"	VENT	CW 1-1/2"	HW —	ADA COMPLIANT, WALL MOUNTED, HIGH EFFICIENCY TOILET, ANTI-MICROBIAL SURFACE, FULLY GLAZED 2-1/8" TRAPWAY, ELONGATED BOWL, VITREOUS CHINA, 1.28 - 1.60 GPFPROVIDE OPEN FRONT, SOFT CLOSE SEAT LESS COVER, KOHLER STRONGHOLD ELONGATED COMM TOILET SEAL MODEL: k-4731-SC PROVIDE BUMPER ON ANGLE STOP TO PREVENT SEAT FROM DAMAGE WHEN IN OPEN POSITION.	 REFER TO ARCHITECTURAL DRAWINGS FOR STANDARD AND ADA FIXTURE LOCATIONS, MOUNTING HEIGHTS, ELEVATIONS AND DETA INSTALL PRE—FORMED INSULATION COVERS FOR ALL EXPOSED SUPPLY AND DRAINAGE PIPING SERVING ADA COMPLIANT LAVATORIES AND SINKS MANUFACTURED BY TRUEBRO, PLUMBER HANDYSHIELD. PLUMBING FIXTURE SHALL HAVE CHROME PLATED BRASS SUPPLISTOPS, ESCUTCHEONS COVERS, P—TRAP, GRID DRAIN, POP—UP DRAINS W/ PUSH ROD, OFFSET DRAIN, CONTINUOUS DRAIN CONNECTION (FOR DOUBLE or TRIPLE BOWL FIXTURES), SHOWER/TUB DRAIN & TAILPIECE ASSEMBLIES SHALL BE CHROM PLATED BRASS. (IN LOCATIONS WHERE PIPING IS TO BE COVERE W/ INSULATION BRASS FINISH ONLY MAY BE SUBSTITUTED).
UR1	URINAL	KOHLER	BARDON K-4991-ER-0 (Wall Mounted Urinal w/ Back Spud for Concealed Flush Valve Installations (.125 - 1.0 GPF))	_	WALL MOUNTED W/ FIXTURE CARRIER J.R.SMITH 0600 SERIES SINGLE MIN. FIN. TO FIN. WALL © 5"	_	2"	1-1/2"	3/4"	_	ADA COMPLIANT, WALL MOUNTED, ELONGATED BOWL, VITREOUS CHINA, .125 TO 1.0 GPF.	 GRID STRAINER / BASKET STRAINER & TAILPIECE SHALL BE STAINLESS STEEL WHERE SERVING STAINLESS STEEL FIXTURES. TOILET ROOM LAVATORY FAUCETS SHALL HAVE 0.5 GPM AERATORS. SERVICE SINK FAUCETS SHALL HAVE VACUUM BREAKERS & CHECK VALVES ON HW&CW SUPPLIES EITHER INTEGRAL TO FAUCET OR PROVIDED ON HW&CW PIPES FEEDING THE FAUCET. WATER CLOSET/TOILET SEATS SHALL BE OF SMOOTH NON-ABSORBENT MATERIAL; ALL SEATS TO BE OF THE HINGED OPEN FRONT TYPE W/ STAINLESS STEEL HINGE & HARDWARE.
L1	LAVATORY (Solid Surface Countertop with Integral Bowl)	DÈTAILS & S	TECTURAL PLANS, PECIFICATIONS FOR DDEL AND SIZE)	ZURN AQUASENSE Z6913-CWB-F-CP4 -TMV1, P6000-HW6 (powers up to 8 faucets) SENSOR OPERATED, ELECTRIC POWERED FAUCET (PROJECTION @6-7/16", SPOUT HEIGHT @3-3/4")		McGUIRE 8902 1-1/4"INLET, 1-1/2"OUTLET P-TRAP W/ CO & McGUIRE 155A GRID DRAIN W/ TAILPIECE	MOUNTED	1-1/4" × 1-1/2"		1-1/2"	1/2"	1/2"	- PROVIDE STOPS, SUPPLIES, ESCUTCHEON COVER PLATES AT WALL & PREFORMED PIPE INSULATION COVERS PROVIDE P-TRAP, TAILPIECE, DRAIN ASSEMBLY, ESCUTCHEON COVERS AT WALL & PREFORMED PIPE INSULATION COVERS PROVIDE THERMOSTATIC MIXING VALVE ACORN MODEL: ST70-MB & BACK CHECK ASSEMBLIES, SET OUTLET HW @ 105°F.	 (COORDINATE SEAT COLOR W/ ARCHITECT & OWNER). 8. WATER CLOSET FLUSH VALVE ASSEMBLIES SHALL HAVE FACTORY FURNISHED BUMPER STOP ON ANGLE STOP OR WALL TO PREVENT SEAT FROM DAMAGE WHEN IN UP/OPEN POSITION. 9. PROVIDE FIXTURES WITH COMPATIBLE CARRIER AND/OR FACTORY FURNISHED WALL HANGER/SUPPORT BRACKET ASSEMBLY UNLESS OTHERWISE INDICATED. 10. PLUMBING FIXTURE — VITREOUS CHINA MATERIAL EQUIVALENT MANUFACTURER'S: KOHLER, SLOAN, TOTO. 11. PLUMBING FIXTURE — TERRAZZO SOLID SURFACE/MOLDED STONE MATERIAL EQUIVALENT MANUFACTURER'S: TERRAZZO, FIAT,
TS1	LAUNDRY TUB TYPE SERVICE SINK	FIAT	SERV-A-SINK FL-1 (FLR MTD W/ LEGS)	A1	McGUIRE LF-H170	McGUIRE 8904 2"INLET, 2"OUTLET P-TRAP W/ CO	FLOOR MOUNTED W/ LEGS & WALL HANGER	2"	2"	1-1/2"	1/2"	1/2"	22"W x 24"L x 13-7/16" MOLDED STONE SINGLE TUB SERVICE TYPE SINK, INTEGRAL STRAINER, PLUG, DECK MOUNTED FAUCET & MOLDED-IN DRAIN. - PROVIDE END OF FAUCET VACUUM BREAKER WOODFORD MODEL 34H. - PROVIDE THERMOSTATIC MIXING VALVE ACORN MODEL: ST70-MB & BACK CHECK ASSEMBLIES, SET OUTLET HW @ 110°F.	FLORESTONE, SWANCORP. 12. WATER CLOSET/TOILET SEAT EQUIVALENT MANUFACTURER'S: CHURCH, OLSONITE, BEMIS. 13. FAUCET EQUIVALENT MANUFACTURER'S: (SENSOR OPERATED FAUCETS: T&S BRASS, HYDROTEK, TOTO, SLOAN, DELTA). 14. FLUSH VALVE EQUIVALENT MANUFACTURER'S: SLOAN, DELANY,
L2 E	LAVATORY (WALL MOUNTED)	KOHLER	PINOIR K-2035-4	SAME AS "L1"	McGUIRE H170	McGUIRE 8902 1-1/4"INLET, 1-1/2"OUTLET P-TRAP W/ CO & McGUIRE 155A GRID DRAIN W/ TAILPIECE	MOUNTED W/ FIXTURE CARRIER J.R.SMITH 0700 SERIES SINGLE MIN. FIN. TO FIN.	1-1/4" x 1-1/2"	1-1/2"	1-1/2"	1/2"	1/2*	ADA COMPLIANT 22" x 18" WALL HUNG LAVATORY WITH SHROUD, VITREOUS CHINA FIXTURE. - PROVIDE STOPS, SUPPLIES, ESCUTCHEON COVER PLATES AT WALL & PREFORMED PIPE INSULATION COVERS. - PROVIDE P-TRAP, TAILPIECE, DRAIN ASSEMBLY, ESCUTCHEON COVERS AT WALL & PREFORMED PIPE INSULATION COVERS. - PROVIDE THERMOSTATIC MIXING VALVE ACORN MODEL: ST70-MB & BACK CHECK ASSEMBLIES, SET OUTLET HW 105.	

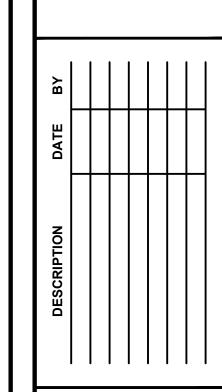
- TECTURAL DRAWINGS FOR STANDARD AND ADA NS, MOUNTING HEIGHTS, ELEVATIONS AND DETAILS.
- ORMED INSULATION COVERS FOR ALL EXPOSED AINAGE PIPING SERVING ADA COMPLIANT SINKS MANUFACTURED BY TRUEBRO, PLUMBEREX,
- E SHALL HAVE CHROME PLATED BRASS SUPPLIES, EONS COVERS, P-TRAP, GRID DRAIN, POP-UP ROD, OFFSET DRAIN, CONTINUOUS DRAIN DOUBLE or TRIPLE BOWL FIXTURES), RAIN & TAILPIECE ASSEMBLIES SHALL BE CHROME (IN LOCATIONS WHERE PIPING IS TO BE COVERED BRASS FINISH ONLY MAY BE SUBSTITUTED).
- / BASKET STRAINER & TAILPIECE SHALL BE WHERE SERVING STAINLESS STEEL FIXTURES.
- VATORY FAUCETS SHALL HAVE 0.5 GPM
- AUCETS SHALL HAVE VACUUM BREAKERS & CHECK CW SUPPLIES EITHER INTEGRAL TO FAUCET OR N&CW PIPES FEEDING THE FAUCET.
- TOILET SEATS SHALL BE OF SMOOTH
 T MATERIAL; ALL SEATS TO BE OF THE HINGED PE W/ STAINLESS STEEL HINGE & HARDWARE. AT COLOR W/ ARCHITECT & OWNER).
- FLUSH VALVE ASSEMBLIES SHALL HAVE FACTORY
 PER STOP ON ANGLE STOP OR WALL TO PREVENT IAGE WHEN IN UP/OPEN POSITION.
- HANGER/SUPPORT BRACKET ASSÉMBLY UNLESS ATED. RE - VITREOUS CHINA MATERIAL EQUIVALENT
- KOHLER, SLOAN, TOTO. RE - TERRAZZO SOLID SURFACE/MOLDED STONE
- TOILET SEAT EQUIVALENT MANUFACTURER'S:
- ENT MANUFACTURER'S: (SENSOR OPERATED BRASS, HYDROTEK, TOTO, SLOAN, DELTA).
- QUIVALENT MANUFACTURER'S: SLOAN, DELANY,
- E CARRIER EQUIVALENT MANUFACTURER'S: J.R. VADE, WATTS.
- , ESCUTCHEONS COVERS, P-TRAP, GRID DRAIN, W/ PUSH ROD, OFFSET DRAIN, CONTINUOUS ON (FOR DOUBLE or TRIPLE BOWL FIXTURES), AIN & TAILPIECE ASSEMBLIES EQUIVALENT McGUIRE, T&S BRASS, BRASS CRAFT. WATTS.
- / BASKET STRAINER & TAILPIECE (STAINLESS ENT MANUFACTURER'S: McGUIRE, T&S BRASS, CRAFT.
- RES (VITREOUS CHINA & SOLID SURFACE) SHALL LOR UNLESS OTHERWISE INDICATED.

Pl	LUMBING LEGEND
— G — →	NATURAL GAS
	UNDERGROUND SANITARY or WASTE
	ABOVE GROUND SANITARY or WASTE
⊢ −−−−	VENT
.	DOMESTIC COLD WATER
 ··-	DOMESTIC HOT WATER -110 DEG
├	DOMESTIC HOT WATER 110°F RECIRCULATION

PLU	MBING SYMBOL TABLE
AFF	ABOVE FINISHED FLOOR
BFF	BELOW FINISHED FLOOR
BPD	BACKFLOW PREVENTER DEVICE
CW	DOMESTIC COLD WATER
ET	EXPANSION TANK
F.F.	FINISHED FLOOR
G	GAS
н w н	DOMESTIC HOT WATER HEATER
HW	DOMESTIC HOT WATER
HWR	DOMESTIC HOT WATER RETURN
ΙE	INVERT ELEVATION
S	SANITARY
ST	STORM
٧	VENT
VTR	VENT THROUGH ROOF
w	WASTE
(M)	UTILITY METER (GAS or WATER)
þ	BALL VALVE
$+^{\sf HB}$	HOSE BIB
⋈── ^{₩H}	WALL HYDRANT
~ ○	TEE DOWN
7	PIPE UP
€	PIPE DN
Ĩ	CAPPED PIPE
	DIRECTION OF FLOW
⊣ ı co	CLEAN OUT
⊣ । wco	WALL CLEAN OUT
⊚FC0	FLOOR CLEAN OUT
8	P-TRAP
\bigcirc	GAS VALVE
⊠ MXV	TEMPERATURE MIXING VALVE







RESTROOM AND FACILITIES PLUMBING SCHEDULES

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	PLUMBING SPECIALTIES SCHEDULE									
UNIT ID	MFG.	MODEL NO.	DESCRIPTION	DESCRIPTION						
FD1	JR SMITH	2005Y-A06NB -UP050	FLOOR DRAIN (FINISHED AREA LIGHT DUTY TOP)	CAST IRON FLOOR DRAIN WITH INTEGRAL CLAMPING COLLAR, SEEPAGE OPENINGS, 1/2" TRAP PRIMER TAPPING, 6" DIA. ROUND "LIGHT DUTY" NICKEL BRONZE TOP WITH VANDAL RESISTANT SCREWS.						
FCO1	JR SMITH	CLEANOUT (FINISHED AREA LIGHT DUTY)		CAST IRON FLOOR CLEANOUT WITH THREADED ADJUSTABLE HOUSING, FLANGED FERRULE W/ COUNTERSUNK TAPERED BRASS PLUG, 6" ROUND "LIGHT DUTY" NICKEL BRONZE SCORIATED TOP. (LIGHT DUTY TOP, UNDER 2000 LBS)						
WH1	WOODFORD (FREEZELESS)	B65	WALL HYDRANT (LOCKABLE BOX TYPE)	AUTOMATIC DRAINING W/ANTI-SIPHON VACUUM BREAKER W/3/4" GARDEN HOSE THREADED OUTLET, FREEZLESS WALL HYDRANT & LOOSE TEE KEY OPERATED, CAST BRONZE BOX WITH SCORIATED HINGED LATCHING COVER, PROVIDE CHROME PLATED FINISH WHERE DIRECTED BY ARCHITECT. (PROVIDE INLET OPTION TO SUIT PROJECT & APPLICATION).						
HB1	WOODFORD (INTERIOR USE)	26	WALL FAUCET (EXPOSED)	BACKFLOW PROTECTED EXPOSED WALL FAUCET, 3/4" GARDEN HOSE THREADED OUTLET, INTEGRAL BACKFLOW PREVENTER-VACUUM BREAKER, KEY TEE OPERATING HANDLEPROVIDE ROUGH BRASS (MACHANICAL AREA) / POLISHED CHROME (FINISHED AREA)PROVIDE INLET OPTION TO SUIT PROJECT & APPLICATION.						
WTP1	J.R. SMITH	2692	QUAD CLOSE WATERLESS INSERTABLE TRAP SEAL DEVICE	INSERTABLE, WATERLESS TYPE TRAP SEAL DEVICE.						

NOTES:

- ABOVE SPECIALTIES ARE BASED ON LISTED MANUFACTURER(S), EQUIVALENT MANUFACTURERS LISTED BELOW MAY BE SUBMITTED FOR CONSIDERATION, ALL SUBSTITUTIONS MUST BE APPROVED BY ENGINEER.
- 2. COORDINATE INSTALLATION HEIGHTS OF DEVICES AND OR EQUIPMENT SPECIFIED IN THIS SCHEDULE WITH ARCHITECT UNLESS OTHERWISE INDICATED.
- 3. FLOOR DRAIN EQUIVALENT MANUFACTURERS: WADE, JOSAM, WATTS, FROET.
- 4. FLOOR, WALL, GRADE CLEANOUT EQUIVALENT MANUFACTURERS: WADE, JOSAM, WATTS.
- 5. TRAP PRIMER EQUIVALENT MANUFACTURERS: (WATERLESS TYPE: WADE, PPP, J.R. SMITH, JOSAM, WATTS).
- 6. WALL HYDRANT & HOSE BIB EQUIVALENT MANUFACTURERS: J.R. SMITH, WADE JOSAM, WATTS.

WATER HEATER SCHEDULE										
ITEM	MANUFACTURER	MODEL	TYPE		# OF HEATING ELEMENTS	KW	FLA	VOLTAGE	PHASE	REMARKS
HWH1	A.O. SMITH	DURA POWER DEN-30	ELECTRIC	30	2	9KW (2 © 4.5KW EACH) *	19.2	208	1	45 GPH RECOVERY AT 80°F RISE

*SIMULTANEOUS DUAL ELEMENT OPERATION

- 1. UNIT SELECTION BASED ON A.O. SMITH: EQUIVALENT MANUFACTURES BY BRADFORD WHITE, LOCHINVAR, STATE. 2. PROVIDE ALUMINUM DRAIN PAN AS MANUFACTURED BY OATEY.
- 3. PROVIDE AUTOMATIC WATER DETECTOR/SAFETY SHUT-OFF SYSTEM WATTS: FLOODSAFE WDS-E220; EQUIVALENT
- MANUFACTURERS BY FIRSTSMART SENSOR (FLOODSTOPPER SYSTEM) OR TACO (WAGS). COORDINATE ELECTRICAL POWER REQUIREMENTS WITH ELECTRICIAN.
- 4. SEE WATER HEATER DETAIL FOR HW OUTLET TEMPERATURES, PIPING ARRANGEMENT & SPECIALTIES.

- 1. COMBINATION TEMPERATURE/PRESSURE GAUGE.
- 2. LOW WATER CUTOFF. 3. PROVIDE ELECTRICAL POWER DISCONNECT.

STANDARD FEATURES:

- -MEET ASHRAE ENERGY EFFICIENCY STANDARDS
- -300 PSI TEST PRESSURE, 150 PSI WORKING PRESSURE
- -GLASS LINED STEEL TANK -NON-CFC FOAM INSULATION W/ STEEL BAKED ON ENAMELED OUTER JACKET
- -ADJUSTABLE THERMOSTAT
- -AUTOMATIC HIGH TEMP CUTOFF SWITCH OVERHEAT PROTECTION
- -EXTRUDED HIGH DENSITY ANODE ROD
- -DIP TUBE WITHSTANDS TEMPERATURES OF 400 DEGREES
- -ASME TEMPERATURE AND PRESSURE RELIEF VALVE
- -FACTORY INSTALLED HEAT TRAPS (FOR NON-RECIRCULATED HW SYSTEMS)
- -U.L. LISTED
- -JUNCTION BOX (MANUFACTURER PROVIDED ON MODELS ABOVE 20 GAL CAPACITY),
- (ELECTRICAL CONTRACTOR TO PROVIDE JUNCTION BOX FOR MODELS 20 GAL CAPACITY AND BELOW)
- -3 YEAR LIMITED TANK WARRANTEE

	HOT WATER RECIRCULATION PUMP SCHEDULE										
UNIT ID	MODEL NO.	TYPE	FLANGE	GPM	HEAD	PU	MP	MOTOR		ACCESSORIES	
			DIAMETER		(FT)	EFF.	RPM	HP	VOLTS	PHASE	
RP1	PL-30B/1BL013LF (LEAD FREE BRONZE)	INLINE	3/4"	3	20	50%	2650	1/12	115	1	1,2

NOTES:

1. PUMP SELECTION BASED ON BELL & GOSSETT EQUIVLENT MANUFACTURES BY ARMSTRONG AND TACO.

2. PUMP SHALL BE OF ALL BRONZE CONSTRUCTION (LEAD FREE) & APPROVED FOR POTABLE DOMESTIC WATER USE.

ACCESSORIES:

- 1. COMBINATION AUTOMATIC TIMER & AQUASTAT KIT; BELL & GOSSET MODELS: TC-1 & AQ-3/4 (FOR PIPE SIZES 1/2" or 3/4"). ELECTRICAL POWER REQUIREMENT FOR AUTOMATIC TIME KIT: 115/120VAC, 60HZ, 1PH.
- 2. MOUNT AQUASTAT ON SUCTION SIDE OF HOT WATER RECIRCUALTION PUMP. 3. PROVIDE ELECTRICAL POWER DISCONNECT

PLUMBING SPECIFICATION / MATERIAL NOTES:

- ARCHITECT'S GENERAL CONDITIONS ARE A PART OF THIS DIVISION.
- 2. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS OF LOCAL AND STATE AGENCIES AND UTILITY
- ALL EQUIPMENT SHALL BE UL LISTED. THE CONTRACTOR SHALL BEAR THE COST OF ALL FEES, PERMITS, LICENSES AND TAXES, AND ANY UTILITY COMPANY CHARGES IN CONNECTION WITH HIS WORK.
- 4. THE CONTRACTOR SHALL PROVIDE A GUARANTEE COVERING ALL MATERIAL AND WORKMANSHIP FOR ONE (1) YEAR FOLLOWING THE DATE OF ACCEPTANCE.
- 5. THE CONTRACTOR SHALL EXAMINE THE ARCHITECTURAL PLANS AND THE PLANS AND SPECIFICATIONS OF OTHER TRADES TO DETERMINE WORK EXTENT. DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. IF SO DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL. WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN THE LAYOUT TO PREVENT CONFLICT WITH THOSE OF OTHER TRADES AND FOR PROPER INSTALLATION OF WORK. THE CONTRACTOR SHALL COORDINATE LOCATIONS OF EQUIPMENT WITH ALL TRADES BEFORE STARTING CONSTRUCTION. ANY MODIFICATIONS TO THE EQUIPMENT LAYOUT REQUIRED FOR INSTALLATION SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.
- 6. SUBMIT AS-BUILT DRAWINGS AND OPERATION AND MAINTENANCE MANUALS AT THE COMPLETION OF THE PROJECT.
- 7. WASTE, SANITARY AND VENT PIPING BELOW GRADE ASTM D 2665 SOLID WALL SCHEDULE 40 PVC WITH SOLVENT WELDED JOINTS MAY BE SUBSTITUTED FOR ALL SIZES OF SANITARY, WASTE AND VENT PIPING.
- 8. WASTE, SANITARY AND VENT PIPING MAINS, ABOVE GRADE ASTM D 2665 SOLID WALL SCHEDULE 40 PVC WITH SOLVENT WELDED JOINTS FOR ALL SIZES OF SANITARY, WASTE AND VENT PIPING. -P-TRAPS LOCATED ABOVE GRADE SHALL HAVE CLEANOUT A BASE OF TRAP TO ALLOW FOR DRAINING OF WATER FROM TRAP AND WINTERIZATION.
- 9. WATER SERVICE ENTRANCE MAINS BELOW GRADE SHALL BE TYPE "L" COPPER TUBE ASTM B 88 WITH WROUGHT COPPER SWEAT FITTINGS ASTM B 16.18 OR ASTM B 16.22 USING LEAD-FREE SOLDER. 2-1/2" AND LARGER SHALL BE CEMENT-LINED DUCTILE IRON, CLASS 54, WITH PUSH-ON OR MECHANICAL JOINTS RATED FOR 350 PSI. - IRRIGATION PIPING/MATERIALS, PIPE ROUTING AND POINT OF CONNECTION SHALL BE COORDINATED WITH IRRIGATION VENDOR PRIOR TO
- INSTALLATION.
- 10. WATER PIPE BELOW GRADE SHALL BE TYPE "K" SOFT COPPER TUBE WITH WROUGHT COPPER SWEAT FITTINGS USING LEAD-FREE SOLDER. IRRIGATION PIPING/MATERIALS, PIPE ROUTING AND POINT OF CONNECTION SHALL BE COORDINATED WITH IRRIGATION VENDOR PRIOR TO
- INSTALLATION. - ENTIRE PIPING DISTRIBUTION SYSTEM SHALL BE INSTALLED WITHOUT SAGS AND DRAINABLE TO ALLOW FOR WINTERIZATION.

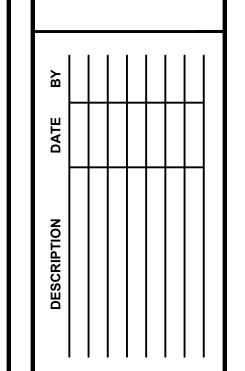
- ENTIRE PIPING DISTRIBUTION SYSTEM SHALL BE INSTALLED WITHOUT SAGS AND DRAINABLE TO ALLOW FOR WINTERIZATION.

BUILDING STRUCTURE. HANGER AND SUPPORT SPACING SHALL BE IN ACCORDANCE WITH PLUMBING CODE REQUIREMENTS.

- 11. WATER PIPE ABOVE GRADE SHALL BE TYPE "L" COPPER WITH WROUGHT COPPER SWEAT FITTINGS USING LEAD-FREE SOLDER. VALVES SHALL BE BALL TYPE WITH SCREWED ENDS BY APOLLO #70-100, OR WATTS #B-6000 OR EQUIVALENT.
- IRRIGATION PIPING/MATERIALS, PIPE ROUTING AND POINT OF CONNECTION SHALL BE COORDINATED WITH IRRIGATION VENDOR PRIOR TO INSTALLATION.
- 11. PROVIDE HANGERS AND SUPPORTS FOR ALL PIPING SYSTEMS INCLUDING SUPPORT DEVICES PER NFPA 54 & MSS-SP-69. PROVIDE HANGERS AND SUPPORTS SUITABLE FOR SERVICE AND SELECTED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDED MAXIMUM LOADING. SUPPORT FROM
- 12. PROVIDE PRE-FORMED INSULATION COVERS FOR EXPOSED SUPPLY AND DRAINAGE PIPING LOCATED BELOW ADA COMPLIANT FIXTURE(S). EQUIVALENT MANUFACTURER'S: TRUEBRO, PLUMBEREX.
- 13. PROVIDE FIBERGLASS INSULATION W/ ALL SERVICE CLEANABLE OUTER SURFACE & LABELING-INCLUDE FLOW ARROWS ON ALL CW & HW PIPES WITHIN PROJECT AREA, INSULATION THICKNESS PER MOST CURRENT ENERGY CODE, IDENTIFY PIPING IN COMPLIANCE WITH ASME A13.
- 14. PROVIDE VALVES TAGS FOR ISOLATION VALVES & NAME PLATES FOR EQUIPMENT, ETC. WITHIN PROJECT AREA, IDENTIFY VALVES & EQUIPMENT IN COMPLIANCE WITH ASME A13.
- 15. PIPING SHALL BE IDENTIFIED AT LEAST EVERY 20 FT. WITH NAME AND FLOW DIRECTION WITH SNAP-ON PLASTIC PIPE MARKERS. ALL EQUIPMENT SHALL BE IDENTIFIED WITH ENGRAVED PLASTIC MARKERS, CHAIN TO VALVE AND PROVIDE IDENTIFICATION WALL CHART.
- 16. PROVIDE WATER HAMMER ARRESTING AIR CHAMBERS EQUAL TO "PPP", INC. OR ACCEPTABLE EQUIVALENT ON HOT AND COLD WATER PIPING PER PDI-WH 201. AT FIXTURES WHERE QUICK-CLOSING VALVES ARE USED OR AS INDICATED ON PLANS.
- 17. PROVIDE SHUT OFF VALVES AT ALL PLUMBING FIXTURE AND EQUIPMENT LOCATIONS.
- 18. PROVIDE DIELECTRIC COUPLING BETWEEN PIPING OF DIS-SIMILAR METERIALS.
- 19. PROVIDE AIR VENTS AT HIGH POINTS OF WATER PIPING.
- 20. INSTALL & LOCATE BELOW GRADE DOMESTIC WATER PIPING TO PREVENT FREEZING PER CODE AND PER UTILITY COMPANY REQUIREMENTS.
- 21. PROVIDE CW PIPING TO ALL TRAP PRIMERS: ALL FLOOR DRAINS SHALL BE PROVIDED WITH P-TRAPS AND TRAP PRIMING TAPPING UNLESS PIPING DISTRIBUTION SYSTEM SHALL BE INSTALLED WITHOUT SAGS AND BE ABLE TO REMOVE WATER TO ALLOW FOR WINTERIZATION.
- 28. SEAL PIPE PENETRATIONS THROUGH FIRE RATED WALLS, CEILINGS OR FLOORS WITH A UL APPROVED FIRE-STOP FITTING CLASSIFIED FOR AN HOURLY RATE EQUAL TO THE RATING CONSTRUCTION. INSULATING MATERIALS SHALL BE COMPATIBLE WITH PIPING SYSTEM BEING INSTALLED. FIRE CAULK TO HAVE FIRE RATING EQUIVALENT OR BETTER THAN WALL FIRE RATING.
- 29. HYDROSTATICALLY TEST DOMESTIC WATER PIPING AT 150 PSI FOR THREE (3) HOURS WITHOUT LEAKS.
- 30. TEST WASTE, SANITARY AND VENT PIPING WITH A 10-FOOT HEAD OF WATER FOR A MINIMUM OF 15 MINUTES WITHOUT LEAKS.
- 31. TEST BURIED OR CONCEALED PIPING BEFORE CLOSING IN OR BACKFILLING.
- 32. DISINFECT POTABLE WATER SYSTEMS (NEW AND EXISTING) PRIOR TO BUILDING OCCUPANCY PER CODES AND LOCAL OFFICIALS REQUIREMENTS AND/OR AWWA C651 OR AWWA C652. FLUSH SYSTEMS THOROUGHLY WITH POTABLE WATER AFTER DISINFECTION. SUBMIT WATER SAMPLES IN STERILE BOTTLES TO AUTHORITIES HAVING JURISDICTION, REPEAT SAMPLE PROCEDURES IF BIOLOGICAL EXAMINATION SHOWS CONTAMINATION.
- 33. CLEAN INTERIOR OF PIPING; REMOVE DIRT OR DEBRIS AS WORK PROGRESSES.
- 34. PROTECT DRAINS DURING REMAINDER OF CONSTRUCTION PERIOD TO AVOID CLOGGING WITH DIRT AND DEBRIS AND TO PREVENT DAMAGE FROM TRAFFIC AND CONSTRUCTION WORK.
- 35. PLACE PLUGS IN ENDS OF UNCOMPLETED PIPING AT END OF DAY AND WHEN WORK STOPS.
- 36. FURNISH ALL EQUIPMENT MANUALS AND WARRANTIES TO TENANT/BUILDING OWNER AT THE COMPLETION OF THE PROJECT.







SPECIFICATIONS Ш STORAGI S Š SCHEDULES FACILITIE AND PLUMBING ESTROOM

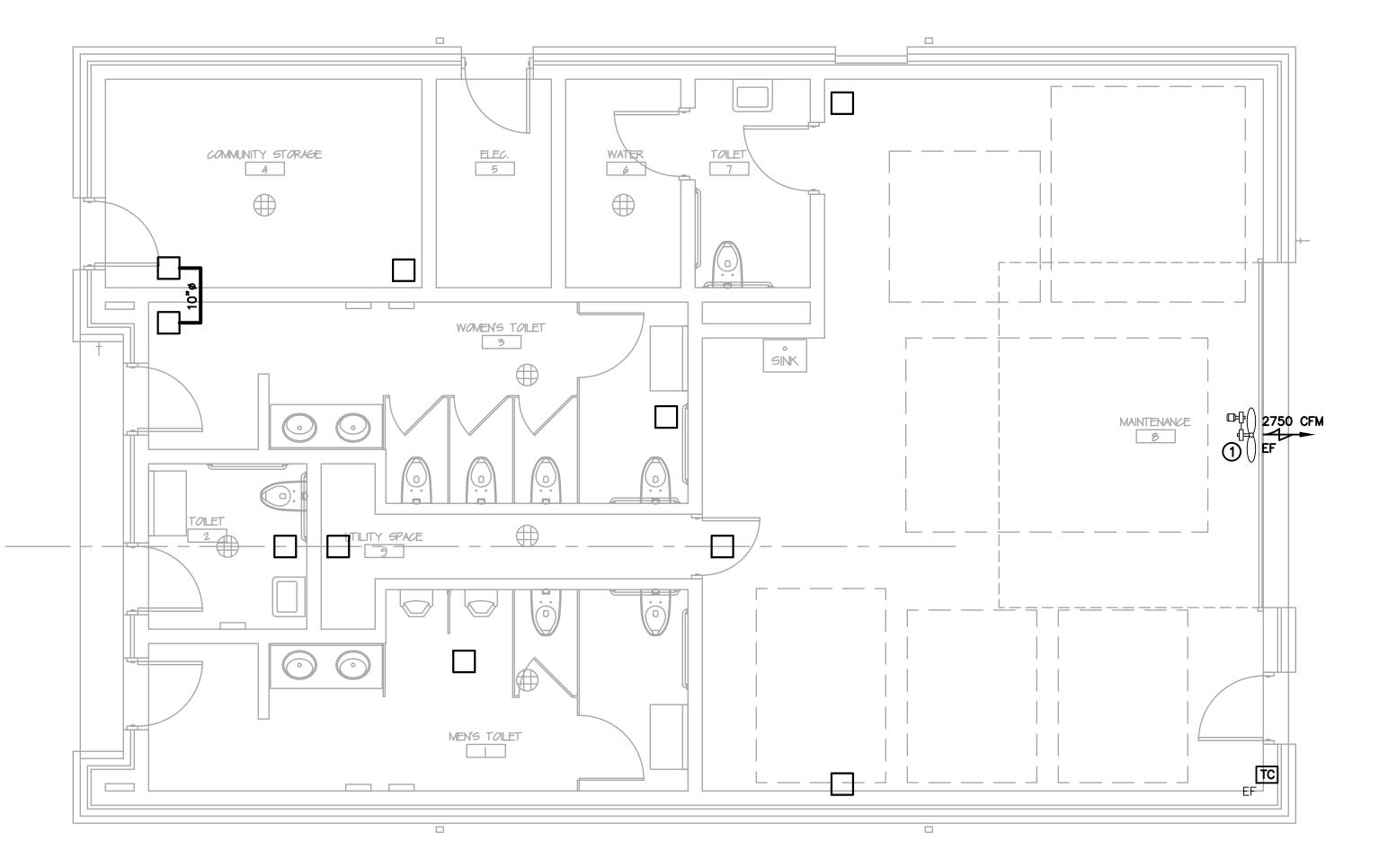
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GENERAL HVAC NOTES:

1. SEISMICALLY SUPPORT EQUIPMENT AND DUCTWORK FROM BUILDING STRUCTURE. MAINTAIN VIBRATION FREE INSTALLATION.

2. PROVIDE ALL SERVICE/ACCESS CLEARANCES FOR MECHANICAL EQUIPMENT PER MANUFACTURERS' INSTRUCTIONS AND RECOMMENDATIONS. COORDINATE PRIOR TO INSTALLATION OF EQUIPMENT.

3. FLEXIBLE DUCT TO AIR OUTLETS SHALL BE UL CLASS 1 CONNECTORS WITH AIRTIGHT CORE, GALVANIZED WRE HELIX AND PRE—INSULATED WITH ONE (1") INCH, 3/4 PCF FIBERGLASS WITH A FLAME RETARDANT VAPOR BARRIER, FLEXMASTER TYPE IX.

4. LOUVER PLENUM SHALL BE GALVANIZED STEEL WITH FLANGED JOINTS. PITCH BASE OF PLENUM TOWARD LOUVER FOR MOISTURE DRAINAGE. PLENUMS SHALL BE FIRMLY ATTACHED TO LOUVER AND CAULKED WEATHER TIGHT AT JOINTS.

5. PLENUM CEILING BOX SHALL BE GALVANIZED STEEL WITH FLANGED JOINTS.

DRAWING KEY NOTES:

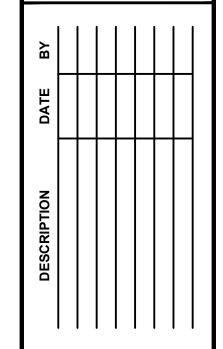
PROVIDE SIDEWALL EXHAUST FAN AS MANUFACTURED BY GREENHECK MODEL SE1-16-428-A5, 2750 CFM © 0.375" ESP, 1/2 HP, 208V, 3PH. PROVIDE PLENUM ON LOUVER FOR FAN INSTALLATION. PROVIDE PROGRAMMABLE TIME CLOCK FOR FAN CONTROL.

	HVAC TAGS						
EF	EXHAUST FAN						
CFM CUBIC FEET PER MINUTE							
HVAC LEGEND							
——	DUCT OR PIPING SINGLE LINE						
HVA	HVAC SYMBOL TABLE						
	12X12 STEEL CEILING LOUVER						
ТС	TIME CLOCK						



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D FACILITIES STORAGE BUILDIN

RESTROOM AND FAC

CFM CFM KAS
DESIGNED DRAWN CHECKED

1/4"= 1' - 0"

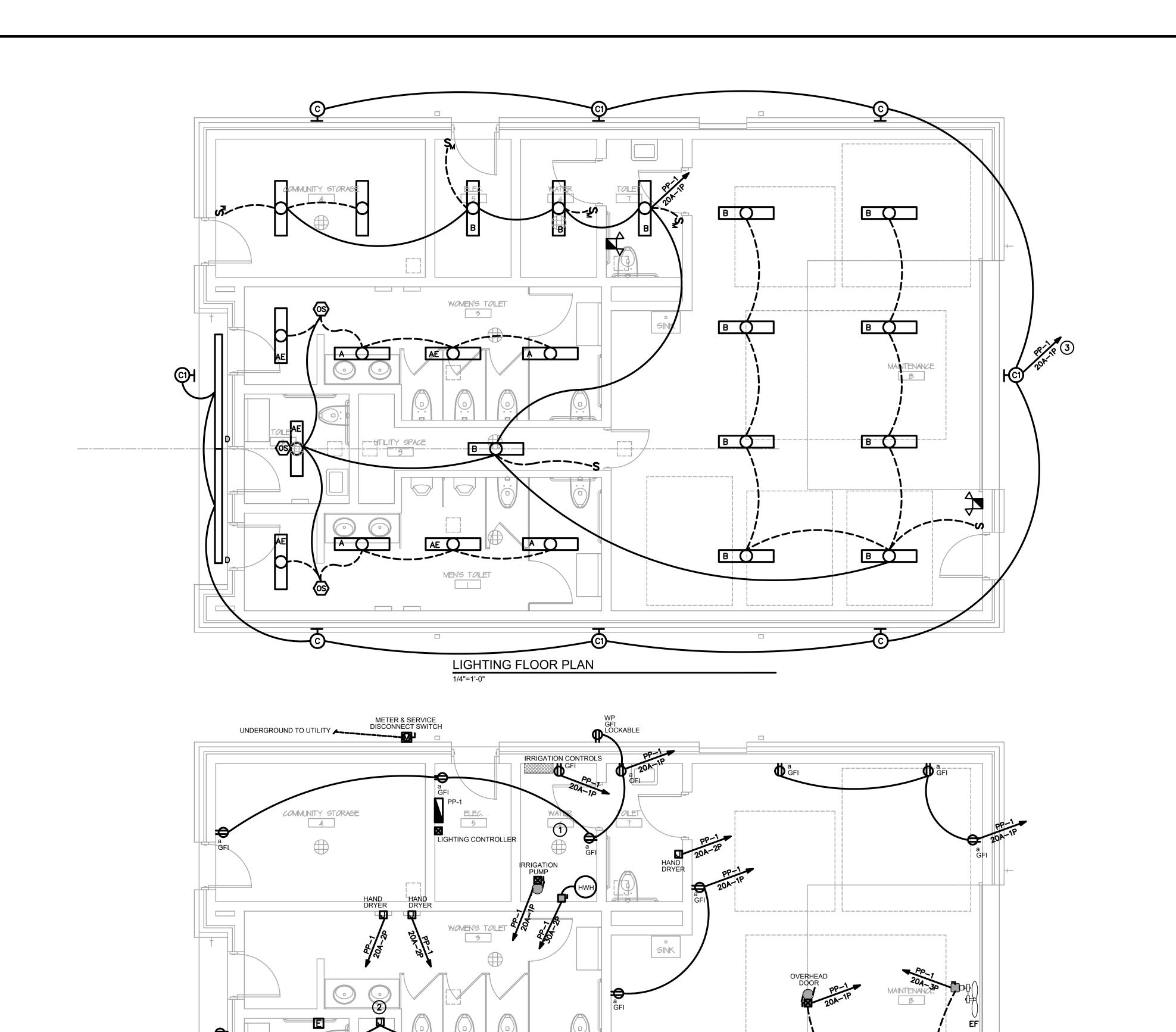
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POWER FLOOR PLAN

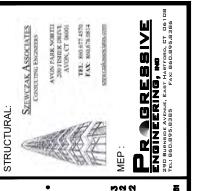
1/4"=1'-0"

GENERAL DRAWING NOTES:

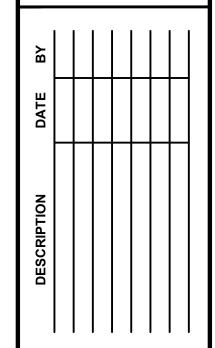
- A. JUNCTION OR OUTLET BOXES SHALL BE INSTALLED SO AS TO ALLOW ACCESS TO COVER. PROVIDE ARCHITECT APPROVED ACCESS DOORS OR PLATES AS REQUIRED IN AREAS WHERE UNOBSTRUCTED ACCESS TO BOX OR OUTLET IS NOT POSSIBLE.
- B. MULTIPLE SWITCHES SHOWN IN SAME LOCATION SHALL BE GANGED TOGETHER WITH A COMMON FACEPLATE.
- C. LIGHTING FIXTURES UTILIZING ELECTRONIC BALLASTS SHALL BE PROVIDED WITH A DEDICATED NEUTRAL.
- D. CONNECT EXIT SIGNS AND EMERGENCY LIGHTING UNITS TO NEAREST LIGHTING BRANCH CIRCUIT AHEAD OF ALL SWITCHES. UNITS SHALL MONITOR LOCAL LIGHTING CIRCUIT AND OPERATE UPON LOSS OF NORMAL POWER.
- E. ALL EXPOSED EXTERIOR WIRING IS WET LOCATION RATED 2#12 & 1#12 GND IN 3/4" RIGID METALLIC CONDUIT, UNLESS NOTED OTHERWISE. ALL BOXES ARE NEMA-3R METAL.
- F. EXPOSED WIRING IN DRY LOCATIONS WALL OR CEILING IS 2#12 & 1#12 GND IN 3/4"EMT. WIRING CONCEALED IN WALLS OR CEILING MAY BE TYPE MC CABLE.
- G. ALL WIRING SHALL BE RUN CONCEALED WHERE PHYSICALLY POSSIBLE. IN AREAS WITHOUT CEILINGS, EXPOSED CONDUITS SHALL BE INSTALLED NEATLY AND ROUTED PARALLEL TO OR AT RIGHT ANGLES TO BUILDING STRUCTURE/LINES.

DRAWING KEY NOTES:

- 1 PROVIDE POWER CONNECTIONS FOR DOMESTIC WATER AND IRRIGATION WATER SERVICES HEAT TRACE SYSTEMS FROM 20A-1P GFI CIRCUIT BREAKERS.
- JUNCTION BOXES FOR POWER CONNECTIONS TO ELECTRONIC FAUCETS, FLUSH VALVES AND TRAP PRIMERS. PROVIDE ALL FINAL LINE AND LOW VOLTAGE WIRING
- 3 CIRCUIT THROUGH SITE LIGHTING CONTROLLER







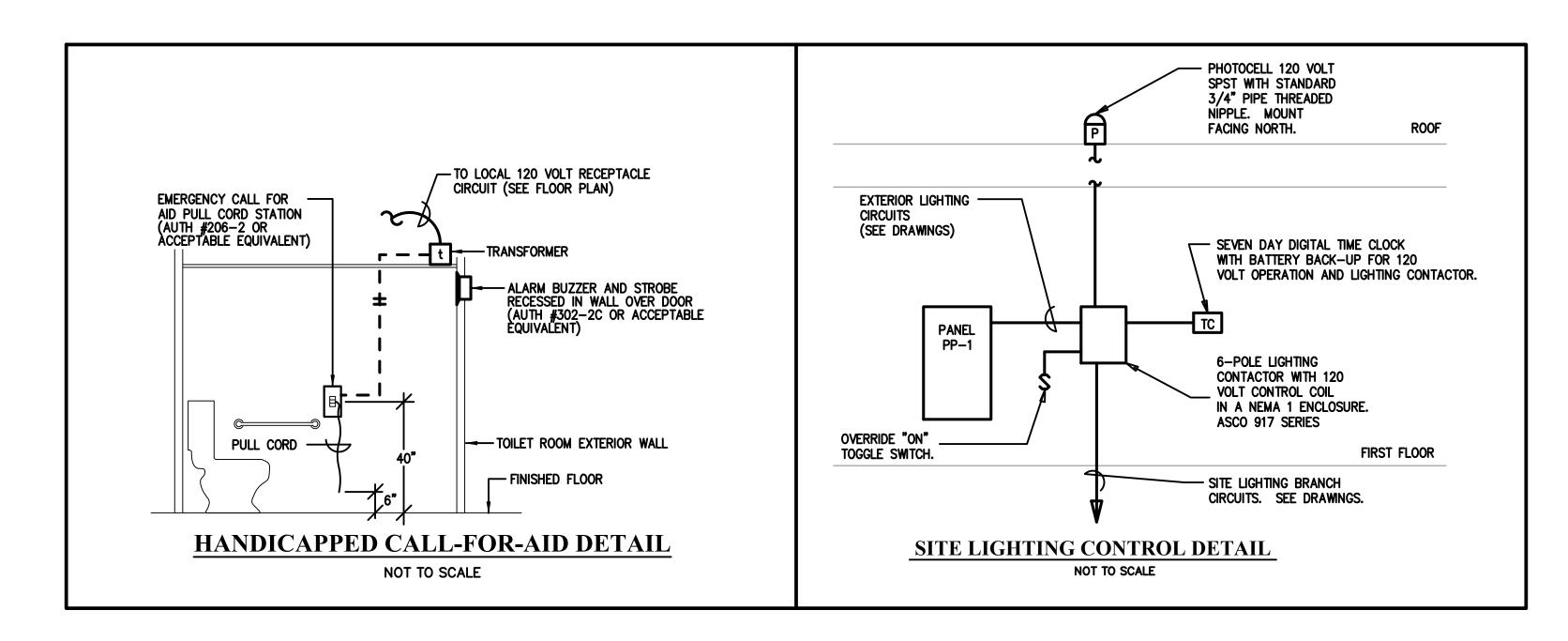
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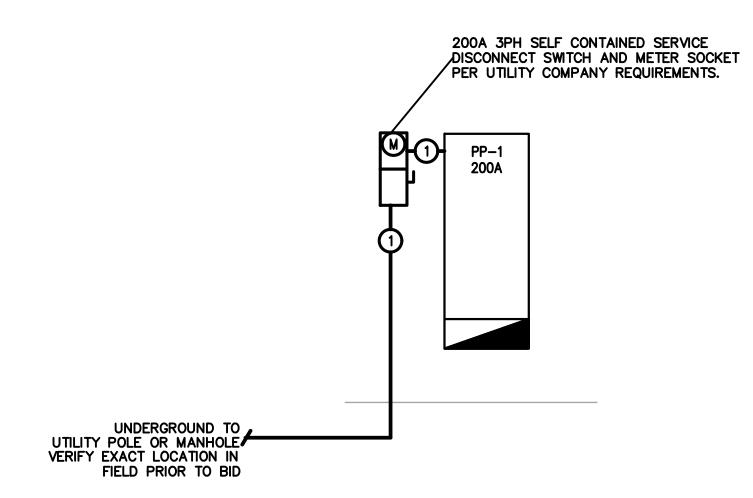
1/4"= 1' - 0"

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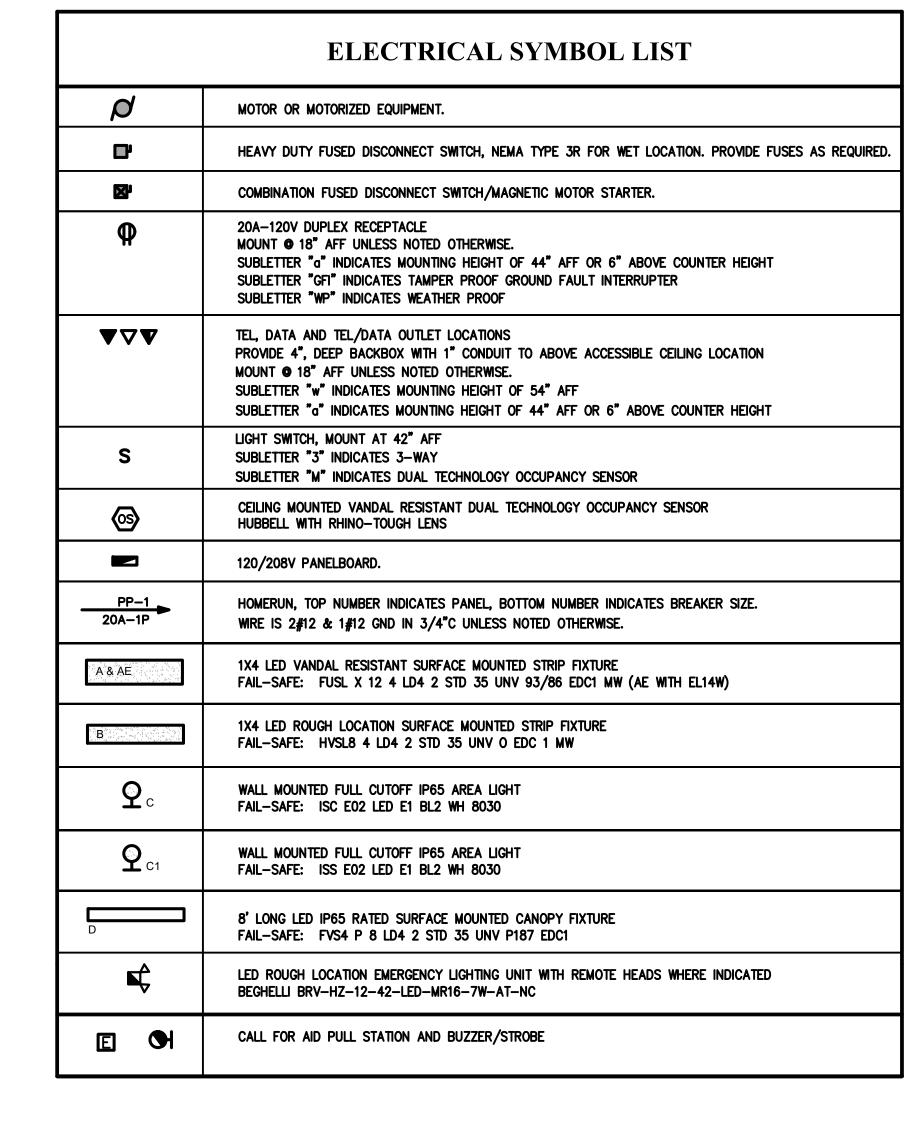


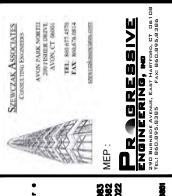


POWER RISER DIAGRAM

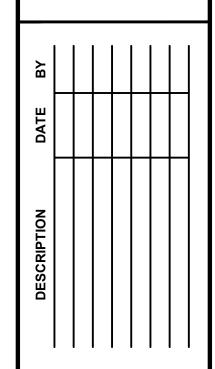
		FEEDER SCHEDULE
FEEDER DESIGNATION	AMPACITY	FEEDER SPECIFICATION
①	200	4#4/0 IN 4"C PLUS (1) EMPTY SPARE 4" CONDUIT
2	200	4#3/0 & 1#6 GND IN 4"C

PANEL SCHEDULE										
PANEL	PANEL	MAIN	BR	ANCH DEVICE	S	BRANCH	AIC		COMMENTS	
DESIGNATION	CONFIGURATION	DEVICE	AMP	POLE	QUANTITY	CAPACITY		MOUNTING		
PP-1	120/208V, 3ø, 4W	200A MCB	30A 20A 20A 20A	2 3 2 1	1 1 7 23	42 POLES	45K	SURFACE		









STORAGE RESTROOM AND FACILITIES ELECTRICAL SYMBOLS

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ELECTRICAL SPECIFICATIONS

1.1 GENERAL:

Architect's General Conditions are a part of this Division. All work shall be done in strict accordance with the latest applicable issue of the National Electrical Code, local Codes and utility company requirements. All equipment is to be UL approved. The Contractor shall bear the cost of all fees, permits, licenses and taxes. Utility company charges for the permanent electric service shall be included in the Contractor's Bid.

Submit six (6) copies of manufacturer's drawings of electrical devices to the Owner for approval. Submit information on any other equipment to be used when requested by the Owner or Engineer.

The Contractor shall provide a guarantee covering all material and workmanship for one (1) year following the date of acceptance.

The Contractor shall examine Architectural Drawings and the Drawings and Specifications of other trades to determine the extent of his work. He shall visit the site and familiarize himself with the project and local conditions before submitting his Bid as he shall be held responsible for any assumptions made thereof. The Drawings are diagrammatic and indicate the general arrangement of systems and work included in the Contract. If so directed by the Engineer, the Contractor shall, without extra charge, make reasonable modifications in the layout to prevent conflict with those of other trades and for proper installation of work. The Contractor shall coordinate locations of equipment with trades before starting construction. Any modifications to the equipment layout required for installation are to be performed at no additional cost to the Owner.

The Contractor shall arrange his work so that any power outage does not interfere with the Owner's operation.

1.2 SCOPE OF WORK:

The Contractor shall furnish and install a complete electrical system for the new facility which includes, but is not limited to: secondary service conductors from pole mount transformer to the service entrance switch; service entrance switch; all branch panelboards including circuit breakers and feeders; all light fixtures as shown on the Drawings; lighting control contactors, switches, receptacles, motor starters, disconnect switches, conduit and branch wiring; wiring of wall heaters, exhaust fans, water heaters and other heating and plumbing related equipment; emergency lighting units; fire alarm system; conduits for telephone cabling; and all other items and equipment as shown on the Drawings or herein specified.

The electrical system shall be complete in all respects, tested, approved and ready for the beneficial use of the Owner.

1.3 WORK BY OTHERS:

Cutting and patching is specified under Division 1.

Excavation and backfill is specified under Division 2.

Access doors shall be provided where required, and are specified under Division 8.

Chases, openings and finish work is specified under the pertinent Divisions 3 through 14 sections.

Delivery of wiring diagrams for Division 15 equipment is specified under Division 15. Electrical wall heaters, ceiling exhaust fan, and water heaters shall be furnished and installed under Division 15, and wired under Division 16.

All automatic temperature control panels, thermostats, aquastats zone valves, etc., for the mechanical systems are work of Division 15. All control and power wiring and required final connections to control devices is also work of Division 15, unless otherwise noted on the Drawings.

1.4 FIELD MEASUREMENTS:

The Contractor shall verify in the field all measurements necessary for his work. Conduits, switches, receptacles, panels and light fixtures which have not already been installed may be relocated up to ten (10') feet from locations shown on the Drawing when so directed by the Engineer, at no cost to the Owner. Verify all interior lighting fixture locations and mounting heights with the Architect before installation.

1.5 WIRING METHODS:

rigid galvanized steel conduit.

Electrical Metallic Tubing (EMT) shall be used for feeders run above ground, all exposed branch circuit wiring, telephone wiring and security or fire alarm system wiring. EMT shall be used for all circuit homeruns.

Rigid galvanized steel conduit shall be used for all buried wiring and wiring in hazardous

Polyvinyl chloride (PVC) conduit may be used for underground power and telephone utility service wiring except as specifically otherwise noted on the Drawings. All elbows shall be

Type MC Metal—Clad cable may be used for concealed branch wiring only to light fixtures, receptacles and switches. The MC cable shall be constructed of galvanized steel armor outer covering with a supplemental cable tape, integral marker tape, Type THHN/THWN insulated conductors and internal copper equipment ground conductor. All cables shall be rigidly supported from the building structure at least four (4') foot on center and run in lines parallel or perpendicular to building structural members. No cable shall rest on the ceiling structure. Type MC cable shall be as manufactured by AFC or acceptable equivalent. Type AC armored cable shall not be permitted on the job.

Flexible Metallic Conduit (FMC) or liquidtight flexible metallic conduit (LFMC) shall be used for connections to vibrating equipment.

All wiring shall be run concealed where possible.

Wire #10 and smaller shall be solid conductor with THW, THWN or THHN insulation as required. Size #8 and larger shall be stranded conductor with Type THW insulation, unless otherwise indicated. Minimum size wire for light and power circuits shall be #12. All conductors shall be soft—annealed copper. The Contractor shall include a green ground conductor for all circuits; the use of the conduit system or cable covering as the sole means of grounding will not be permitted.

All conduits and wiring shall be run inside walls where possible. All exposed conduits shall be run neatly in lines parallel or perpendicular to building walls. All splices shall be made with Scotchlok spring connectors or acceptable equivalent. Entire wiring system shall be grounded as mentioned above. Connections to lighting fixtures and mechanical equipment shall be in flexible metallic tubing.

1.6 PANELBOARDS:

All panelboards shall be 208/120 Volt, 3—Phase, 4—Wire Square D Type "NQOD" or I—Line series panelboards or acceptable equivalent by General Electric or Westinghouse. Panelboards shall be furnished with main lugs or main circuit breaker, and bolt—on type branch breakers as noted on the panelboard schedule, catch locks, ground bus, circuit index card holder and hinged door—in—door cover. Panelboard short circuit rating shall be noted on the Drawings.

1.7 DISCONNECT SWITCHE

An unfused disconnect switch shall be furnished and installed for all equipment. A fused disconnect switch shall be furnished and installed for equipment located ahead of all magnetic motor starters.

Safety switches shall be heavy—duty Type in NEMA enclosures suitable for the environment in which they shall be installed. Switches shall be rated for 600 VAC as manufactured by General Electric, Square D or Westinghouse and equivalent to the following General Electric types:

Fused disconnect 2— and 3—pole — Type TH Non—fused disconnect switches — Type THN

Fused or non-fused, rain-tight (WP) disconnect switches in NEMA 3R enclosures — Type TH and/or Type THN

Motors requiring disconnecting means remote from the Controller shall have a unfused mounted switch as close as possible to the motor.

1.8 FUSES

All fuses shall be UL listed, non-renewable type as manufactured by Bussman or acceptable equivalent. Fuses rated at 1/10 Ampere and up to 600 Amperes shall be equivalent to Bussman Type LPN-RK (250 Volt) UL Class RK1, low peak, dual-element, time delay fuses. Fuses shall have separate short circuit and overload elements and have an interrupting rating of 200,000 Amperes.

All fuses shall be installed so that the size is readily visible.

The Contractor shall furnish to the Owner six (6) spare fuses for each size of fuse.

1.9 POWER, MOTOR AND EQUIPMENT WIRING:

The Contractor shall furnish and install all wiring for all motors and equipment which will be furnished and set in place by work of other sections on this project.

Conduit connections to motor frames shall have minimum of 18 inches of flexible steel sealtite conduit to reduce vibrations and noise being transferred to other parts of the buildings.

1.10 SWITCHES, RECEPTACLES AND ACCESSORIES:

Wall switches shall be mounted 48 inches to the top above finished floor, opposite hinged side of door, unless otherwise indicated. Where there is more than one (1) switch in one (1) location, switches shall be ganged under one (1) cover. Duplex receptacles shall be mounted 18" AFF unless otherwise indicated. All wall switches and receptacles shall be flush—mounted, where applicable, and furnished with stainless steel cover plates or other type plate as requested by Owner.

Outlet and switch boxes shall be zinc—coated steel. Use plaster covers for boxes installed in sheet rock walls. Use box extensions as necessary.

Switches and receptacles shall be as manufactured by Arrow Hart, Leviton, Pass and Seymour or Hubbell and equivalent to the following Specification grades:

Single—pole switches shall be Hubbell #1221 2—pole switches shall be Hubbell #1222

3—way switches shall be Hubbell #1223

Duplex grounding type receptacles shall be 20 Ampere Hubbell #5362

Isolated ground type receptacles shall be 20 Ampere Hubbell #G5362.

Weatherproof outlet shall be Hubbell #GF-5362, mounted in a Crouse-Hinds "FS" backbox complete with "WLRD" coverplate or acceptable equivalent.

Ground fault type receptacles shall be Hubbell #GF-5362 feed-through receptacles.

1.11 WALL PLATES:

All wall plates for switches and receptacles located where wiring is concealed shall have a stainless steel finish and be equivalent to Mulberry Metal #97000 Series. Plates installed on exposed conduit boxes shall be galvanized and have rounded edges. Ganged switches shall be provided with one—piece gang plates.

1.12 OUTLET AND JUNCTION BOXES:

Outlet boxes for light fixtures in concrete walls or slabs shall be 4—inch octagonal mud boxes not less than 2—1/2—inches deep. Include fixture studs where required.

Switch and receptacle outlet boxes in masonry walls and partitions where wiring is concealed shall be standard 4-inches square, 1-1/2 inches-deep, galvanized, with extension cover for the particular device they will receive. Use plaster extensions not less than 1/2-inch deep for boxes installed in plastered walls or cast in concrete. Use 1-1/2-inch deep square corner tile wall extension for boxes installed in tile, exposed brick or exposed block masonry walls.

All boxes shall be securely fastened to the building structure. Suitable means shall be provided to support the outlet box to take the weight of the fixture. Recessed outlet boxes or their extension covers shall be set flush with face of finished wall, but in no case set greater then 1/4 inch behind finished face of wall. Receptacle boxes shall be approximately 18 inches on center above the finished floor, unless otherwise noted. Switch outlets shall be located 48 inches above finished floor, unless otherwise noted. The Contractor shall check with the Architectural Drawings for possible interference.

Junction and outlet boxes where exposed to the weather and wet locations shall be threaded hub type and provided with watertight screw—on covers and gaskets. Floor outlets shall be adjustable type and waterproof where required.

1.13 LIGHTING FIXTURES:

The Contractor shall furnish and install all lighting equipment as shown and specified complete with lamps ready for operation.

Provide all required supports, hangers and seismic bracing for fixtures, including recessed

All lamps shall be as manufactured by General Electric or Sylvania. All lamps for new and existing relocated fixtures shall be new and be furnished and installed by the Contractor.

All ballasts for fluorescent fixtures shall be high power factor, CBM/ETL certified with an "A" sound rating, where possible. All ballasts shall be electronic Advance Mark V energy saving type or acceptable equivalent by General Electric or Universal, unless otherwise specified in the Lighting Fixture Schedule.

Existing fixtures in the space shall be reused as noted on the Drawings. The fixtures shall be disconnected, removed and stored by the Contractor and then be cleaned prior to reinstalling the fixtures. The Contractor shall document, in writing, any damage noted on the fixtures prior to removing them and submit a copy to the General Contractor and Engineer. The Contractor shall be held responsible for any subsequent damage.

1.14 FIRE-STOPS AND SEALS:

All penetrations through fire rated walls, ceilings or floors in which cables or conduits pass shall be sealed with a UL approved fire—stop fitting classified for an hourly rating equivalent to the rating of the wall, ceiling or floor.

Through wall and floor seals shall be used to provide a positive means of sealing pipes or conduits which pass through concrete foundation of a structure below grade or below ground water level.

All openings shall be sealed as required by the NEC.

1.15 TELEPHONE/DATA SYSTEM:

The Contractor shall furnish and install all preparation work for the telephone system, including service entrance conduit with pull wire, J—boxes, plaster rings and 1" conduits stubbed up to above finished hung ceiling with pull wires and modular wall jacks. The installation of telephone cables and equipment shall be by the Owner and/or the telephone

1.16 WARNING TAP

Color—coded warning ribbon composed of a solid, aluminum foil core encased in a protective plastic jacket shall be placed above all buried electrical and communication lines. All tapes shall be highly visible, color—coded and imprinted with the appropriate warning legend. The tape width shall vary from a two (2") inch wide tape buried ten (10") inches below the surface to an 18—inch wide tape buried 50 inches below the surface.

Standard legends shall be marked continuously along the entire length of the tape. A red safety tape imprinted with "CAUTION — ELECTRIC LINE BURIED BELOW" shall be used for all buried primary and secondary electric services. Orange safety tapes shall be imprinted with "CAUTION — TELEPHONE LINE BURIED BELOW" or "CAUTION — TELEVISION CABLE BURIED BELOW".

Warning tapes shall be as manufactured by Allen Systems, Houston, Texas or acceptable equivalent.

1.17 SECONDARY SERVICE:

The secondary service conductors shall be run underground from the pole to the main panelboard in either RGS/PVC conduits. All conduits shall be buried to a minimum depth of three (3') feet or as required by the Utility Company.

1.18 SYSTEMS OPERATIONAL MANUALS:

Upon completion of the work and at a time designated by the Engineer, the Contractor shall furnish instruction manuals, data, warranties, etc., and instruct the Owner or his representative as to the arrangement, location and operation of all equipment and systems furnished and installed under the Contract.

Contractor shall provide as—built documents to the Owner at the completion of the

1.19 LOAD BALANCE:

The Contractor shall balance the loads on the three phases in the electrical panelboards insofar as physically possible, and report each panel loading to the Engineer.

1.20 SHOP DRAWINGS:

The following list of electrical items must be submitted by this Contractor for approval:

Service entrance equipment

Electrical distribution panelboards and circuit breakers

Safety switches

Light switches, receptacles and plates (submit samples as requested)

Contactors and relays

All lighting fixtures (submit samples as requested)

Conduit and wire with fittings and connectors

Exit signs (submit samples as requested)
Emergency lighting fixtures

Fuses

Motor starters and disconnects

All ballasts Fire alarm systems

1.25 GENERAL WIRING TESTS: At the time of find inspection

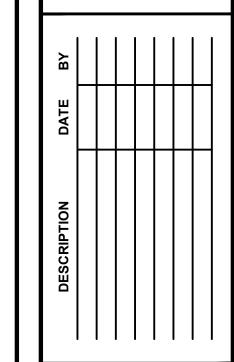
At the time of final inspection and test, all wiring and connections throughout the expansion areas must be completed, devices and equipment properly operating, all lighting fixtures installed, and power and lighting circuit and control wiring clearly identified with approved tags ready for acceptance. Each system shall test free from short circuits and from grounds.

Insulation resistance for low voltage cables and wiring shall be performed at 1000 Volt D.C. for one—half (1/2) minute. When insulation resistance must be determined, all switchboards, panelboards, fuse holders, switches, and overcurrent devices shall be in place, and the insulation resistance when tested at 500 Volts D.C. shall be no less than 100,000 ohms for #14 and #12 wire and 250,000 ohms for #10 wire and larger.



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ELECTRICAL SPECIFICATIONS
RESTROOM AND FACILITIES STORAGE BUILDING

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WITHIN DOUBLE PARTITIONS OR HUNG CEILINGS.

PART 1 - GENERAL PROVISIONS FOR ELECTRICAL WORK

REFERENCES

THIS SECTION COVERS THE GENERAL REQUIREMENTS FOR ELECTRICAL WORK; EXAMINE ALL CONTRACT DRAWINGS AND ALL OTHER SECTIONS OF THE SPECIFICATIONS FOR ADDITIONAL WORK RELATED TO THE WORK

DEFINITIONS

'PROVIDE' - TO FURNISH. INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION OF PARTICULAR WORK REFERRED TO UNLESS, SPECIFICALLY OTHERWISE NOTED.

'INSTALL' - TO ERECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.

'WORK' - LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION.

'WIRING' - RACEWAY, FITTINGS, WIRE, BOXES, MOUNTING HARDWARE AND RELATED ITEMS.

'CONCEALED' - EMBEDDED IN MASONRY OR OTHER CONSTRUCTION CAVITY, INSTALLED IN FURRED SPACES,

'SIMILAR' OR 'EQUAL' - EQUAL MATERIALS, WEIGHT, SIZE, DESIGN AND EFFICIENCY OF SPECIFIED PRODUCT.

'CONTRACTOR' - THE ELECTRICAL CONTRACTOR. 'NOTED' - AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS.

THIS WORK SHALL CONSIST OF THE FURNISHINGS OF ALL LABOR. MATERIALS AND SERVICES REQUIRED COMPLETE READY FOR CORRECT OPERATION FOR ALL FLECTRICAL WORK CALL FOR BY THE ACCOMPANYING DRAWINGS AND SPECIFICATIONS. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, STATE AND LOCAL CODES

THE DATA INDICATED IN THESE DRAWINGS AND SPECIFICATIONS ARE AS EXACT AS COLIL DIRECTOR BUT THEIR ABSOLUTE ACCURACY IS NOT GUARANTEED. DO NOT SCALE DRAWINGS, EXACT LOCATIONS, DISTANCES. LEVELS AND OTHER CONDITIONS WILL BE GOVERNED BY THE BUILDING. USE THE DRAWINGS AND SPECIFICATIONS FOR GUIDANCE AND SECURE THE ENGINEER'S APPROVAL OF CHANGES IN LOCATIONS. CIRCUITS, WHERE SHOWN ON AN ELECTRICAL DRAWINGS, ARE SO INDICATED PRIMARILY FOR THE PURPOSE OF INDICATING THE GENERAL CIRCUIT PLAN AND DO NOT NECESSARILY INDICATE THE EXACT LOCATION OF ROUTING OF THE RACEWAYS JNLESS SPECIFICALLY INDICATED. CIRCUITS SHALL BE RUN IN SUITABLE CONDITIONS CONSIDERING STRUCTURAL FEATURES, OTHER TRADES, CONSTRUCTION METHODS AND GOOD INSTALLATION PRACTICE.

BEFORE SUBMITTING A BID, THE CONTRACTOR SHALL VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH ALL EXISTING CONDITIONS UNDER WHICH THE WORK AND WORK OF OTHER TRADES WILL BE INSTALLED. THIS CONTRACT INCLUDES ALL NECESSARY OFFSETS, TRANSITIONS, MODIFICATIONS AND RELOCATION REQUIRED TO INSTALL ALL NEW EQUIPMENT IN NEW OR EXISTING SPACES. CONTRACTOR SHALL INCLUDE ANY MODIFICATIONS REQUIRED IN EXISTING ELECTRICAL EQUIPMENT FOR INSTALLATION OF NEW ELECTRICAL EQUIPMENT AND NEW EQUIPMENT OF OTHER TRADES. (LIGHTING FIXTURES, DEVICES, CONDUIT WIRING, ETC.) ALL NEW AND EXISTING EQUIPMENT AND SYSTEMS SHALL BE FULLY OPERATIONAL UNDER THIS CONTRACT BEFORE THE PROJECT IS CONSIDERED COMPLETE. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS THAT ARE MADE, ANY OMISSIONS OR ERRORS MADE AS A RESULT OF FAILURE TO VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS AND THE CONTRACT DOCUMENTS OF ALL TRADES.

CODES, REGULATIONS AND STANDARDS

ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING APPROVED CODES:

STATE DEMOLITION CODE STATE BUILDING CODE

STATE FIRE SAFETY CODE LOCAL BUILDING CODE

IBC - INTERNATIONAL BUILDING CODE NFPA - NATIONAL FIRE PROTECTION CODE

ANSI - AMERICAN NATIONAL STANDARDS INSTITUTE ASTM - AMERICAN SOCIETY FOR TESTING AND MATERIALS

OSHA - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION U.L. - UNDERWRITERS LABORATORIES

NFPA 101 - LIFE SAFETY CODE NFPA 99 - HEALTH FACILITIES CODE

NFPA 70 - NATIONAL ELECTRICAL CODE NFPA 72 - NATIONAL FIRE ALARM CODE

EPA - ENVIRONMENTAL PROTECTION AGENCY IEEE - INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS

NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION ECC - INTERNATIONAL ENERGY CONSERVATION COD ICC/ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

PERMITS, FEES AND INSPECTIONS

THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, ORTAIN ALL PERMITS, PAY FOR ALL GOVERNMENT STATE SALES TAXES AND APPLICABLE FEES. THE CONTRACTOR SHALL FILE ALL DRAWINGS. COMPLETE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS FROM THE PROPER AUTHORITY OR AGENCY HAVING JURISDICTION, OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION COVERING WORK, THE CONTRACTOR SHALL SEE THAT ALL REQUIRED INSPECTIONS AND TESTS ARE MADE AND SHALL COOPERATE TO MAKE THESE TESTS AS THOROUGH AND AS READILY MADE AS POSSIBLE.

MATERIALS AND WORKMANSHIP

ALL MATERIALS AND APPARATUS REQUIRED FOR THE WORK, EXCEPT AS OTHERWISE SPECIFIED, SHALL BE NEW AND OF FIRST-CLASS QUALITY. IT SHALL BE FURNISHED, DELIVERED, ERECTED, CONNECTED, FINISHED IN EVERY DETAIL AND SO SELECTED AND ARRANGED AS TO FIT PROPERLY INTO THE BUILDING SPACES. WHERE NO SPECIFIC KIND OR QUALITY MATERIAL IS GIVEN, A FIRST-CLASS STANDARD ARTICLE AS ACCEPTED BY THE ENGINEER SHALL BE FURNISHED.

ALL EQUIPMENT AND MATERIALS SHALL BE SPECIFICATION GRADE AND BEAR THE UNDERWRITER'S LABEL. NO SUBSTITUTE OR ALTERNATE EQUIPMENT. MATERIAL. ETC. WILL BE CONSIDERED FOR THIS PROJECT.

ALL WORK SHALL BE OF A QUALITY CONSISTENT WITH GOOD TRADE PRACTICE AND SHALL BE INSTALLED IN A NEAT WORKMANLIKE MANNER THE ENGINEER/OWNER RESERVES THE RIGHT TO REJECT ANY WORK WHICH IN HIS OPINION, HAS BEEN INSTALLED IN A SUBSTANDARD, DANGEROUS OR IN A UNSERVICEABLE MANNER, THE CONTRACTOR SHALL REPLACE REJECTED WORK IN A SATISFACTORY MANNER AT NO EXTRA COST TO THE

GUARANTEES

ALL WORKMANSHIP AND MATERIALS SHALL BE FULLY GUARANTEED FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF THE ENTIRE INSTALLATION COVERED BY THIS CONTRACT, SHOULD ANY DEFECTS OCCUR DURING THE GUARANTEED PERIOD, THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ALL DEFECTIVE EQUIPMENT, MATERIAL AND/OR WORK AT NO EXTRA CHARGE TO THE OWNER

RECORD DRAWINGS

MAINTAIN, AT THE JOB SITE, A SET OF ELECTRICAL DRAWINGS INDICATING ALL CHANGES IN LOCATION OF THE EQUIPMENT, PANELS, DEVICES, ETC. FROM THE ORIGINAL LAYOUT, CLEARLY MARK IN RED ALL CHANGES ON THE DRAWINGS, AT THE COMPLETION OF THE PROJECT THE CONTRACTOR SHALL TURN OVER THE RECORD DRAWINGS.

ALL WORK SHALL BE CARRIED OUT IN CONJUNCTION WITH OTHER TRADES AND FULL COOPERATION SHALL BE GIVEN IN ORDER THAT ALL WORK MAY PROCEED WITH A MINIMUM OF DELAY AND INTERFERENCE.

SUBMIT ELECTRONIC COPIES FOR REVIEW DETAILED SHOP DRAWINGS OF ALL FOLIPMENT AND MATERIAL SPECIFIED. THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMISSION TO THE ENGINEER FOR REVIEW. NO MATERIAL OR EQUIPMENT MAY BE DELIVERED TO THE JOB SITE OR INSTALLED UNTIL CONTRACTOR HAS IN THEIR POSSESSION, APPROVED SHOP DRAWINGS FOR THE PARTICULAR MATERIAL OR EQUIPMENT. SHOP DRAWINGS SHALL BE SPECIFIC WITH ITEMS SUBMITTED FOR APPROVAL CLEARLY IDENTIFIED.

THE FOLLOWING IS A LIST OF ELECTRICAL ITEMS THAT MUST BE SUBMITTED FOR REVIEW:

- a. CONDUIT, WIRE AND CABLE DEVICES (E.G. RECEPTACLES
- SERVICE ENCLOSURE

OPERATING INSTRUCTIONS

THE CONTRACTOR SHALL FURNISH TO THE OWNER ELECTRONIC SETS OF TYPEWRITTEN OR BLUEPRINTED INSTRUCTIONS FOR OPERATING AND MAINTAINING ALL SYSTEMS AND EQUIPMENT INCLUDED IN THIS DIVISION. MANUFACTURER'S ADVERTISING LITERATURE OR CATALOGS WILL NOT BE ACCEPTABLE FOR OPERATING AND

THE CONTRACTOR. IN THE ABOVE-MENTIONED INSTRUCTIONS, SHALL INCLUDE THE MAINTENANCE SCHEDULE FOR THE PRINCIPAL ITEMS OF EQUIPMENT FURNISHED UNDER THIS DIVISION

AN AUTHORIZED MANUFACTURER'S REPRESENTATIVE SHALL ATTEST IN WRITING THAT HIS FOUIPMENT HAS BEEN PROPERLY INSTALLED PRIOR TO STARTUP. THESE LETTERS WILL BE BOUND INTO OPERATING AND MAINTENANCE

EQUIPMENT PROTECTION

PROPERLY AND COMPLETELY PROTECT AGAINST ALL DAMAGE, ALL APPARATUS, EQUIPMENT, ETC., INCLUDED IN THIS CONTRACT. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE TO FURNISHED APPARATUS, EQUIPMENT, ETC., UNTIL FINAL ACCEPTANCE.

THE CONTRACTOR SHALL TAKE WHATEVER MEANS NECESSARY AND/OR REQUIRED TO PROTECT OWNER'S PROPERTY WITHIN THE WORKING AREAS FROM DUST, DEBRIS AND OTHER MATTER GENERATED BY THE WORK. NO WORK SHALL COMMENCE IN AREAS WHERE PROTECTION IS REQUIRED UNTIL APPROVAL HAS BEEN GIVEN TO THE CONTRACTOR BY THE OWNER.

MANUFACTURER'S INSTRUCTION

INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS OR REQUIREMENTS FOR PROPER OPERATION AND MAINTENANCE.

THOROUGHLY CLEAN ALL ELECTRICAL EQUIPMENT DEVICES AND ENCLOSURES UPON COMPLETION OF ALL WORK. REPAINT ANY EQUIPMENT WHOSE FINISH IS DAMAGED OR RUSTED. MATCH MANUFACTURER'S ORIGINAL FINISH.

ALL PENETRATIONS SHALL BE SEALED WITH 3M INTUMESCENT FIRE BARRIER PENETRATION SEALANT, APPLIED PER MANUFACTURER'S AND U.L. GUIDELINES.

CUTTING, PATCHING, REPAIRING AND PAINTING

THE GENERAL CONTRACTOR SHALL PERFORM ALL CUTTING, PATCHING, REPAIRING AND PAINTING FOR ALL ELECTRICAL ITEMS AND EQUIPMENT CALLED FOR UNDER THIS CONTRACT.

FIRE STOPS AND SEALS

PENETRATIONS THROUGH FIRE-RATED WALLS, CEILING OR FLOORS IN WHICH CABLES OR CONDUITS PASS SHALL BE FILLED SOLIDLY BY U.L. APPROVED FIRE-STOP MATERIALS. CLASSIFIED FOR AN HOUR RATING EQUAL TO THE FIRE RATING OF THE WALL, CEILING OR FLOOR, PROVIDE TO 3M BRAND FIRE BARRIER CP25WB CAULK OR APPROVED EQUIVALENT

SEALING BUSHINGS SHALL BE USED ON CONDUIT AND CABLE ENDS TO EFFECTIVELY PREVENT THE INTRUSION OF WATER, A DAMP OR CORROSIVE ATMOSPHERE, DRAFT OR DUST.

THE CONTRACTOR SHALL FURNISH AND INSTALL ACCESS PANELS AND DOORS AS REQUIRED FOR ACCESS TO INACCESSIBLE PULLBOXES, JUNCTION BOXES AND OTHER SPECIALTIES

THE CONTRACTOR SHALL COORDINATE THE LOCATIONS OF ACCESS PANELS AND DOORS WITH THE GENERAL CONTRACTOR AND OTHER TRADES. FINAL LOCATIONS SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT.

PART 2 - PRODUCTS

DESCRIPTION ALL MATERIALS AND EQUIPMENT PROVIDED UNDER THIS SECTION SHALL BE NEW, FIRST GRADE, BEST OF THEIR RESPECTIVE KINDS AND IN NO WAY SHALL THEY BE LESS THAN THE QUALITY AND INTENT SET FOURTH UNDER THIS SECTION THEY SHALL MEET THE REQUIREMENTS OF ALL STANDARDS SET UP TO GOVERN THE MANUFACTURER OF ELECTRICAL MATERIALS AND COMPLY WITH ALL APPLICABLE CODES AND STANDARDS.

CONDUCTORS SHALL BE U.L. LISTED, 600 VOLTS, 90 DEG. C., SINGLE CONDUCTOR TYPE THWN/THHN. 98% CONDUCTIVITY, ANNEALED UNCOATED COPPER WITH PVC INSULATION COVERED WITH NYLON SHEATH JACKE⁻ TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF UNDERWRITERS LABORATORIES STANDARD 83. WIRE SHALL BE IDENTIFIED BY SURFACE MARKING INDICATING MANUFACTURER'S IDENTIFICATION CONDUCTOR SIZE AND METAL, VOLTAGE RATING, U.L. SYMBOL AND TYPE DESIGNATION. CONDUCTORS SHALL BE STRANDED. MINIMUM SIZE SHALL BE #12 AWG UNLESS OTHERWISE INDICATED. MANUFACTURED BY ROME CABLE, TRIANGLE WIRE & CABLE, GENERAL CABLE OR ESSEX WIRE & CABLE.

RIGID GALVANIZED STEEL CONDUIT (RGS)

RIGID STEEL CONDUIT SHALL BE FULL WEIGHT. HEAVY WALL STEEL PIPE WITH GALVANIZED PROTECTIVE COATING. MANUFACTURED BY TRIANGLE WIRE AND CABLE, ALLIED TUBE AND CONDUIT, REPUBLIC OR STEELDUCT, CONDUIT FITTINGS SHALL BE MALLEABLE IRON, CADMIUM PLATED WITH FULL THREADED HUBS

RIGID POLYVINYL CHLORIDE CONDUIT (PVC)

RIGID POLYVINYL CHLORIDE CONDUIT SHALL BE SUNLIGHT RESISTANT, RATED OR USE WITH 90 DEGREES C. CONDUCTORS, U.L. RATED. ALL PVC CONDUIT AND FITTINGS SHALL BE SOLVENT WELDED. MANUFACTURED BY CARLON, ELECTRI-FLEX OR PLASTILINE. SCHEDULE 80 UNLESS OTHERWISE NOTED.

ELECTRICAL METALLIC TUBING SHALL BE GALVANIZED THIN WALL STEEL CONDUIT. MANUFACTURED BY TRIANGLE WIRE AND CABLE, ALLIED TUBE AND CONDUIT, REPUBLIC OR STEELDUCT. THE CONNECTORS AND COUPLINGS SHALL BE HEAVY DUTY, STEEL-ZINC PLATED, SET SCREW TYPE.

CONDUIT BODIES FOR RIGID GALVANIZED STEEL CONDUIT (RGS) SHALL BE MALLEABLE IRON-ZINC PLATED WITH TAPERED HUBS AND GASKETED ALUMINUM COVER CONDUIT BODIES FOR ELECTRICAL METALLIC TUBING (EMT) SHALL BE CAST ALUMINUM-ALUMINUM ENAMEL FINISH

WITH SET SCREW HUBS AND ALUMINUM COVER. INSULATION BUSHINGS SHALL BE HIGH IMPACT THERMOPLASTIC PHENOLIC WITH 150 DEG. C. UL TEMPERATURE

INSULATED GROUNDING BUSHINGS SHALL BE MALLEABLE IRON ZINC PLATED WITH MOLDED ON PHENOLIC INSULATION AND LAY-IN GROUNDING LUG.

CONDUIT LOCKNUTS SHALL BE HEAVY NUT STOCK STEEL-ZINC PLATED.

OFFSET NIPPLES SHALL BE MALLEABLE IRON ZINC PLATED WITH RIGID CONDUIT THREADING AND 3/4" OFFSET CONNECTORS AND COUPLINGS FOR ELECTRICAL METALLIC TUBING (EMT) SHALL BE HEAVY STEEL-ZINC PLATED WITH PRE-SET/PRE-SHAKED SET SCREWS.

CONDUIT STRAPS SHALL BE SNAP-TYPE, DOUBLE RIBBED STEEL-ZINC PLATED.

CONDUIT FITTINGS SHALL BE MANUFACTURED BY O/Z GEDNEY, CROUSE-HINDS OR APPLETON. SUPPORT FITTINGS

SUPPORT CHANNEL SHALL BE ROLL-FORMED #12 GAUGE STEEL, SOLID BASE OR BOLT HOLE BASE - HOT DIP GALVANIZED FINISH. COMPLETE WITH ANGLE FITTINGS, SPRING NUTS, CONDUIT SUPPORTS, 3/8" OR 1/2" THREADED RODS (SIZE REQUIRED FOR LOAD), ETC.

CABLE TIES SHALL BE FABRICATED OF ONE-PIECE HALLAR WITH NO METAL PARTS. MANUFACTURED BY BURNDY. T&B, PANDUIT OR BLACKBURN.

OUTLET BOXES SHALL BE GALVANIZED STEEL. FLUSH OR SURFACE MOUNTED AND OF PROPER TYPE AND SIZE AS REQUIRED FOR THE PARTICULAR APPLICATION. SIZE AND TYPE DICTATED BY THE NUMBER OF DEVICES (2 GANG MINIMUM WITH SINGLE GANG PLASTER RING FOR SINGLE DEVICE LOCATIONS). NUMBER OF CONDUCTORS AND WIRING METHOD UTILIZED. BOXES SHALL BE ADEQUATE SIZE FOR THE INSTALLATION OF CONDUCTORS WITHOUT

EXCESSIVE BENDING OR CRIMPING OF THE CONDUCTORS AND DAMAGING OF CONDUCTOR INSULATION. MANUFACTURED BY STEEL CITY OR RACO. OUTLET BOXES SHALL BE SECURED FIRMLY IN PLACE AND SET TRUE AND SQUARE. PROVIDE SUITABLE MEANS TO SUPPORT OUTLET BOX TO TAKE THE WEIGHT OF THE LIGHTING FIXTURE OR DEVICE. OUTLET BOXED OR BOX EXTENSION RINGS SHALL BE SET FLUSH TO THE FINISHED WALL OR CEILING. BOXES MUST BE ATTACHED THAT THEY WILL NOT 'ROCK', 'SHIFT' OR 'MOVE IN AND OUT' WHEN DEVICES ARE USED. IN NO CASE SHALL BOXES BE

PANELBOARDS SHALL BE THE COMBINATION THERMAL/MAGNETIC CIRCUIT BREAKER TYPE. 3 PHASE. 4 WIRE WITH THE NUMBER OF BRANCH CIRCUITS AS INDICATED ON THE SCHEDULES. PROVIDE WITH FULLY RATED HARD-DRAWN COPPER, 98 PERCENT CONDUCTIVE PHASE AND GROUND BUS, LUGS SIZED TO ACCOMMODATE WIRE QUALITY AND SIZES. PANELS SHALL BE U.L. LISTED. DOOR-IN-DOOR DESIGN. BOXES SHALL BE CORROSION RESISTANT, ZINC FINISH GALVANIZED. FRONTS SHALL BE REINFORCED STEEL POWDER FINISH PAINTED LIGHT GRAY (ANSI-61) AND SHALL BE EQUIPPED WITH CONCEALED HINGES AND CONCEALED TRIM ADJUSTING SCREWS. DIRECTORY CARD HOLDERS SHALL BE CORROSION-PROOF VALOX WITH RETRACTABLE LATCH, KEYED ALIKE. PHASE BUS SHALL BE SEQUENCED AND FULLY INSULATED RATINGS SHALL BE DISPLAYED ON THE DEAD FRONT SHIELD AND TOTALLY VISIBLE WITH THE DOOR OPEN. REFER TO SCHEDULES FOR OTHER REQUIREMENTS.

CIRCUIT BREAKERS

BRANCH CIRCUIT BREAKERS SHALL BE QUICK-MAKE, QUICK-BREAK, BOLT-IN THERMALMAGNETIC TYPE WITH VISIBLE CURRENT RATING AND TRIP POSITION. MANUFACTURED BY GENERAL ELECTRIC, SIEMENS, SQUARE 'D' OR CUTLER HAMMER REFER TO SCHEDULES FOR AIC RATING

ALL MULTI-POLE BREAKERS SHALL BE EQUIPPED WITH HANDLE TIES FOR MULTI-POLE USE. PHASE SEQUENCE AND BALANCING

INSTALLED BACK-TO-BACK IN A COMMON WALL DIVIDING TWO SPACES.

MAINTAIN CORRECT PHASE SEQUENCE OF ALL FEEDERS AND CIRCUITS WITH PHASE IDENTIFICATION THROUGHOUT THE ENTIRE SYSTEM. BALANCING ALL FEEDERS AND CIRCUITS TO WITHIN 10 PERCENT

JUNCTION BOXES, PULLBOXES AND HANDHOLES

JUNCTION BOXES, PULLBOXES AND WIREWAYS SHALL BE OF PROPER TYPE AND SIZES AS REQUIRED. CODE GAUGE, GALVANIZED STEEL WITH KNOCKOUTS AND FLANGES TO RECEIVE THE COVERS. COVERS SHALL BE FLAT, OF THE SAME MATERIAL AS THE BOX AND FASTENED TO THE BOX WITH MACHINE SCREWS. MANUFACTURED BY HOFFMAN, SQUARE 'D', OR LEE PRODUCTS

UNDERGROUND HANDHOLES SHALL BE POLYMER CONCRETE, OPEN BOTTOM TYPE, SIZE AS REQUIRED TO ACCOMMODATE CONDUIT QUANTITIES AND ENTRY POINTS. QUAZITE OR EQUAL

ALL DEVICES SHALL BE COMMERCIAL SPECIFICATION GRADE, U.L. LISTED, SELF-GROUNDING, GROUND LUG, SIDE/BACK WIRED, 20A RATED. COLOR SHALL BE SELECTED BY ARCHITECT OR OWNER UNLESS OTHERWISE INDICATED, MANUFACTURED BY HUBBELL, LEVITON, OR PASS & SEYMOUR.

RECEPTACLES LOCATED IN WET LOCATIONS SHALL BE INSTALLED WITH AN OUTLET ENCLOSURE CLEARLY MARKED 'SUITABLE FOR WET LOCATIONS WHILE IN USE'. THERE MUST BE A GASKET BETWEEN THE COVER AND THE BASE TO ASSURE A PROPER SEAL. THE ENCLOSURE MUST EMPLOY STAINLESS STEEL MOUNTING HARDWARE AND BE CONSTRUCTED OF IMPACT RESISTANT POLYCARBONATE. THE OUTLET ENCLOSURE SHALL BE U.L. LISTED. MANUFACTURED BY TAYMAC, CARLON, OR APPROVED EQUAL.

LIGHTING FIXTURES

FURNISH AND INSTALL ALL LIGHTING FIXTURES AS SPECIFIED ON THE SCHEDULES. COMPLETE WITH ALL ACCESSORIES, LOUVERS, LAMPS AND MOUNTING HARDWARE, THE FIXTURES SHOWN ARE MARKED AS TYPE A. B.

PROVIDE FIXTURES LISTED IN LIGHTING FIXTURE SCHEDULE - NO SUBSTITUTIONS WILL BE ACCEPTED. CLEAN AND REMOVE ALL PAINT, STICKERS, DIRT, SMUDGES AND FINGERPRINTS FROM LIGHTING FIXTURES AFTER

LIGHTING CONTROLS SYSTEM

PROVIDE LIGHTING CONTROL SYSTEM INDICATED ON THE DRAWINGS - NO SUBSTITUTIONS WILL BE ACCEPTED. PROVIDE ALL COMPONENTS AS REQUIRED FOR A FULLY FUNCTIONAL SYSTEM, INCLUDING CONTROL DEVICES, WIRING, SWITCHES, LINE VOLTAGE CONNECTIONS, 0-10V CONTROL WIRING AND OTHER SUCH ITEMS

PART 3 - EXECUTION

ALL WORK, MATERIALS AND MANNER OF INSTALLING SAME SHALL BE IN STRICT ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRIC CODE.

ALL CONDUIT AND WIRING SHALL BE INSTALLED CONCEALED UNLESS OTHERWISE NOTED.

WIRING IN UNFINISHED AREAS INSIDE BUILDINGS SHALL BE INSTALLED EXPOSED USING EMT OR RGS CONDUIT. **RACEWAYS**

RACEWAYS, ENCLOSURES AND BOXES SHALL BE MECHANICALLY JOINED TO FORM A CONTINUOUS ELECTRICAL

THE CONTRACTOR SHALL PROVIDE APPROVED TYPE PULL BOXES AS REQUIRED.

MINIMUM SIZE CONDUIT SHALL BE 3/4" UNLESS OTHERWISE NOTED.

FURNISH NYLON PULL STRINGS IN ALL EMPTY CONDUIT RUNS.

ELECTRICAL METALLIC TUBING (EMT) SHALL BE USED FOR CONCEALED AND EXPOSED WIRING IN DRY LOCATIONS

FURNISH LOCKNUTS AND BUSHINGS FOR ALL CONDUIT TERMINATIONS IN ALL OUTLET BOXES, PANELS, PULL

- BRANCH CIRCUITS & FEEDERS INSIDE BUILDINGS
- RIGID GALVANIZED STEEL CONDUIT (RGS) SHALL BE USED FOR WIRING IN THE FOLLOWING LOCATIONS:

WHICH FURNISHED OR PROVIDED UNDER OTHER DIVISIONS OR BY THE OWNER

- 2. EXPOSED TO MOISTURE, INCLUDING ALL EXTERIOR EXPOSED APPLICATIONS 3. UNDERGROUND TO ABOVE GROUND TRANSITIONS / SWEEPS
- RIGID POLYVINYL CHI ORIDE (PVC) SHALL BE USED FOR WIRING IN THE FOLLOWING LOCATIONS
- 1. BRANCH CIRCUITS AND FEEDERS UNDER PARKING LOTS AND AREAS SUBJECT TO VEHICULAR TRAVEL (SCHEDULE 80) 2. BRANCH CIRCUITS AND FEEDERS UNDER WALKWAYS AND GRASS AREAS (SCHEDULE 40)
- B. SERVICE ENTRANCE CONDUITS (SCHEDULE 40) UTILITY TRANSFORMER PRIMARY CONDUITS (SCHEDULE 40, CONCRETE ENCASED) ALL INTERIOR CONDUIT SHALL BE INSTALLED IN PARALLEL AND PERPENDICULAR TO THE BUILDING LINES.

ALL INTERIOR CONDUIT SHALL BE SUPPORTED USING CADMIUM PLATED CONDUIT STRAPS AND HANGERS

PROVIDE WIRING TO ALL OUTLETS, EQUIPMENT, APPARATUS AND OTHER SPECIALTIES UNDER THIS DIVISION THAT

THE TERM 'WIRING' SHALL BE CONSIDERED TO BE COMPRISED OF THE CONDUIT, CONDUCTORS, CONNECTIONS,

ALL WIRING ON DRAWINGS IS SIZED FOR TYPE THWN/THHN COPPER CONDUCTORS. MINIMUM SIZE WIRE SHALL BE #12 UNLESS OTHERWISE INDICATED. ALL WIRING SHALL BE COLOR CODED EXERCISE CAUTION IN PULLING CONDUCTORS INTO RACEWAYS SO AS NOT TO DAMAGE THE INSULATION. CABLE

PULLING LUBRICANT SHALL BE USED TO ASSIST IN PULLING CONDUCTOR WITHIN PANELBOARDS, JUNCTION BOXES, TROUGHS AND OTHER EQUIPMENT WHERE CONCENTRATIONS OF CONDUCTORS ARE ENCLOSED, SHALL BE NEATLY ARRANGED AND TIED WITH CABLE TIES.

POSSIBLE, EQUALLY BETWEEN EACH LINE AND NEUTRAL. 10% WILL BE CONSIDERED A REASONABLE AND ALLOWABLE UNBALANCE. COMMON NEUTRAL FOR MULTIPLE BRANCH CIRCUITS IS NOT ACCEPTABLE. PROVIDE SEPARATE NEUTRAL FOR

CIRCUITS SHALL BE SO CONNECTED TO THE PANELBOARDS THAT THE TOTAL LOAD IS DISTRIBUTED AS NEATLY AS

WIRING IN OUTLET BOXES, JUNCTION BOXES, CABINET PANELBOARDS OR EQUIPMENT SHALL HAVE A MINIMUM OF EIGHT (8") INCHES LENGTH LEADS FOR CONNECTING WIRING DEVICES TO MAKE UP CIRCUIT SPLICES

INSTALL COPPER GREEN INSULATED GROUNDING CONDUCTOR IN ALL CONDUITS AND RACEWAYS

<u>SPLICING</u> SPLICING SHALL BE DONE WITH INSULATED OR NON-INSULATED CONNECTORS OF APPROPRIATE TYPES AND CURRENT-CARRYING CAPACITY. NON-INSUALTED CONNECTORS SHALL BE WRAPPED WITH INSULATING TAPE TO THE THICKNESS OF THE INSULATION OF THE CONDUCTORS BEING SPLICED. ELECTRICAL TAPE SHALL BE 3M OR

SPLICES FOR CONDUCTORS, SIZES #10 AWG OR SMALLER SHALL BE MADE WITH U.L. LISTED SPRING-TYPE CONNECTORS OR APPROPRIATE CURRENT CARRYING CAPAC

SPLICES, TAPS AND TERMINALS FOR CONDUCTORS #8 AWG OR LARGER SHALL BE MADE WITH U.L. LISTED BOLTED PRESSURE CONNECTORS OF BRONZE OR COPPER CONSTRUCTION, OF APPROPRIATE CURRENT CARRYING CAPACITY. EQUAL TO O/Z GEDENY, BURNDY OR BLACKBURN.

CONDUCTORS #8 AWG AND SMALLER SHALL HAVE A COLOR-CODED INSULATION.

SUPER 88 SCOTCH VINYL FLAME-RETARDANT, COLD AND WEATHER RESISTANT

FEEDERS AND BRANCH CIRCUIT CONDUCTORS SHALL BE IDENTIFIED FOR PHASE ROTATION.

CONDUCTORS #6 AWG AND LARGER SHALL BE IDENTIFIED WITH TAPES APPLIED NEAR THE ENDS OF THE

UTILIZE INDUSTRY STANDARD COLORS FOR CONDUCTORS. ALL FEEDERS, MAINS AND BRANCH CIRCUIT CONDUCTORS SHALL BE TAGGED AT BOTH ENDS WITH WIRE MARKERS IN ALL PANELS, MOTOR CONTROLS, JUNCTION BOXES, OUTLET BOXES AND DEVICE BOXES.

FURNISH AND INSTALL NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT, IDENTIFYING ITEMS BY NAME, FUNCTION

IDENTIFYING NAMEPLATES SHALL BE LAMINATED, PLASTIC TYPE, CONSISTING OF TWO BLACK PLASTIC SHEETS WITH ONE WHITE PLASTIC SHEET BONDED TO AND BETWEEN THE TWO OUTER BLACK SHEETS AND HAVING THE LETTERS ENGRAVED IN ONE BLACK TO THE DEPTH OF THE WHITE PLASTIC. FASTEN NAMEPLATES TO EQUIPMENT WITH SUITABLE ADHESIVES OR STAINLESS STEEL SCREWS

ADDITIONAL COPY OF COMPLETE UPDATED PANEL DIRECTORY TO FACILITY ENGINEERING. USE PLASTIC-COATED WIRE MARKERS OF THE SELF-ADHESIVE. WRAPAROUND TYPE WITH PERMANENT FACTORY-PRINTED NUMBER, LETTERS AND SYMBOLS.

ALL PANELS SHALL HAVE TYPEWRITTEN CIRCUIT DIRECTORIES IDENTIFYING ALL BRANCH CIRCUITS, PROVIDE

WIRE MARKERS SHALL BE SECURELY ATTACHED AT BOTH ENDS. IDENTIFYING PANEL AND CIRCUIT BREAKER ALL CONDUCTORS SHALL BE PERMANENTLY TAGGED AT TIME OF INSTALLATION, LABELS SHALL BE EQUAL TO T&B.

ALL ELECTRICAL WORK SHALL BE GROUNDED AND BONDED IN FULL CONFORMANCE WITH THE LATEST APPROVED

PANDUIT OR IDEAL.

CONDUCTOR IDENTIFICATION

EDITION OF THE NATIONAL ELECTRICAL CODE AND LOCAL REQUIREMENTS ALL ELECTRICAL EQUIPMENT, TRANSFORMERS, PANELBOARD ENCLOSURES, MOTOR FRAMES, SAFETY SWITCHES, METAL ENCLOSURES, ELECTRICAL DEVICE CLOSURES AND ALL OTHER EQUIPMENT SHALL BE MADE TO FORM A CONTINUOUS CONDUCTING, GROUND PATH OF LOW IMPEDANCE FOR GROUND FAULT CIRCUITS AND OPERATION OF THE CIRCUIT PROTECTIVE DEVICES WITHIN EACH CIRCUIT.

PROVIDE GROUNDING CONDUCTOR IN ALL RACEWAYS UNLESS OTHERWISE NOTED.

GROUND CONNECTIONS WITH THE GROUNDING CONDUCTORS SHALL BE MADE AT EACH OUTLET BOX LIGHTING FIXTURE AND OTHER EQUIPMENT COMPONENTS BY MEANS OF A POSITIVELY SECURED GROUNDING CLAMP. SCREW OR CLIP. CONNECTIONS TO GROUNDING RODS, OTHER GROUNDING ELECTRODE CONDUCTORS SHALL BE MADE WITH CADWELL TYPE, EXOTHEMIC WELD PROCESS UNLESS OTHERWISE NOTED. CONNECTIONS TO PIPES SHALL BE MADE WITH APPROVED BRONZE OR BRASS CLAMPS.

BONDING SHALL BE PROVIDED TO ASSURE ELECTRICAL CONTINUITY AND THE CAPACITY TO SAFELY CONDUCT ANY FAULT CURRENT LIKELY TO BE IMPOSED. ALL DEVICES (SWITCHES, RECEPTACLES, ETC.), SHALL BE GROUNDED TO CONDUIT SYSTEM WITH SIX (6") INCH

SOLID COPPER #12 AWG INSULATED WIRE (GREEN) CONNECTED TO GROUND SCREW IN DEVICE AND FASTENED

TO BACKBOX WITH 10-32x3/8" SLOTTED HEXAGON HEAD WASHER FACE GROUND WITH GREEN DYE FINISH.

END OF ELECTRICAL SPECIFICATIONS

ELECTRICAL GENERAL NOTES

- UNLESS OTHERWISE INDICATED, FURNISH AND INSTALL A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM INCLUDING ALL NECESSARY MATERIAL, LABOR, AND EQUIPMENT.
- ELECTRICAL PLANS AND DETAILS, AND ONE LINE DIAGRAMS SHOW THE GENERAL LOCATION AND ARRANGEMENT OF THE ELECTRICAL SYSTEM. THEY ARE DIAGRAMMATIC AND DO NOT SHOW ALL CONDUIT BODIES, CONNECTORS, BENDS, FITTINGS, HANGERS, AND ADDITIONAL PULL AND JUNCTION BOXES WHICH THE CONTRACTOR MUST PROVIDE TO COMPLETE THE ELECTRICAL
- ALL EQUIPMENT AND MATERIAL SHALL BE LABELED AND LISTED, AND INSTALLED IN ACCORDANCE WITH THEIR LISTING.
- 4. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND ARRANGE FOR ALL REQUIRED INSPECTIONS IN ACCORDANCE WITH STATE GOVERNING AUTHORITIES.
- ALL WORK SHALL BE DONE WITH LICENSED WORKERS IN ACCORDANCE WITH STATE GOVERNING AUTHORITY.
- 6. THE DEFINITION OF ELECTRICAL TERMS USED SHALL BE AS DEFINED IN THE NATIONAL ELECTRICAL CODE, 2020 EDITION.
- THE TERM "INDICATED" SHALL MEAN "AS SHOWN ON CONTRACT DOCUMENTS (SPECIFICATIONS, DRAWINGS, AND RELATED ATTACHMENTS)".
- 8. THE TERM "SIZE" SHALL MEAN ONE OR MORE OF THE FOLLOWING: "LENGTH, CURRENT AND VOLTAGE RATING, NUMBER OF POLES, NEMA SIZE, AND OTHER SIMILAR ELECTRICAL CHARACTERISTICS".
- 9. THE TERM "SPACE" ON PANELBOARD AND SWITCHBOARD SCHEDULES SHALL MEAN "PROVIDE SPACE TO INSTALL THE NUMBER OF POLES AND SIZE OF THE PROTECTIVE DEVICE INDICATED WITH ALL THE NECESSARY BUS AND FITTINGS TO INSTALL THE DEVICE AT SOME FUTURE DATE".
- 10. COORDINATE ELECTRICAL WORK WITH OWNER.
- 11. COORDINATE ELECTRICAL WORK WITH OTHER DIVISIONS OF THIS PROJECT.
- 12. BEFORE SELECTING MATERIAL AND EQUIPMENT, AND PROCEEDING WITH WORK INSPECT AREAS WHERE MATERIAL AND EQUIPMENT ARE TO BE INSTALLED TO INSURE SUITABILITY, AND CHECK NEEDED SPACE FOR REPLACEMENT, CLEARANCES AND INTERCONNECTIONS.
- 13. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, 2020 EDITION.
- 14. CONTACT EVERSOURCE TO COORDINATE SERVICE WORK. OWNER WILL PAY UTILITY FEES ASSOCIATED WITH THE NEW SERVICE WORK.

15. SEAL ALL PENETRATIONS. MAINTAIN FIRE RATINGS WHERE APPLICABLE.

ABBREVIATIONS

BR

CT

HD

IMP

KA

ΚV

KW

LTG

MC

MCB

MCS

MDP

MLO

MW

N/A

NEC

NECA

NEMA

NEUT

NIC

N.T.S.

OC

PΑ

PC

PNL

PRI

PSI

PVC

PWR

RECPT

RGS

RNC

REF

RSC

SC

SCHD

SCR

SD

SE

SEC

SURF

SW

TC

TEL

UG

U.O.N.

UTIL

UVR

VA

WG

WP

WT

XFMR

SYM

SYMB

MH

Kcmils

IMPEDANCE

JUNCTION

KILOVOLT

KILOWATT

LIGHTING

MANHOLE

NEUTRAL

POLE

PHASE

PULL BOX

PRIMARY

POWER

REMAIN

PHOTO CELL

PANELBOARD

RECEPTACLE

REFRIGERATOR

RAINTIGHT

SCHEDULE

SERVICE DROP

SOLENOID VALVE

TIME CONTROLLER

SYMMETRICAL

TELEPHONE

TELEVISION TYPICAL

UNDERGROUND

VOLT-AMPERES

WEIGHT IN POUNDS

WIRE GUARD

WATERTIGHT

TRANSFORMER PERCENT

REMOVE

NUMBER

INCHES

FEET

UNDERWRITER'S LABORATORY

WALL PHONE OR WEATHERPROOF

UNLESS OTHERWISE NOTED

UNDER VOLTAGE RELEASE

SECONDARY

STUNT TRIP

SURFACE

SWITCH

SYMBOL

LITII ITY

VOLTS

WATTS

RIGID STEEL CONDUIT

SERVICE CONDUCTORS

SHORT-CIRCUIT RATING

SERVICE EQUIPMENT

SMOKE DETECTOR

NONFUSED

NOT TO SCALE

OVERCURRENT

PUBLIC ADDRESS

MAIN LUG ONLY

MICROWAVE OVEN

NOT APPLICABLE

NOT IN CONTRACT

METER

KILO AMPERE

KILO VOLT-AMPERE

THOUSAND CIRCUIT MILLS

LIGHTING PANELBOARD

MOTOR CONTROLLER

MAIN CIRCUIT BREAKER

MOTOR-CIRCUIT SWITCH

NATIONAL ELECTRIC CODE

POUNDS PER SQUARE INCH

POLYVINYL CHLORIDE

REMOVE EXISTING ITEM

RELOCATE EXISTING ITEM

RIGID NONMETALLIC CONDUIT

RIGID GALVANIZED STEEL CONDUIT

MAIN DISTRIBUTION PANELBOARD

NEW LOCATION OF RELOCATED ITEM

NATIONAL ELECTRICAL CONTRACTORS ASSOC.

NATIONAL ELECTRICAL MANUFACTURERS ASSOC.

MCC/MCB MOLDED CASE CIRCUIT BREAKER

INCHES

ABBREVIATIONS DESCRIPTION **AMPERES** ALTERNATING CURRENT (60 HZ) A/C AIR CONDITIONING AMERICANS WITH DISABILITIES ACT AFCI ARC FAULT CIRCUIT INTERRUPTER AFFV ABOVE FINISHED FLOOR ATS AUTOMATIC TRANSFER SWITCH AUX AUXILIARY AWG AMERICAN WIRE GAUGE BALLAST FACTOR BRANCH CONDUIT CB CIRCUIT BREAKER CIR CIRCUIT CURRENT TRANSFORMER CU COPPER DISHWASHER DISC DISCONNECT DW DISHWASHER DWG DRAWING DWU DISTILLED WATER UNIT **EXISTING TO REMAIN** EMT ELECTRICAL METALLIC TUBING **EQUIP EQUIPMENT** EX/ETR EXISTING EQUIPMENT TO REMAIN FDR FEEDER FLOOR FEET GFCI/GFI GROUND-FAULT CIRCUIT-INTERRUPTER GROUND-FAULT CIRCUIT EQUIPMENT BREAKER GFP GROUND-FAULT PROTECTION GRD GROUND HEAT DETECTOR HAND-HOLF HORSEPOWER INSULATED GROUND ICE MAKER

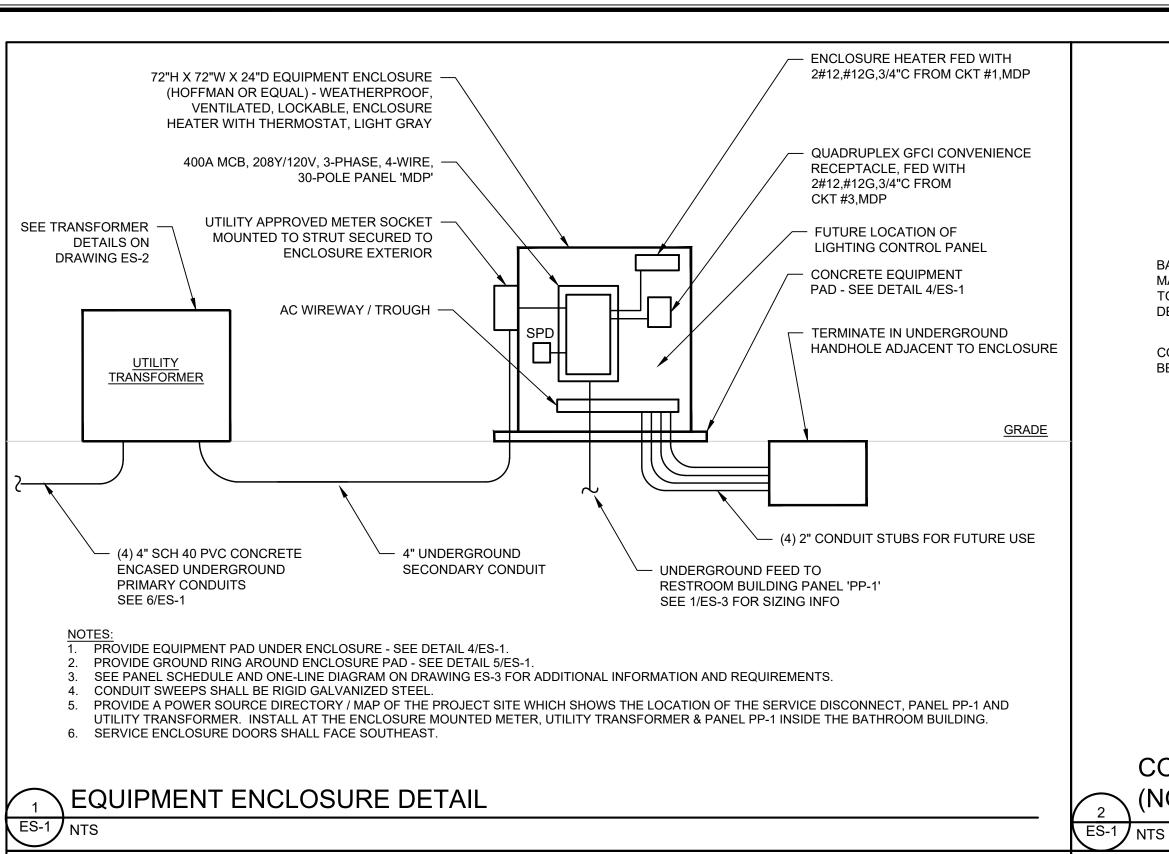
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OCTOBER 14, 2022

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11261.00094



CONTRACTOR TO COORDINATE

-PAD SHALL BE SIZED 12" LARGER THAN OVERALL DIMENSIONS OF

- 4x4xW4.0xW4.0 WWF OR

#4 @ 12" O.C. EACH WAY

EQUIPMENT

/---#4 @16" O.C.

— COMPACTED GRAVEL

-12" OF NO. 6 STONE

— 2 - #5 CONT.

T&B TYP.

CONDUIT ENTRY WITH SHOP DRAWING

- 6" OF NO. 6 STONE

1. 4,000 PSI CONCRETE WITH 6% AIR

3. ASTM A-185 WELDED WIRE FABRIC

4. PROVIDE A SMOOTH BROOM FINISH

2. ASTM A-615, 60,000 PSI REINFORCING STEEL

5. PROVIDE #2/0 FROM UNCOATED REBAR TO

EQUIPMENT PAD - SEE DETAIL 5/ES-1 FOR

GROUND RING ON OPPOSITE CORNERS OF THE

ENTRAINMENT

GROUND RING DETAIL.

ENCLOSURE -

EQUIPMENT PAD PLAN

SEE SITE PLAN FOR LOCATION SCALE N.T.S

PAD SHALL BE SIZED 12" -

LARGER THAN OVER ALL

GRADE -

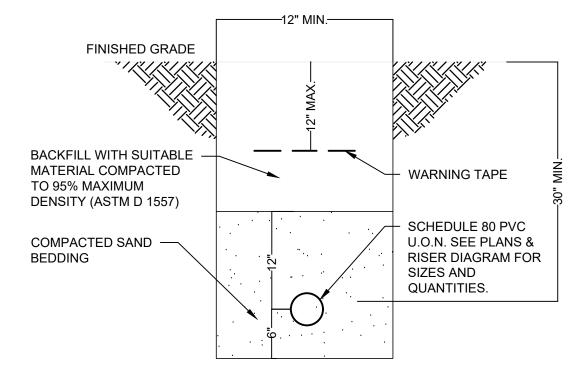
PROVIDE FOOTING -

PERIMETER OF PAD

AROUND

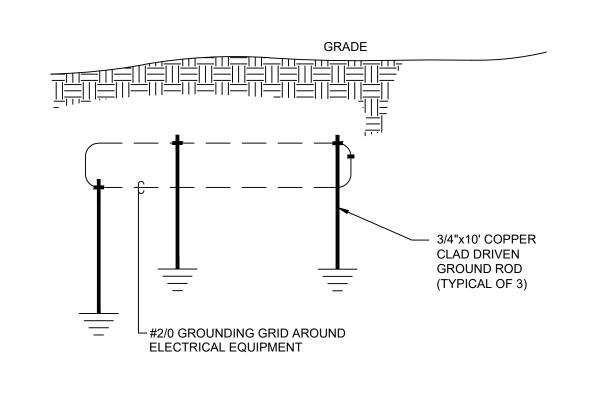
EQUIPMENT PAD DETAIL

DIMENSIONS OF **EQUIPMENT**



- 1. THE CLEAN FILL SHALL PASS THROUGH A 3/8" MESH SCREEN AND SHALL NOT CONTAIN SHARP STONES. OTHER BACKFILL SHALL NOT CONTAIN ASHES, CINDERS, SHELLS, FROZEN MATERIAL, LOOSE DEBRIS OR STONES LARGER THAN 2" IN MAXIMUM DIMENSION. THE TRENCH SHALL BE BACKFILLED IMMEDIATELY FOLLOWING PLACEMENT OF OTHER CONDUITS.
- WHERE EXISTING UTILITIES ARE LIKELY TO BE ENCOUNTERED, CONTRACTOR
- SHALL HAND DIG AND PROTECT EXISTING UTILITIES 3. MAINTAIN 12" SEPARATION FROM OTHER UTILITIES (E.G. WATER,
- COMMUNICATIONS, SANITARY, ETC.)
- 4. CONDUIT SWEEPS SHALL BE RIGID GALVANIZED STEEL

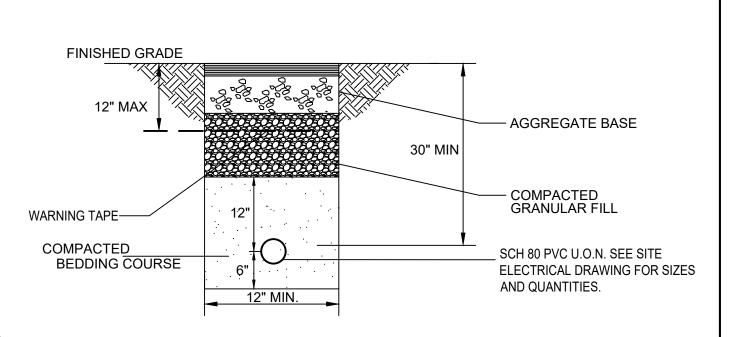
CONDUIT INSTALLATION IN GRASS (NOT APPLICABLE TO U.I. CONDUIT)



NOTES:

- 1. THIS DIAGRAM IS FOR INFORMATIONAL PURPOSES ONLY. EXACT DETAILS OF GROUNDING SYSTEM MAY VARY.
- 2. ALL ASPECTS OF GROUNDING SYSTEM SHALL COMPLY FULLY WITH ARTICLE 250 OF
- 3. THE ELECTRICAL CONTRACTOR SHALL UTILIZE GROUNDING BUSHINGS AS REQUIRED.
- 4. BOND TO ELECTRICAL EQUIPMENT IN THE LOCATION OF THE GROUND RING PER NEC.
- 5. GROUND RODS SHALL BE 6'-0" APART.

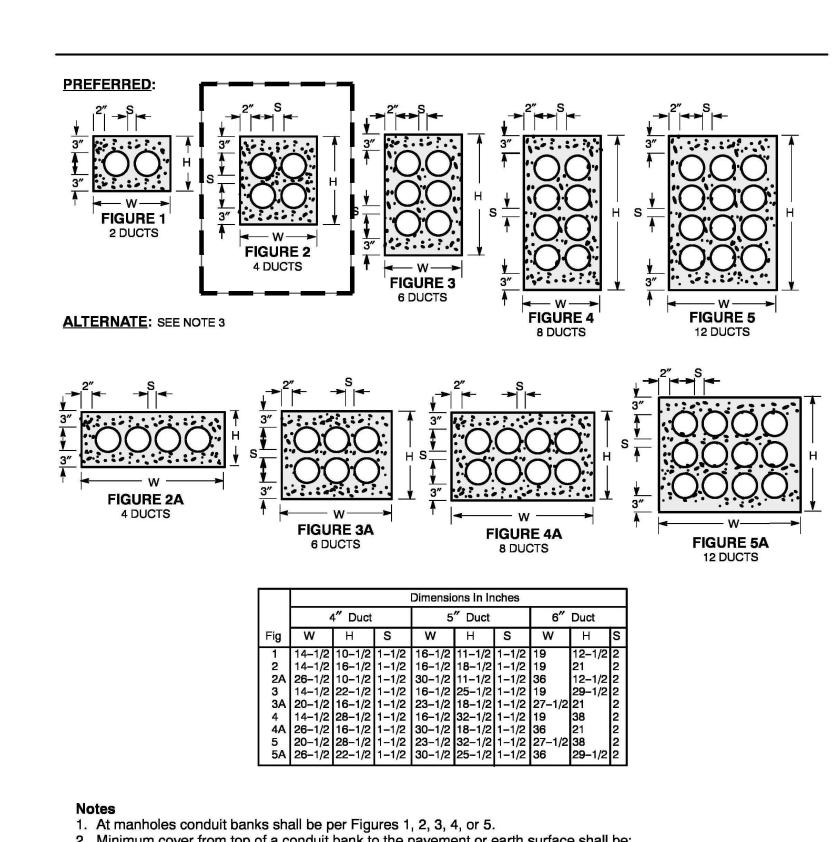
SERVICE GROUND RING DETAIL



- 1. THE CLEAN FILL SHALL PASS THROUGH A 3/8" MESH SCREEN AND SHALL NOT CONTAIN SHARP STONES. OTHER BACKFILL SHALL NOT CONTAIN ASHES, CINDERS, SHELLS, FROZEN MATERIAL, LOOSE DEBRIS OR STONES LARGER THAN 2" IN MAXIMUM DIMENSION. THE TRENCH SHALL BE BACKFILLED IMMEDIATELY FOLLOWING PLACEMENT OF THE CONDUITS.
- 2. WHERE EXISTING UTILITIES ARE LIKELY TO BE ENCOUNTERED, CONTRACTOR SHALL HAND DIG AND PROTECT EXISTING UTILITIES.
- 3. MAINTAIN 12" SEPARATION FROM OTHER UTILITIES (E.G. WATER, COMMUNICATIONS, SANITARY, ETC.)
- 4. CONDUIT SWEEPS SHALL BE RIGID GALVANIZED STEEL

CONDUIT INSTALLATION IN BITUMINOUS (NOT APPLICABLE TO U.I. CONDUIT)

ES-1 NTS



- 2. Minimum cover from top of a conduit bank to the pavement or earth surface shall be:
- a. State highways 36 inches
- b. Railroad tracks 60 inches c. All other areas - 24 inches
- 3. In the conduit run between manholes if obstructions are encountered or to reduce trench depth, Figures 2A, 3A, 4A, or 5A are permissible.
- 4. Concrete shall be 2500 psi, 1/2 inch maximum stone, 6-9 inches slump of such consistency that spading will ensure the flow of concrete between and under the individual ducts, but not so wet as to float the ducts. For tier buildup construction a stiffer consistency should be used.

ORIGINAL 5/29/75 APPROVED	_	ONDUIT BANK CONSTRUCTION		
11/2/99 Bolonur	EVERSOURCE ENERGY	DESIGN & APPLICATION STANDARD	DTR 73.209	5

TRANSFORMER PRIMARY CONDUIT DUCTBANK DETAIL



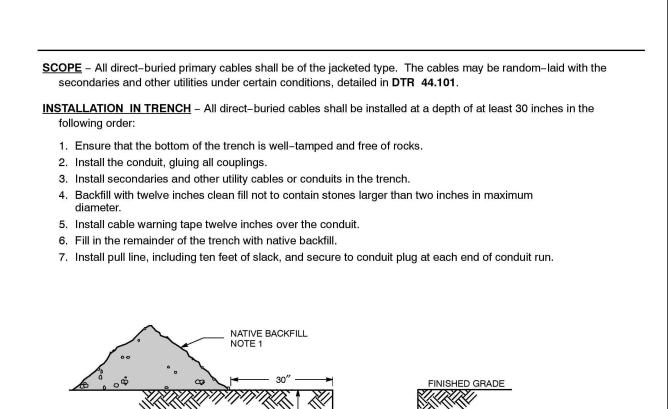
AND

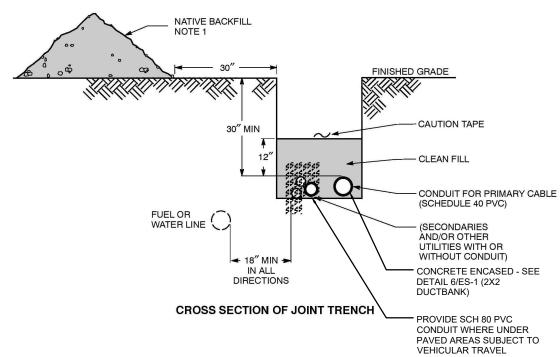
BUIL

CONSTRUCTION OF NEW AT THE MERIDEN GREEN

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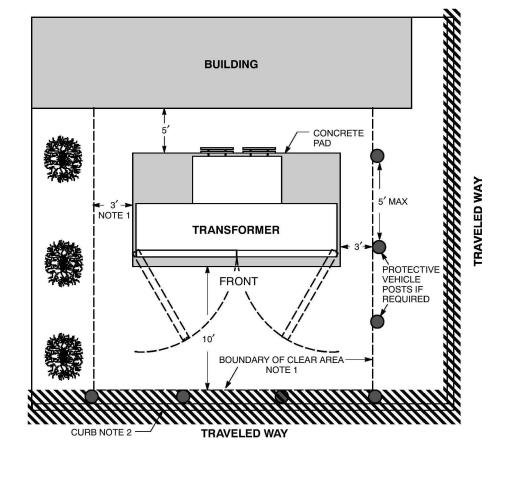




1. The trench shall be backfilled immediately following placement of the conduit. 2. One quarter inch diameter nylon pull line and plastic conduit plugs to be supplied and installed by contractor.

ORIGINAL	SINGI F_P	HASE PRIMARY CABLE INSTALL	ΔΤΙΟΝ /	
6/24/98			$A \cap A \cap A$	CT/MA
APPROVED	ט	IRECT-BURIED - IN CONDUIT		
10/11/12	NORTHEAST UTILITIES	CONSTRUCTION STANDARD	DTR 50.103	6





1. To inspect, provide access, operate elbow connectors and ventilate the transformer, the above specified clear area distances to buildings or shrubs shall be maintained. The distance from the building is to the concrete transformer pad. Property line shall be considered an obstruction, since fences, shrubs, etc. may be installed at a future date by adjacent property owners. Because of the possibility of cooling fins overhanging the pad, side clearances to be increased to 5 feet for transformers 1000 kVA and larger. 2. If no curb exists, or transformer is located closer than 10 feet to the traveled way, protective vehicle posts (

shall be installed as specified in DTR 42.061. 3. Top of transformer pad shall be installed 3 inches above final grade. 4. Transformer shall not be located on steep grades where access to or elbow operation is made difficult. 5. Transformer shall meet the minimum distances to doors, windows, fire escapes, air intakes and walls as

specified in DTR 42.061. 6. Transformer *is not* to be located with its doors facing the building.

Refer to DTR 58.301 for specific instructions on the installation of the transformer pad.
 Refer to DSEM Section 06.32 and DTR 58.311 (NH) for information on environmental considerations.

		4						
ORIGINAL	PAD-MOUNTED TRANSFORMERS							
4/10/91								
APPROVED	LOCAT	TION TO BUILDINGS AND ROADWA	AYS					
7/8/10 Cwp	NORTHEAST UTILITIES	CONSTRUCTION STANDARD	DTR 42.047	7				

GENERAL – Pad-mounted oil insulated equipment (such as transformers, transclosures, switches, etc) should be installed so as to be accessible, not constitute an environmental hazard or a fire hazard, and be protected from damage. In URD areas transformers installed at residential front lot lines are not subject to the requirements of this Standard, refer to DTR 42.031.

LOCATION – The pad-mounted equipment should be installed at a location where permanent access will be assured for future operation and maintenance as well as to permit installation, replacement and removal of the equipment by means of a winch truck with the boom up. Where noise may be a problem, careful consideration should be given when selecting a location. Areas subject to flooding should be avoided, as should other environmentally sensitive areas noted in DSEM Section 06.32. The building owner's and/or tenant's fire insurance carrier may restrict the proximity of the equipment to doors, windows or combustible materials and such requirements are the responsibility of the customer subject to the requirements of Northeast Utilities. In the absence of other requirements, the equipment shall be located with the following minimum clearances from various building facilities. The distances mentioned in this section shall not supersede any local ordinance or code which requires greater clearances.

	<u>Minimum</u>	<u>Distance</u>	
<u>ltem</u>	In Front of In Feet	To Side of In Feet	Below In Fee
oor ir intake	20 10	10 10	_ 25
/indow	10	3	5
ire escape	20	20	-
ombustible wall	6	6	_
oncombustible wall	.5	3	\ <u> </u>
uel tanks (above and below grade) atural gas or propane connections	10	10	_
CT/MA	3	3	_
NH	15	15	_
asoline dispensing unit	20	20	_

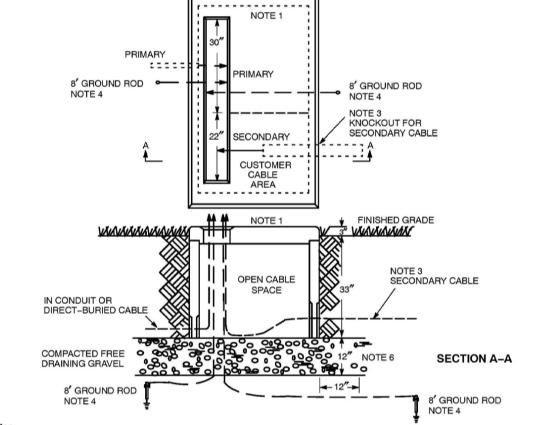
OIL SUMP - If the surrounding grade pitches toward critical areas, it is recommended that an oil sump be provided. This should consist of 3/4-inch trap rock fill under and around the equipment pad adequate to contain the quantity of oil in the equipment to be installed at the given location.

ADDITIONAL FIRE PROTECTION - If the building owner's and/or tenant's combustible facilities adjacent to the equipment require fire protection beyond that provided by oil sump, it shall be their responsibility to provide such protection in the form of space separation, fire resistant barriers, automatic spray systems, other oil containment facilities, or other means approved by their fire insurance company.

EQUIPMENT PROTECTION – Where pad-mounted equipment would be exposed to possible damage by vehicular traffic, protective bumpers are to be installed on exposed sides. Galvanized steel pipes 4-inch minimum diameter filled with concrete, I-beams 5-inch minimum, or other suitable means of protection may be used as bumpers. Such pipes or I-beams shall extend 42-inch minimum both above and below grade. Heavier bumpers set deeper should be considered where exposed to heavy trucks. Bumpers should be 10-foot minimum from the operating side of concrete pad and on the other sides 36-inch minimum from equipment or pad, whichever projects farther. The maximum spacing between bumpers on exposed sides should be 60 inches.

EQUIPMENT LOCKS – Any equipment, with provisions for locking, that is left on site and is accessible to the general public, shall be padlocked. This includes installations that are not complete and not energized. Completed pad-mount transformer installations shall meet "TAMPERPROOF EQUIPMENT LOCK" requirements, DTR 03.401.

ORIGINAL	PAD-MOUNTED OIL INSULATED EQUIPMENT								
12/6/73									
PPROVED	LOCATION AND MECHANICAL PROTECTION								
1/25/02	NORTHEAST UTILITIES	DESIGN & APPLICATION STANDARD	DTR 42.061	9					
Donus	NONTHEAST UTILITIES	DESIGN & AFFLICATION STANDARD	DIN 42.001	9					



Notes
1. 75 – 300 kVA – Install 76" x 54" x 36" pad as per SPC P-013 and P-014.
500 – 2500 kVA – Install 76" x 70" x 36" pad as per SPC P-015 and P-016.

2. Primary Cable
a. Install direct-buried cables a minimum of 30 inches below grade.
b. Install cables in conduit a minimum of 24 inches below grade.

c. Loop cables in cable pit before making connections.
3. Secondary Cable – Leave enough cable to extend 6 feet above pad for future reconnecting to transformers with higher secondary terminals. Customer cable(s) shall enter through the rear knockout and shall be confined to the area defined as the

"customer cable area."

4. Galvanized Steel Ground Rods – Install in trench and connect #2 copper conductors from rods through pad opening and extending 5 feet above pad. Minimum separation of ground rods is 8 feet.

6. The excavation for the pad shall be carried to a depth of 12 inches below the bottom of the pad. The bottom layer of backfill shall be compacted, clean gravel, free of foreign matter and construction debris, extending 12 inches beyond the circumference of the structure, and in accordance with Connecticut DOT Spec M.02.06 Grading "A"; or Massachusetts DPW Spec M1.03.0 Type b. The remaining backfill shall not contain ashes, cinders, shells, frozen material, loose debris, or stones larger than 2 inches in maximum dimension. It shall be placed in 6-inch layers and compacted with mechanical tampers to not less than 95 percent of the maximum dry density as determined by the standard compaction tests, AASHTO T180 or ASTM D698.

ORIGINAL 9/28/87	INSTALLATIO	N OF CONCRETE PAD FOR THRE	E-PHASE	
APPROVED	PAD-MOUNTED TI	RANSFORMERS 75–2500 KVA – DI	RECT-BURIED)
9/30/04	EVERSOURCE ENERGY	CONSTRUCTION STANDARD	DTR 58.301	8

Page 1 of 2

EVERSOURCE TRANSFORMER REQUIREMENTS

NOT TO SCALE

PROVIDE SCH 80 PVC CONDUIT WHERE UNDER

PAVED AREAS SUBJECT TO VEHICULAR TRAVEL

SERVICE TRENCH - By Customer The trench shall be in as direct a line as possible without reverse bends from the distribution facility to the customer service entrance. In order to minimize cable pulling forces, no more than two bends (not including riser at house or pole) exceeding a total combined change of 45 degrees shall be permitted.

- 1. Trench shall be of such depth to accommodate 24 inches minimum cover for service cables in conduit.
- 2. In order to prevent the conduit from being pulled out of the meter box, conduit shall be installed on virgin or well tamped soil. Trench bottom shall be undisturbed or relatively smooth earth, well tamped, and free of any debris that may be detrimental to the conduit.
- 3. Conduit in the trench should have a 4-inch-per-100 feet downward pitch toward the distribution facility, if physically possible. (This provides drainage away from the service entrance, and prevents stagnant water in
- 4. Backfill shall not contain frozen material or stones larger than 2 inches in maximum dimension. Care shall be exercised to avoid damage to conduit during backfilling. Backfill shall be compacted, and shall be completed before the Company schedules cable installation.
- 5. When required, coordination with telephone, cable TV, or other utilities is the Customer's responsibility. **CONDUIT** – By Customer

Standard conduit shall be minimum 3-inch diameter, rigid PVC, heavy wall, sunlight resistant

- (6 percent 7 percent titanium dioxide by weight), Schedule 40 as per ANSI/NEMA TC 2–2003. 1. A 90 degree Schedule 40 PVC bend, 24-inch minimum radius, shall join the meter socket conduit to the
- conduit in the trench. See DTR 54.114. 2. Bends in the conduit run shall have a minimum radius of 48 inches. This requirement does not include bends used at house or pole risers where the bend radius shall be a minimum of 24 inches, with 36 inches
- 3. A ¹/₄-inch-diameter nylon pull rope, including 10 feet of slack, shall be installed in the conduit. Secure the pull line to a plastic conduit plug (e.g., SC 526328 for 3-inch diameter), at each end of the conduit run.
- SERVICE FROM POLE If service is from an overhead system, a grounded 90 degree galvanized steel bend shall be installed at the pole. See DTR 12.057.

SERVICE FROM HANDHOLE/TRANSFORMER - Extend conduit to distribution facility and mate to previously installed 10-foot conduit stub. Tie pull lines, slide conduit sleeve over both ends and secure with conduit cement. See DTR 54.203

CAUTION - Customer shall not enter any Company structure because it could be energized.

LIMITATIONS – If the route chosen for the conduit requires more than two bends (not including the bend at the riser or the house) exceeding a total of a 45 degree change in direction, the Company may refuse to permit the conduit service and a direct-buried service would be installed.

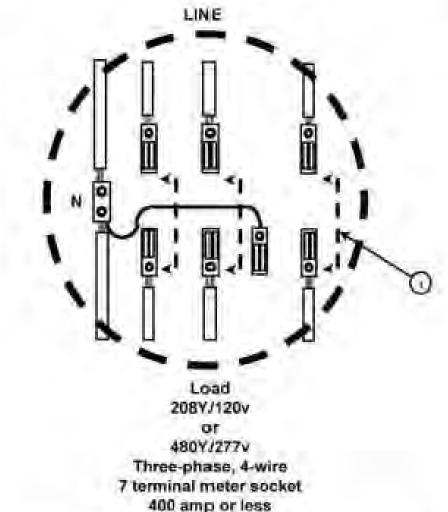
COMPANY CONSIDERATIONS – Services in conduit shall be identified at the transformer or handhole with a brass "SVC IN CNDT" tag. To aid troubleshooting, conduit service shall be clearly designated on mapping records.

ORIGINAL 9/28/87	DIRE	CT/WMA			
APPROVED					
12/6/12 (wp	EVERSOURCE ENERGY	DESIGN & APPLICATION STANDARD	DTR	54.113	6
Curp	EVENOGONOE ENERGY	DEGIGIT G. A. I. Ello, H. Ion G. A. I. D. I. I.		00	

EVERSOURCE PRIMARY & SECONDARY CONDUIT REQUIREMENTS

NOT TO SCALE

FIGURE 21 Three -Phase: Self-Contained Metering Connections



1. An approved lever operated manual bypass with law release and flash

- A. Bond at service equipment in accordance with NEC Article 250. The grounding electrode conductor connection shall be made at an accessible location in the service equipment and not in the meter sockel. The grounding electrode conductor shall not be run through the meter socket.
- B. All three-phase network and 480Y/277 volt services will require a main disconnect with over current protection ahead of the meter (Cold Sequence)

EVERSOURCE METER DETAIL NOT TO SCALE

Page 1 of 2 PAD - PRECAST CONCRETE - THREE-PHASE TRANSFORMER 75-300 KVA - 76" x 54" x 36"

MATERIAL SPECIFICATION SPC P-013 7 EVERSOURCE ENERGY

BAR SCHEDULE NO OF WINDOW KNOCKOUT DETAIL

1. Roof Design Load: 1300 lbs spread over 1-foot-square area anywhere on roof. 2. Walls: Soil pressure of equivalent fluid pressure of 33 pcf. Surcharge of 2.5 feet of soil weighing 120 pcf. 3. Concrete: 4000 psi at 28 days. Entrained air 6–9 percent. 4. Steel: ASTM A615-1992, Grade 40.

5. All concrete and reinforcement in accordance with ACI 318-1999. 6. For lifting top or bottom sections, cast in four 3/4-inch-diameter Dayton Suregrip (or approved equal) coil loop inserts, galvanized, with T21 plastic setting plugs. Inserts are to be secured in place with rebar. **Top**: Catalog Type B16, 3/4" diameter x 4" long

Bottom: Catalog Type B16, 3/4" diameter x 6" long 7. Provide 3-inch-long groove (3/4" x 1") for lifting sling at each corner, each side. 8. Manufacturer's identification and month/year when manufactured shall be legibly marked in/on concrete in 9. Zinc alloy inserts 3/4 inch – 10" x 3" for cable pulling. To be located 4 inches above (7" x 13")

PAD – PRECAST CONCRETE – THREE-PHASE TRANSFORMER 75–300 KVA – 76" x 54" x 36"

EVERSOURCE ENERGY MATERIAL SPECIFICATION

EVERSOURCE TRANSFORMER PAD DETAIL NOT TO SCALE

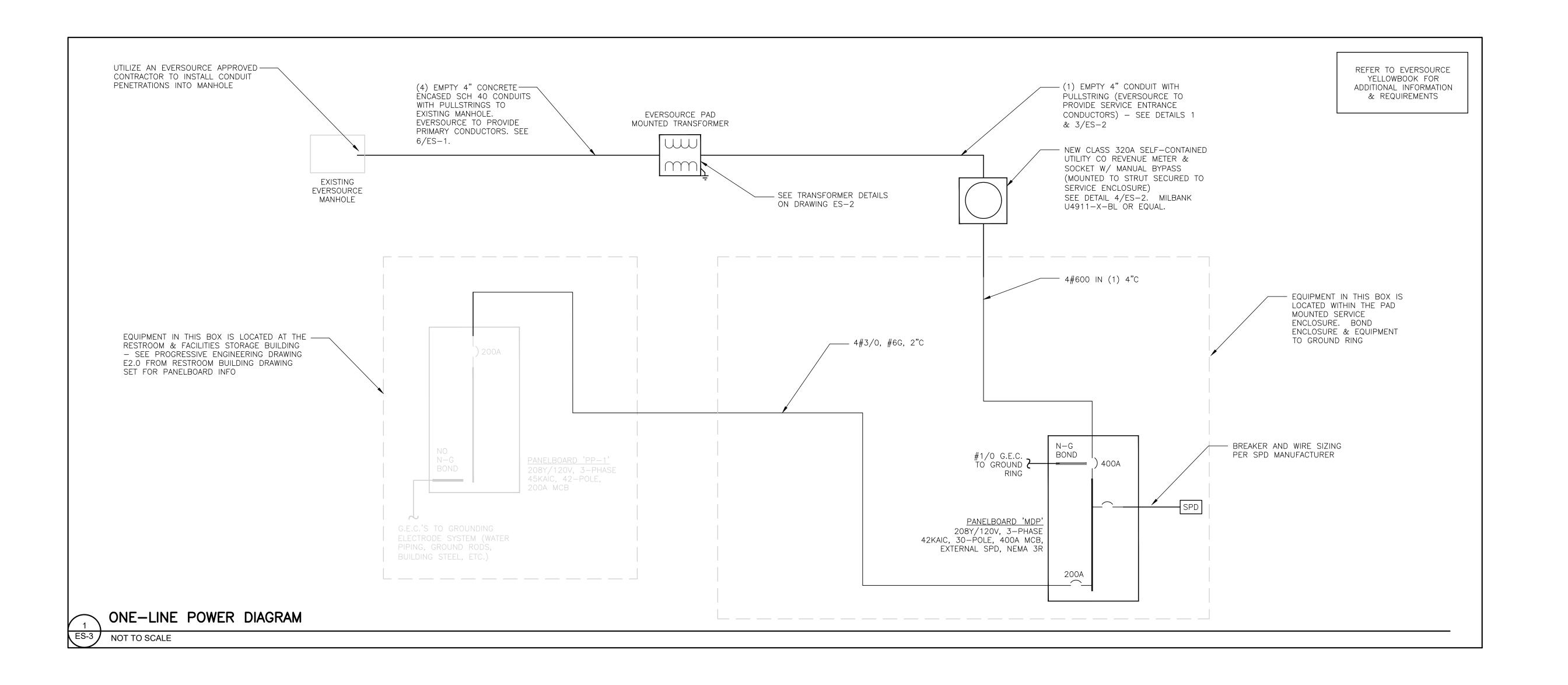
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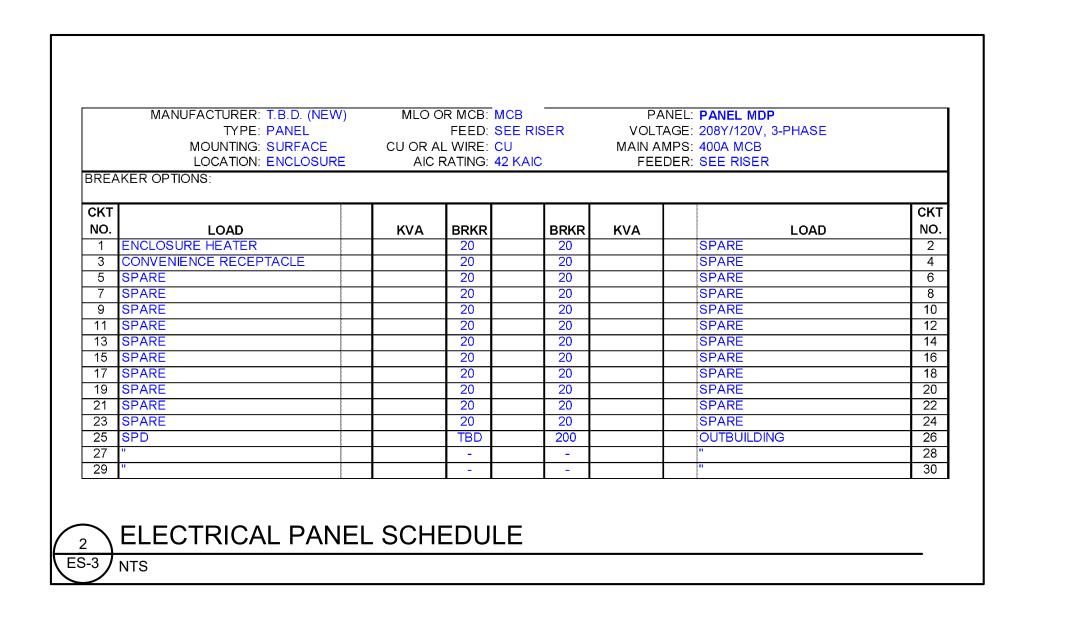
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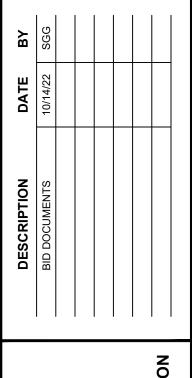
SPC P-014 | 7











BUILDIN

CONSTRUCTION OF NEW RAT THE MERIDEN GREEN
MILL STREET
MERIDEN, CONNECTICUT

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