



CONTRACT No. 17-521  
NEW EQUIPMENT STORAGE BUILDING  
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
VALHALLA CAMPUS  
VALHALLA, NEW YORK



PLANS ARE FOR THE CONSTRUCTION OF A ONE STORY  
VEHICLE STORAGE BUILDING

<p>Seal:</p> 	<p><b>DCAK · MSA</b> ARCHITECTURE AND ENGINEERING</p> <p>53 HUDSON AVENUE NYACK, NEW YORK 10960 www.DCAK-MSA.com Email: info@DCAK-MSA.com Tel 845-353-1300 Fax 845-353-1616</p>
	<p><b>RCM</b> Technologies</p> <p>99 BAUER DRIVE, SUITE 101 OAKLAND, NJ 07436 Tel: 201-416-4012 Fax: 201-337-1099</p>
	<p>OLA Consulting Engineers 50 Broadway, Hawthorne, New York 10532 914.747.2800 12 East 49th Street, 11th Flr. New York, NY 10017 646.849.4110 olace.com</p>

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WIND SPEED:	120 MPH, 3 SECOND PEAK GUST
EXPOSURE:	C
RISK CATEGORY:	IV
SEISMIC:	SEE ENGINEER'S DRAWINGS N-100.00

CONTRACTOR PROVIDE PROJECT SPECIFIC ROOF MANUFACTURER'S SIGNED ASSEMBLY LETTER AND SAMPLE WARRANTY WITH REQUIRED WIND SPEED LISTED PRIOR TO START OF WORK.

☐ AS BUILT - CHANGES AS NOTED  
☐ AS BUILT - NO CHANGES

IN CHARGE OF DC  
CHECKED BY DC  
MADE BY CC

ADAM KAPLINSKI, R.A.  
ASSOCIATE ARCHITECT  
DEPARTMENT OF PUBLIC WORKS AND  
TRANSPORTATION

  
11.9.2021  
RECOMMENDED FOR CONSTRUCTION  
D  
GAYLE M. KATZMAN, P.E.  
FIRST DEPUTY COMMISSIONER  
DEPARTMENT OF PUBLIC WORKS AND  
TRANSPORTATION

*Richard G. Wishnie* 11/10  
APPROVED FOR CONSTRUCTION DATE

RICHARD G. WISHNIE  
COMMISSIONER  
DEPARTMENT OF EMERGENCY SERVICES

*Hugh J. Greechan* 11/8/1  
APPROVED FOR CONSTRUCTION

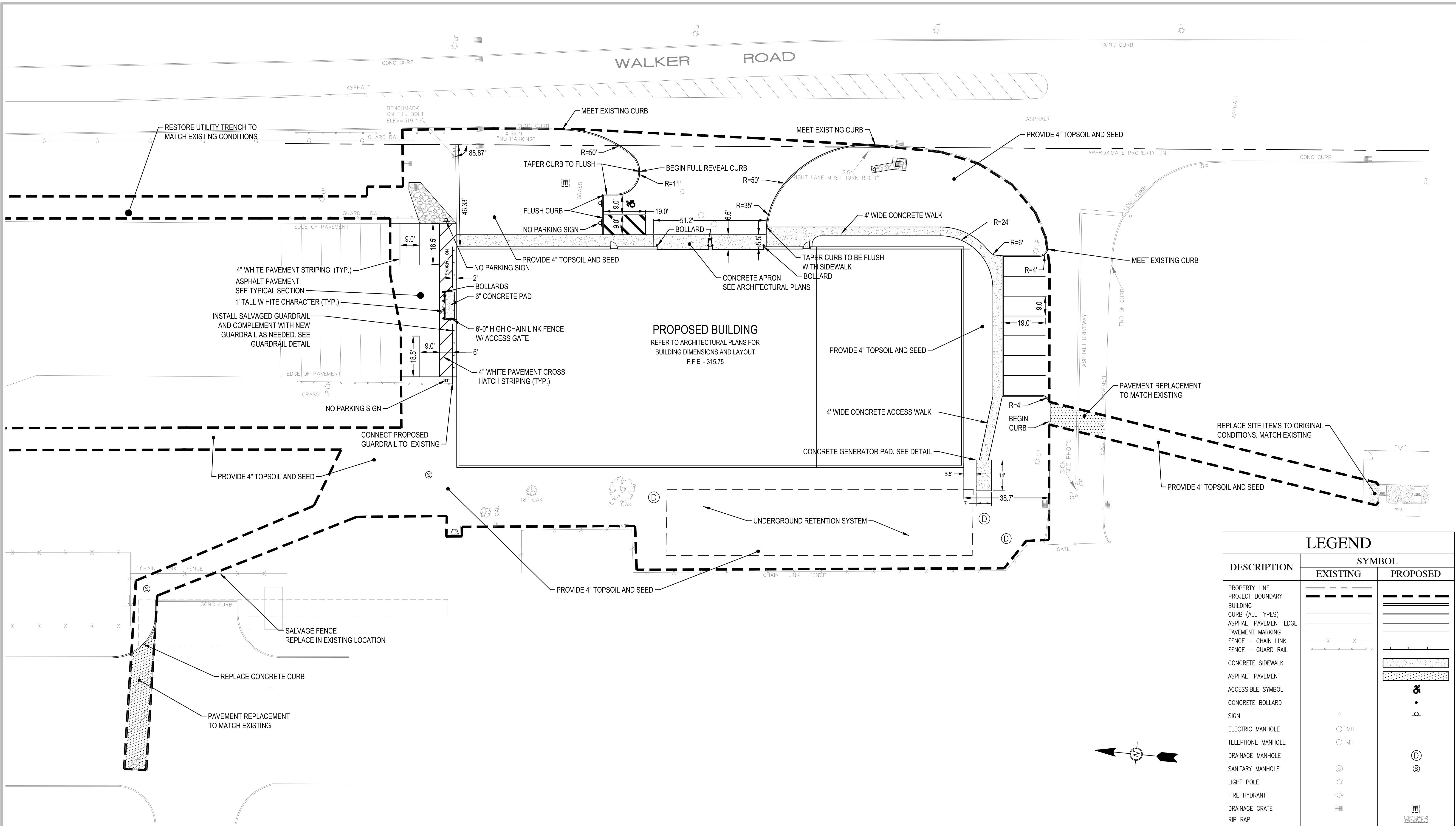
HUGH J. GREECHAN, JR., P.E.  
COMMISSIONER

DEPARTMENT OF PUBLIC WORKS AND  
TRANSPORTATION

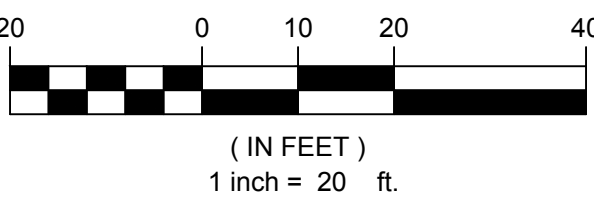








DESCRIPTION	SYMBOL	
	EXISTING	PROPOSED
PROPERTY LINE	---	---
PROJECT BOUNDARY	---	---
BUILDING	---	---
CURB (ALL TYPES)	---	---
ASPHALT PAVEMENT EDGE	---	---
PAVEMENT MARKING	---	---
FENCE - CHAIN LINK	---	---
FENCE - GUARD RAIL	---	---
CONCRETE SIDEWALK	---	---
ASPHALT PAVEMENT	---	---
ACCESSIBLE SYMBOL	---	---
CONCRETE BOLLARD	---	---
SIGN	---	---
ELECTRIC MANHOLE	---	---
TELEPHONE MANHOLE	---	---
DRAINAGE MANHOLE	---	---
SANITARY MANHOLE	---	---
LIGHT POLE	---	---
FIRE HYDRANT	---	---
DRAINAGE GRATE	---	---
RIP RAP	---	---
FLARED END SECTION	---	---
TREE	---	---



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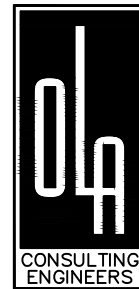
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12 East 49th Street, 11th Fl.  
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REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

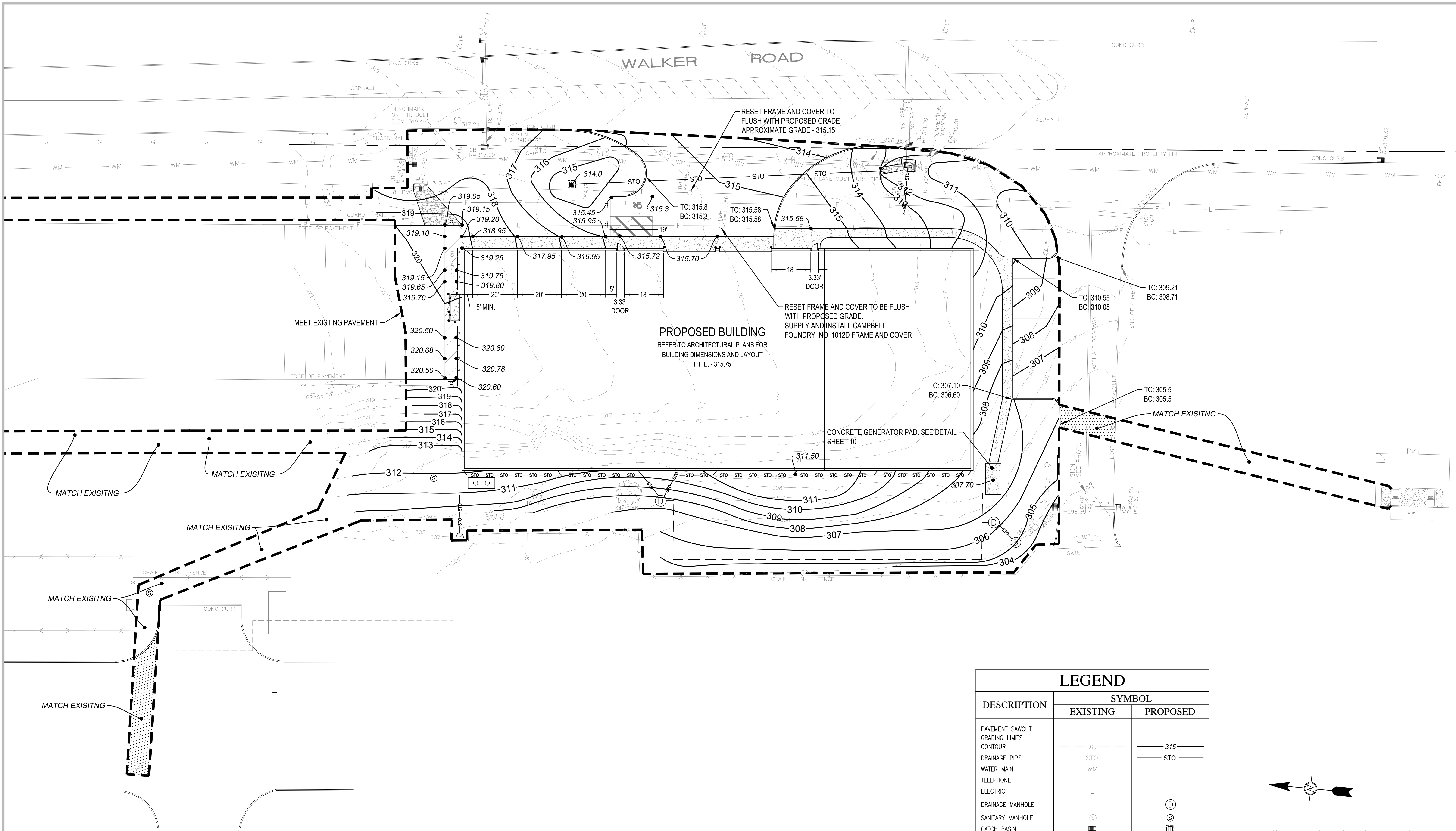
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CONTRACTOR		PROJECT COORDINATOR	
NAME	NAME	NAME	NAME
SIGNATURE	SIGNATURE	SIGNATURE	SIGNATURE
TITLE	TITLE	TITLE	TITLE

**WESTCHESTER COUNTY, NEW YORK**  
**DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION**  
DIVISION OF ENGINEERING

NEW EQUIPMENT STORAGE BUILDING  
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
VALHALLA CAMPUS, VALHALLA, NEW YORK  
SITE PLAN

CONTRACT NUMBER 17-521	SHEET NUMBER C-100
SHEET NO. 3	OF 53
SCALE: AS SHOWN DATE: 11/16/2021	REV. NO. 0
DPW FILE NO. 38-47-G-685-0	



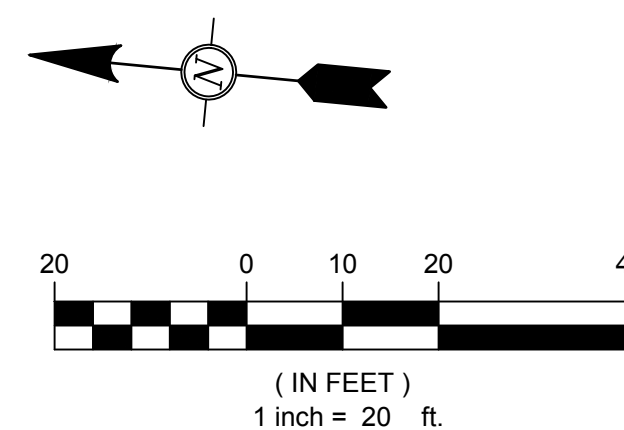


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DESCRIPTION	SYMBOL	
	EXISTING	PROPOSED
PAVEMENT SAWCUT	---	---
GRADING LIMITS	---	---
CONTOUR	--- 315 ---	--- 315 ---
DRAINAGE PIPE	--- STO ---	--- STO ---
WATER MAIN	--- WM ---	
TELEPHONE	--- T ---	
ELECTRIC	--- E ---	
DRAINAGE MANHOLE		⊙
SANITARY MANHOLE	⊙	⊙
CATCH BASIN	■	■
RIP RAP		■
FLARED END SECTION		▷

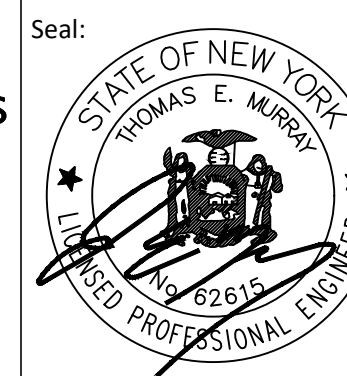


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REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

#### RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED  
☐ AS BUILT - NO CHANGES

#### CONTRACTOR

NAME \_\_\_\_\_  
SIGNATURE \_\_\_\_\_  
TITLE \_\_\_\_\_ DATE \_\_\_\_\_

#### PROJECT COORDINATOR

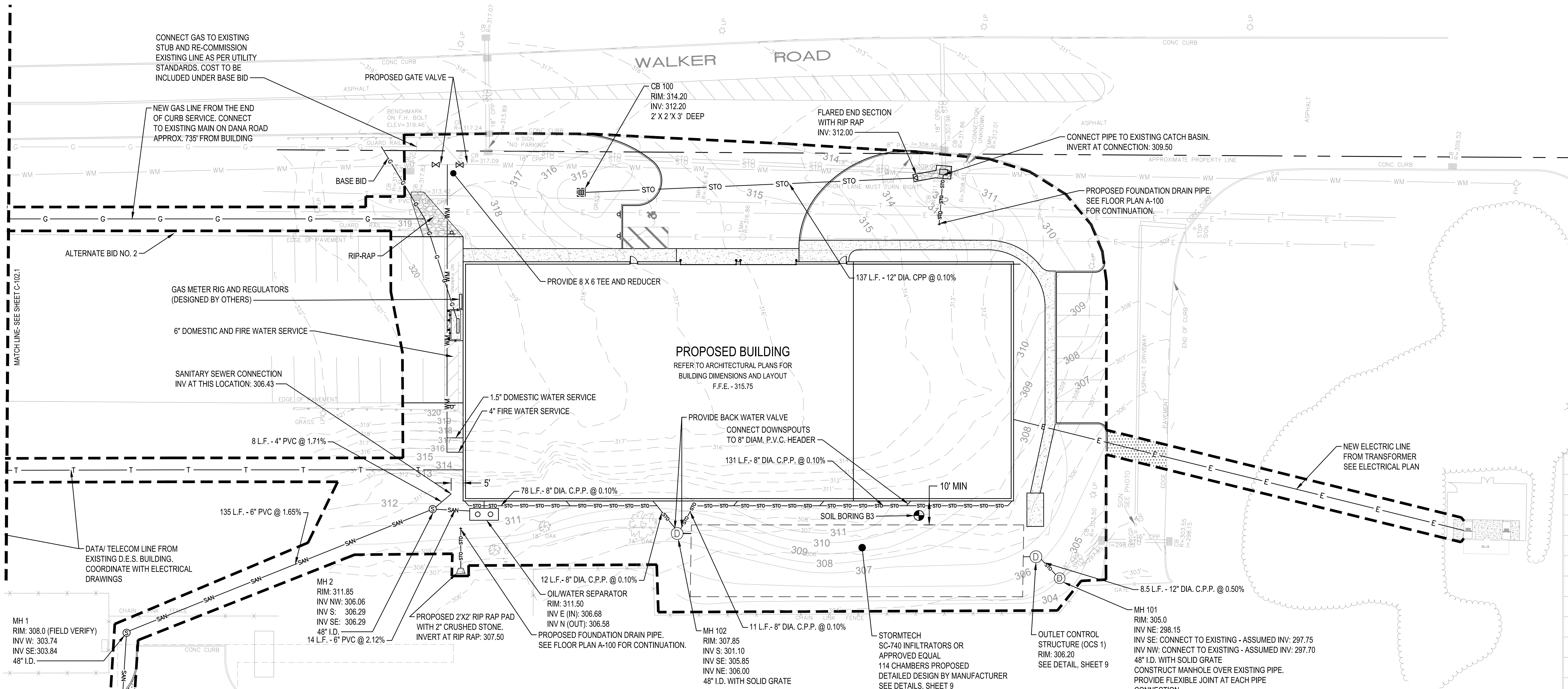
NAME \_\_\_\_\_  
SIGNATURE \_\_\_\_\_  
TITLE \_\_\_\_\_ DATE \_\_\_\_\_

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DIVISION OF ENGINEERING

NEW EQUIPMENT STORAGE BUILDING  
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
VALHALLA CAMPUS, VALHALLA, NEW YORK  
GRADING PLAN

CONTRACT NUMBER	17-521	SHEET NUMBER	C-101
SHEET NO.	4	OF	53
SCALE:	AS SHOWN	DATE:	11/16/2021
DPW FILE NO.	38-47-G-686-0	REV. NO.	0

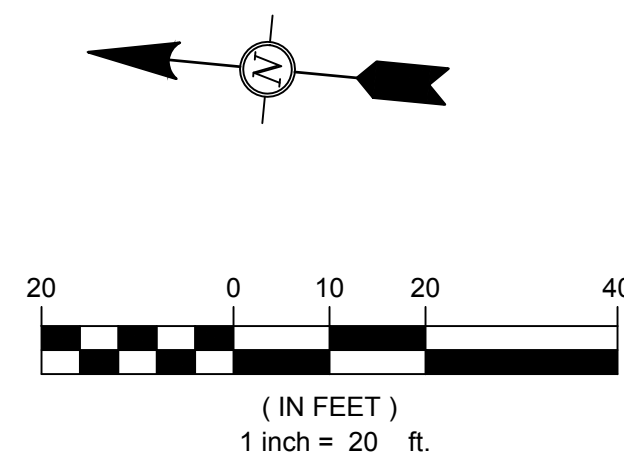




NOTES

- 1. REFER TO SHEET C-104, CIVIL DETAILS, FOR GENERAL NOTES.
- 2. ALL WATERMAIN PIPE SHALL BE DIP, CLASS 52. ALL WATERMAIN SHALL HAVE MINIMUM 8'-0" BURY (TOP OF PIPE TO FINISH GRADE). DIP SHALL BE ENCASED WITH POLYETHYLENE FILM CONFORMING TO ASTM D 1248-889.
- 3. ALL SANITARY SEWER PIPE SHALL BE PVC PIPE (ASTM D 3034, SDR 35), UNLESS OTHERWISE NOTED. SANITARY SEWER INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D2321.
- 4. ALL STORM SEWER PIPE SHALL BE CPP, WITH FLEXIBLE WATERTIGHT JOINTS IN ACCORDANCE WITH ASTM C-361 OR PVC PIPE (ASTM D3034, SDR 35) INSTALLED IN ACCORDANCE WITH ASTM D2321, UNLESS OTHERWISE NOTED.
- 5. FLEXIBLE JOINTS AT STORM SEWER PIPE CONNECTIONS TO STRUCTURES:
  - a. PROVIDE FLEXIBLE JOINTS AT ALL PIPE CONNECTIONS TO ALL STORM SEWER STRUCTURES.
  - b. ACCEPTABLE MANUFACTURERS / PRODUCTS:
    - i. FERNCO, "CONCRETE MANHOLE ADAPTORS" OR "LARGE-DIAMETER WATERSTOPS"
    - ii. PRESS-SEAL, WATERSTOP GROUTING RINGS"
    - iii. OR APPROVED EQUAL.
- 6. WATERMAIN SHALL BE INSTALLED AT LEAST 10 FEET HORIZONTALLY FROM ANY MANHOLE, CATCH BASIN, STORM SEWER, SANITARY SEWER, DRAINTILE OR OTHER POTENTIAL SOURCE FOR CONTAMINATION. THIS ISOLATION DISTANCE SHALL BE MEASURED FROM THE OUTER EDGE OF THE PIPE TO THE OUTER EDGE OF THE CONTAMINATION SOURCE (OUTER EDGE OF STRUCTURES OR PIPING OR SIMILAR).
- 7. ANY MANHOLE, CATCH BASIN, STORM SEWER, SANITARY SEWER, DRAINTILE OR OTHER POTENTIAL SOURCE FOR CONTAMINATION SHALL BE INSTALLED AT LEAST 10 FEET HORIZONTALLY FROM ANY WATERMAIN. THIS ISOLATION DISTANCE SHALL BE MEASURED FROM THE OUTER EDGE OF THE PIPE TO THE OUTER EDGE OF THE CONTAMINATION SOURCE (OUTER EDGE OF STRUCTURES OR PIPING OR SIMILAR).
- 8. LOCATE ALL EXISTING UTILITIES, VERIFY LOCATION, SIZE AND INVERT ELEVATION OF ALL EXISTING UTILITIES. VERIFY LOCATIONS, SIZES AND ELEVATIONS OF SAME BEFORE BEGINNING CONSTRUCTION.
- 9. PRIOR TO CONSTRUCTION OF PROPOSED BUILDING UTILITY SERVICES (STORM, SANITARY SEWER, WATERMAIN), VERIFY ALL PROPOSED BUILDING UTILITY SERVICE PIPE SIZES, LOCATIONS AND ELEVATIONS WITH MECHANICAL PLANS. COORDINATE CONSTRUCTION AND CONNECTIONS WITH MECHANICAL CONTRACTOR.
- 10. CONTRACTOR SHALL STAKE LIMITS OF WALKS AND CURBING PRIOR TO INSTALLATION OF GATE VALVES, CATCH BASINS AND MANHOLES. GATE VALVE AND MANHOLE LOCATIONS SHALL BE ADJUSTED TO AVOID PLACEMENT OF THESE STRUCTURES IN WALKS AND CURB AND GUTTER. CURB AND GUTTER SHALL BE STAKED TO ALLOW CURB INLET TYPE CATCH BASINS TO BE PROPERLY LOCATED IN LINE WITH CURBING.
- 11. THE CONTRACTOR SHALL BE REQUIRED TO SUPPLY SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL FOR THE UNDERGROUND STORAGE SYSTEM PRIOR TO INSTALLATION.

DESCRIPTION	SYMBOL	
	EXISTING	PROPOSED
DRAINAGE PIPE	— STO —	— STO —
SANITARY PIPE	— SAN —	— SAN —
GAS MAIN	— G —	— G —
WATER MAIN	— WM —	— WM —
TELEPHONE	— T —	— T —
ELECTRIC	— E —	— E —
DRAINAGE MANHOLE		⊙
SANITARY MANHOLE	⊙	⊙
CATCH BASIN	⊞	⊞
RIP RAP		▨
FLARED END SECTION		▷
GATE VALVE		⋈



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Fax: 201-337-1099

Seal:  
STATE OF NEW YORK  
THOMAS E. MORRIS  
REGISTERED PROFESSIONAL ENGINEER  
No. 82615

**OLA Consulting Engineers**  
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New York 10532  
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12 East 49th Street, 11th Flr.  
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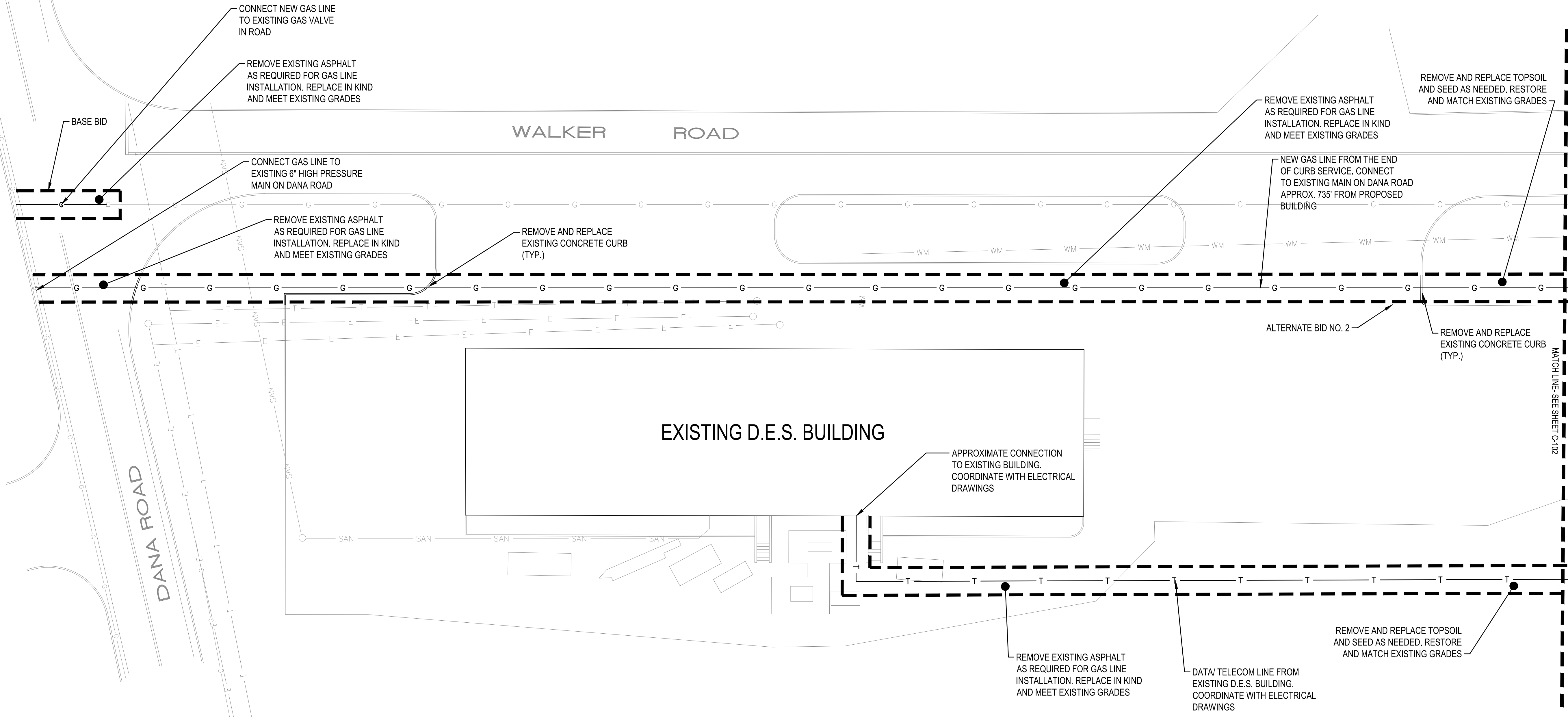
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CONTRACTOR		PROJECT COORDINATOR	
NAME	NAME	SIGNATURE	SIGNATURE
TITLE	TITLE	DATE	DATE

**WESTCHESTER COUNTY, NEW YORK**  
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION  
DIVISION OF ENGINEERING

NEW EQUIPMENT STORAGE BUILDING  
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
VALHALLA CAMPUS, VALHALLA, NEW YORK  
UTILITY PLAN

CONTRACT NUMBER	SHEET NUMBER
17-521	C-102
SHEET NO. 5 OF 53	
SCALE: AS SHOWN DATE: 11/16/2021	
DPW FILE NO.	REV. NO.
38-47-G-687-0	0



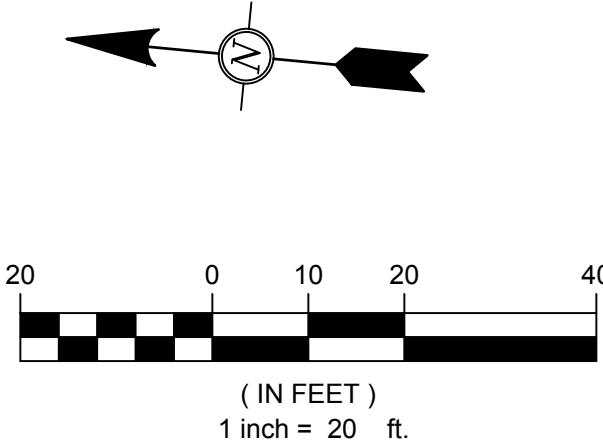


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LEGEND		
DESCRIPTION	SYMBOL	
	EXISTING	PROPOSED
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SANITARY PIPE	— SAN —	— SAN —
GAS MAIN	— G —	— G —
WATER MAIN	— WM —	— WM —
TELEPHONE	— T —	— T —
ELECTRIC	— E —	— E —
DRAINAGE MANHOLE		⊙
SANITARY MANHOLE	⊙	⊙
CATCH BASIN	⊞	⊞
RIP RAP		▨
FLARED END SECTION		▷
GATE VALVE		⋈



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CONTRACTOR			PROJECT COORDINATOR		
NAME			NAME		
SIGNATURE			SIGNATURE		
TITLE	DATE		TITLE	DATE	

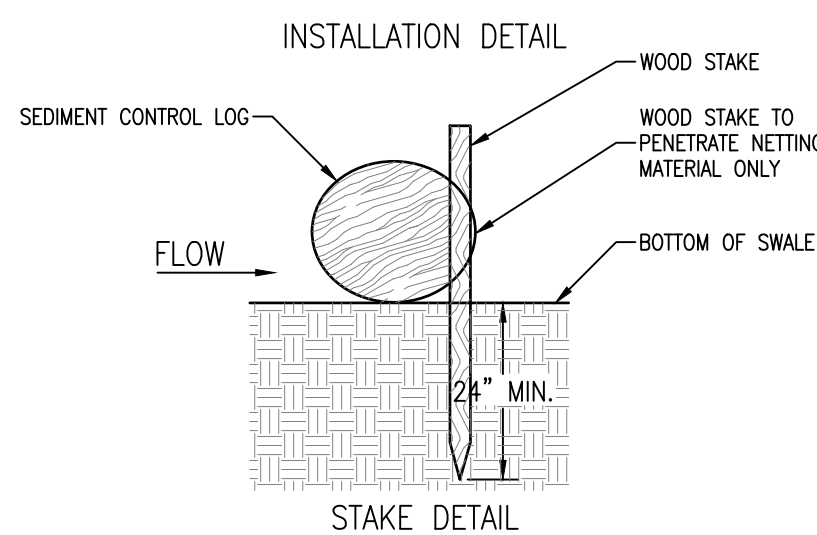
**WESTCHESTER COUNTY, NEW YORK**  
**DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION**  
DIVISION OF ENGINEERING  
NEW EQUIPMENT STORAGE BUILDING  
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
VALHALLA CAMPUS, VALHALLA, NEW YORK  
GAS AND TELEPHONE LINE PLAN

CONTRACT NUMBER	SHEET NUMBER
17-521	C-102.1
SHEET NO. 6 OF 53	
SCALE: AS SHOWN DATE: 11/16/2021	
DPW FILE NO.	REV. NO.
38-47-G-688-0	0









2"x4" WOOD FRAME

STAKE

FABRIC

BURIED FABRIC

DROP INLET WITH GATE

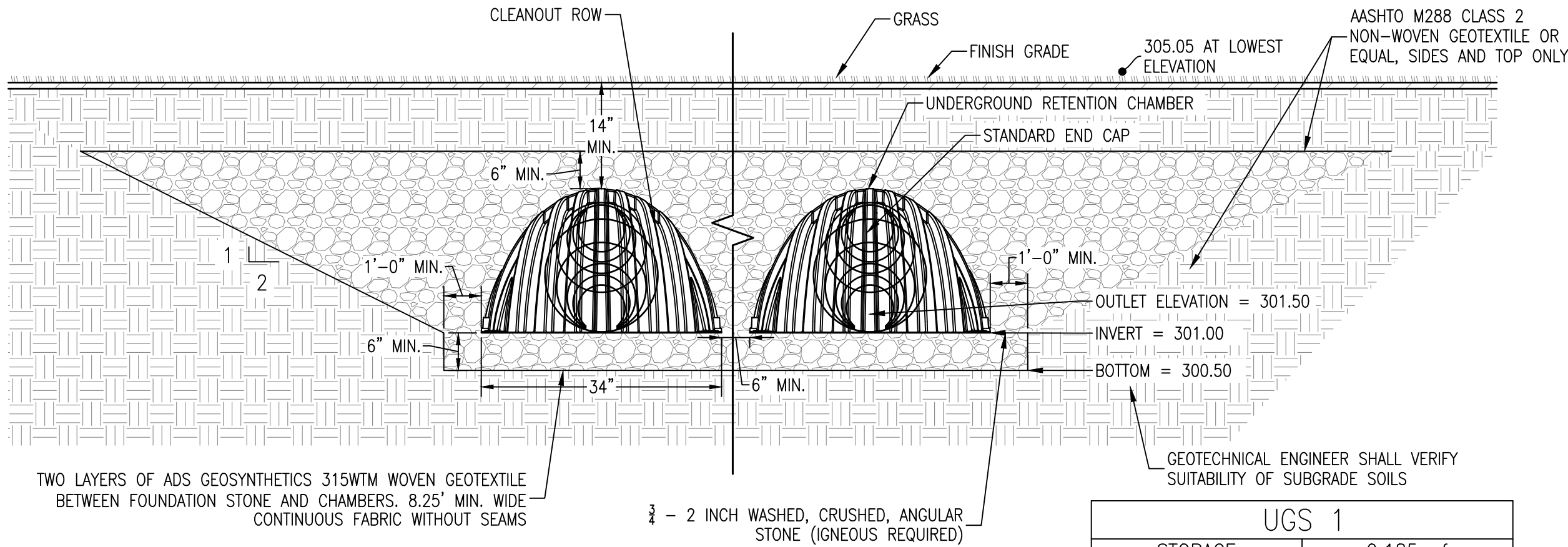
FRAME

GATHER EXCESS AT CORNERS

The technical drawings illustrate the construction of the pond. The **SECTION VIEW** shows a cross-section of the pond wall, which is 10 feet high. It consists of a 10 MI PLASTIC LINER supported by a WOOD FRAME SECURELY FASTENED AROUND ENTIRE PERIMETER WITH STAKES, AS SHOWN. The **PLAN VIEW** shows the top-down layout of the pond, which is rectangular with overall dimensions of 10' by 16'. The plan view also shows the 10 MI PLASTIC LINER and the 2x12 ROUGH WOOD FRAME. The frame is composed of two stacked 2x12s, with the top 2x12 being 16' long and the bottom 2x12 being 10' long. The stakes are shown securing the liner to the frame.

38-47-G-690-0



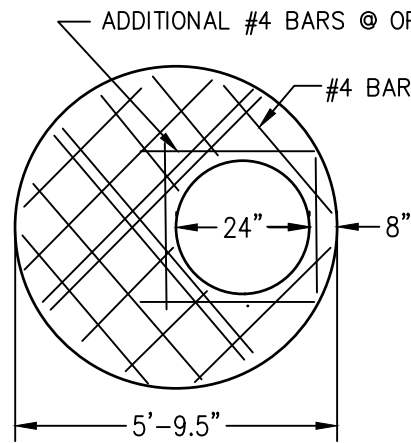


- NOTES:
- SUPPLIERS SHALL USE 30% VOID SPACE FOR AGGREGATE STORAGE (STONE VOIDS)
  - THE EXFILTRATION VELOCITY (CONSTANT VELOCITY) FOR THE REQUESTED APPROVED EQUAL SYSTEM SHALL NOT EXCEED 0.3 INCHES PER HOUR.
  - THE SYSTEM BASE AREA AT THE BOTTOM OF THE ROCK SHALL NOT BE LESS THAN 480 SQUARE FEET.
  - THE VOLUME OF THE SYSTEM, INCLUDING VOID SPACE, SHALL NOT BE LESS THAN 500 CUBIC FEET.

\* BASED ON STORMTECH SC-740 DESIGN. QUANTITIES AND DIMENSIONS MAY VARY WITH OTHER PRE-APPROVED PRODUCTS

### UGS 1 SECTION

UGS 1	
STORAGE	0.185 af
LENGTH	138.9 FEET
WIDTH	30.0 FEET
CHAMBERS	6 X 19
INVERT	301.00
BOTTOM OF ROCK	300.50
ROWS	6
CHAMBERS PER ROW	19



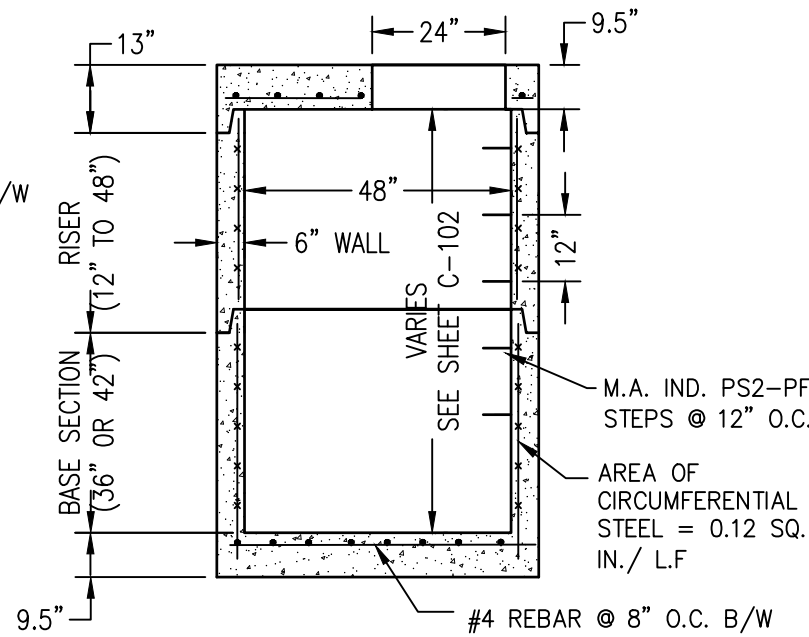
#### PLAN

##### NOTES:

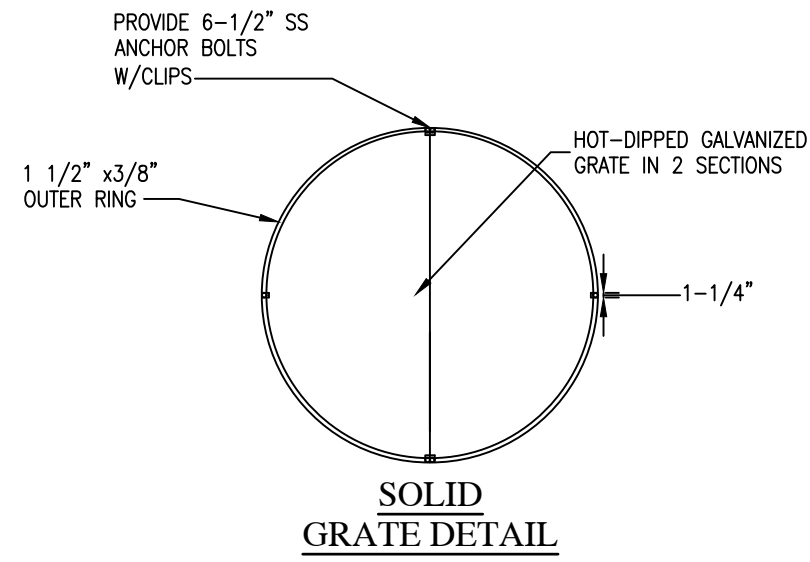
- MANHOLE TO BE IN ACCORDANCE WITH ASTM C478 "STANDARD SPECIFICATION FOR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS" AND AASHTO H-20 TRAFFIC LOADING.
- CONCRETE 4000 PSI @ 28 DAYS.
- WELDED WIRE MESH ASTM A185.
- REBAR ASTM A615 GRADE 60.

### 48" I.D. DRAINAGE MANHOLE

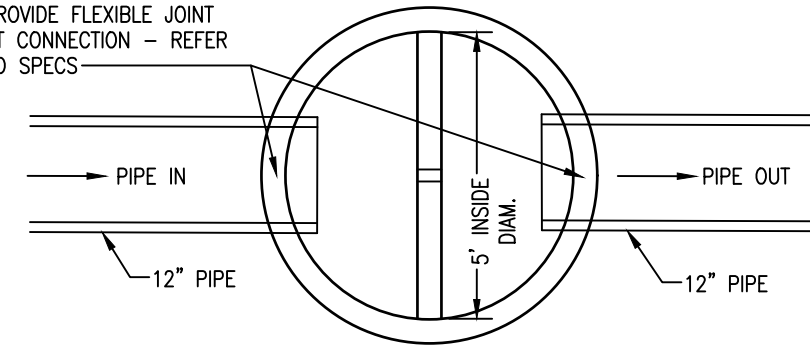
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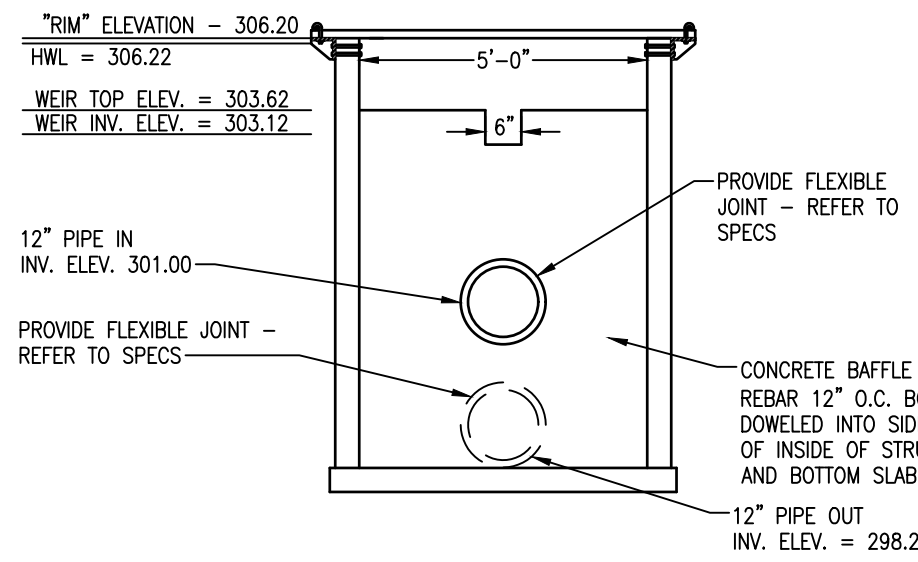
#### SECTION



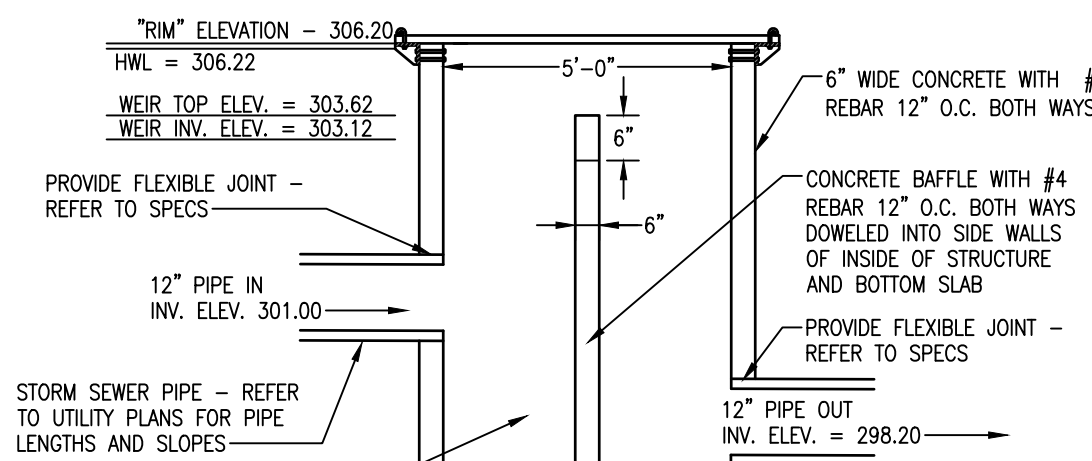
#### SOLID GRATE DETAIL



#### PLAN



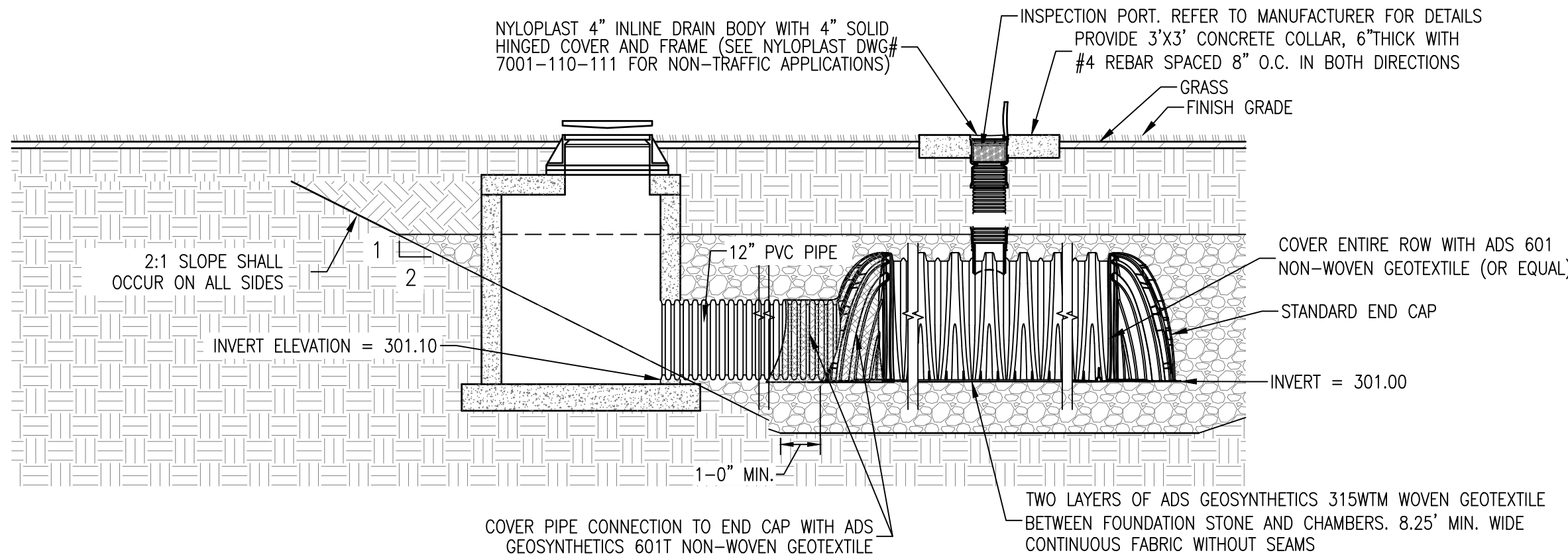
#### SECTION



#### SECTION

### OUTLET CONTROL STRUCTURE (OCS 1)

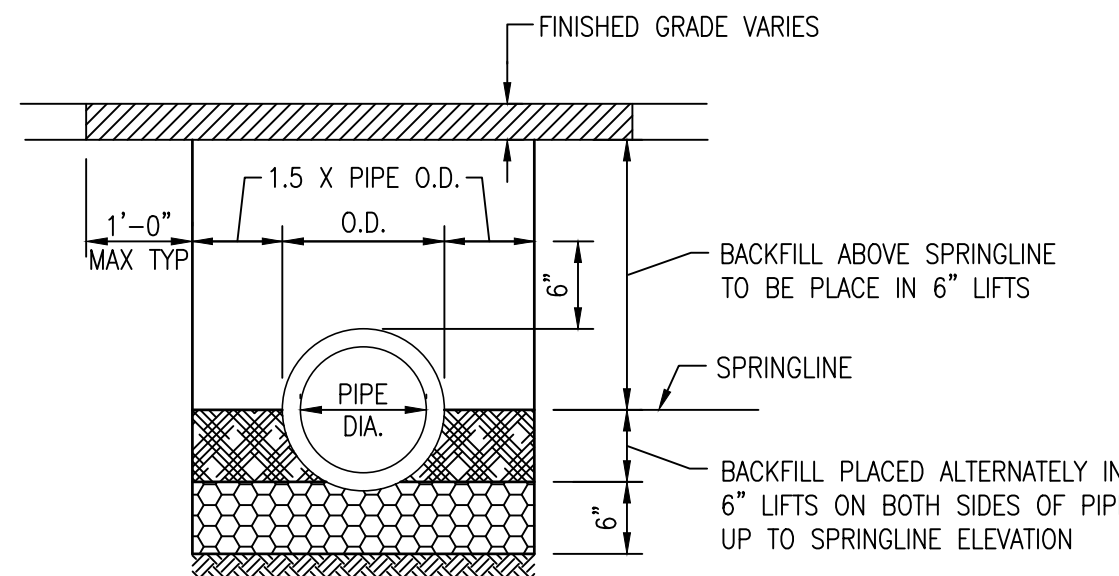
N.T.S.



- NOTES:
- INSPECTION PORT MUST BE CONNECTED THROUGH KNOCK-OUT LOCATED AT CENTER OF CHAMBER.
  - ALL SCHEDULE 40 FITTINGS TO BE SOLVENT CEMENTED.

### UGS 1 CLEANING ROW CONNECTION AND INSPECTION PORT

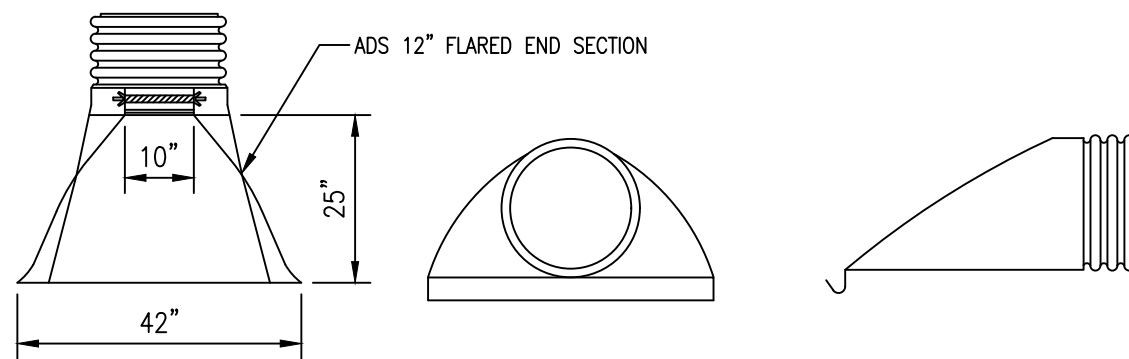
N.T.S.



- NOTE:
- IF DEPTH OF TRENCH EQUALS OR EXCEEDS 5'-0", THE CONTRACTOR MUST PROVIDE SHEETING AND BRACING, IN ACCORDANCE WITH OSHA REGULATIONS

### PIPE TRENCH DETAIL-CPP

N.T.S.



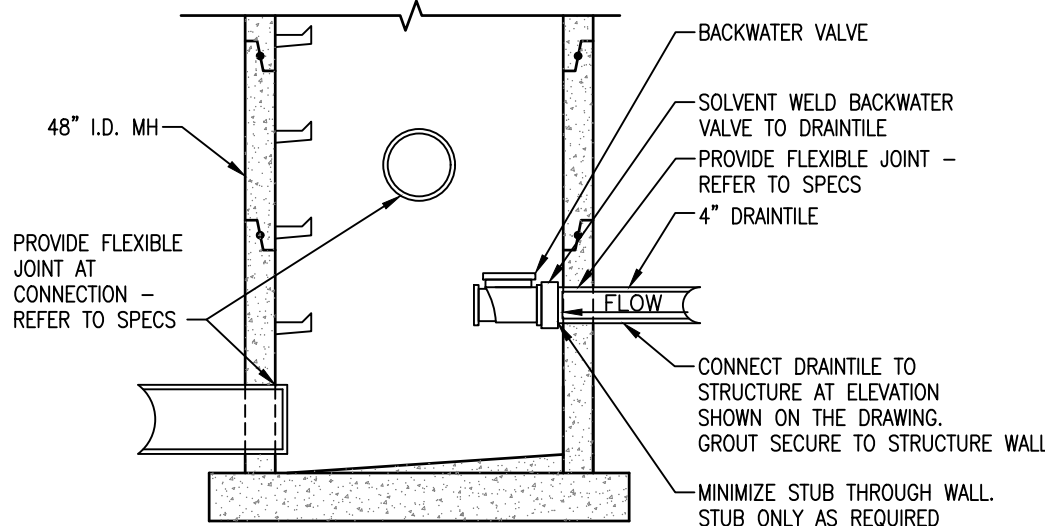
#### TOP VIEW

#### FRONT VIEW

#### RIGHT SIDE VIEW

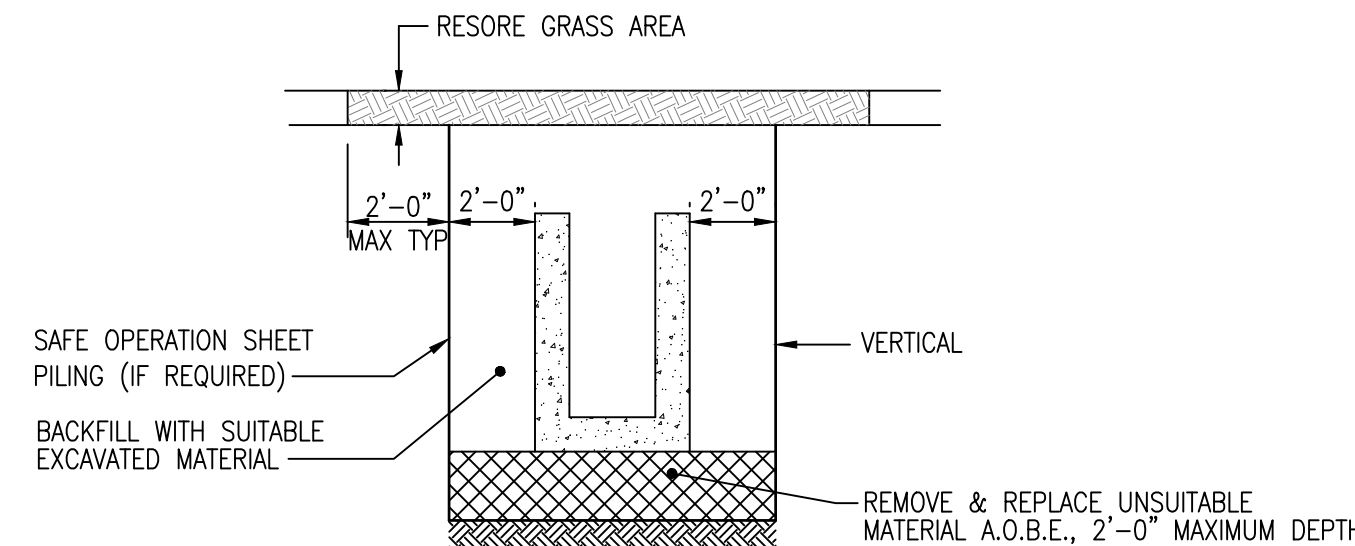
### 12" C.P.P. END SECTION DETAIL

N.T.S.



### BACKWATER VALVE

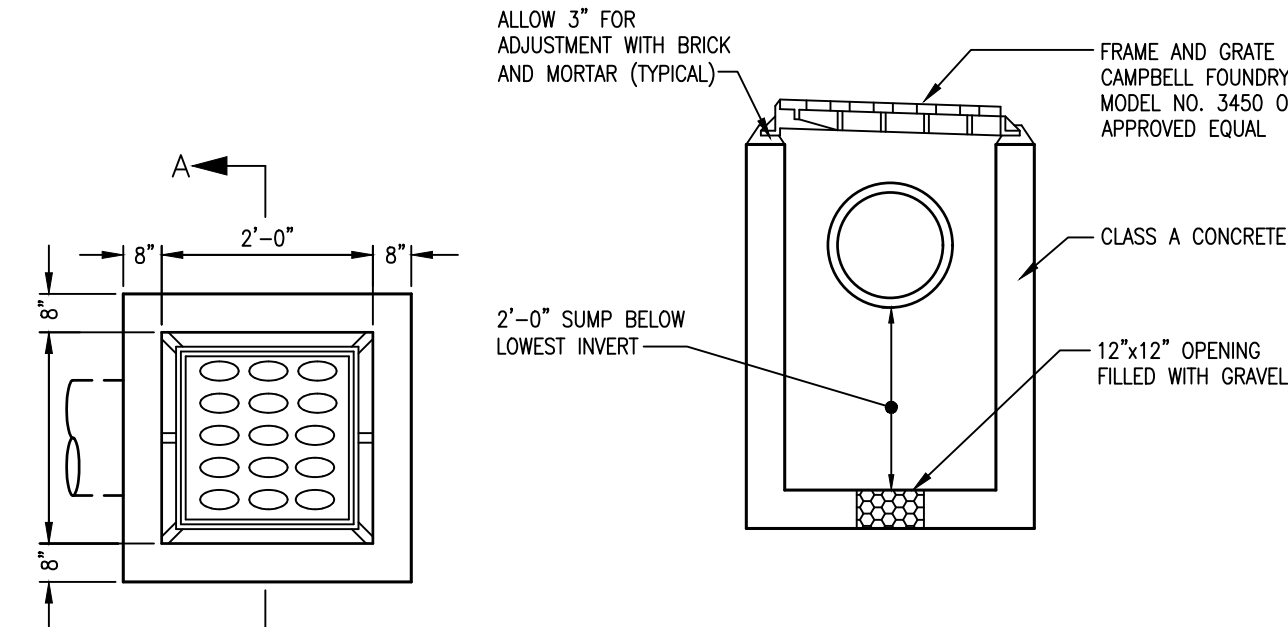
N.T.S.



- NOTE:
- IF DEPTH OF TRENCH EQUALS OR EXCEEDS 5'-0", THE CONTRACTOR MUST PROVIDE SHEETING AND BRACING, IN ACCORDANCE WITH OSHA REGULATIONS

### DRAINAGE STRUCTURE INSTALLATION DETAIL

N.T.S.



### CATCH BASIN

N.T.S.

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646.849.4110  
olace.com

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

#### RECORD DRAWING CERTIFICATION

- ☐ AS BUILT - CHANGES AS NOTED  
☐ AS BUILT - NO CHANGES

#### CONTRACTOR

NAME \_\_\_\_\_

SIGNATURE \_\_\_\_\_

TITLE \_\_\_\_\_ DATE \_\_\_\_\_

#### PROJECT COORDINATOR

NAME \_\_\_\_\_

SIGNATURE \_\_\_\_\_

TITLE \_\_\_\_\_ DATE \_\_\_\_\_

**WESTCHESTER COUNTY, NEW YORK**  
**DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION**  
DIVISION OF ENGINEERING

NEW EQUIPMENT STORAGE BUILDING  
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
VALHALLA CAMPUS, VALHALLA, NEW YORK  
CIVIL DETAILS II

CONTRACT NUMBER  
17-521

SHEET NUMBER  
C-105

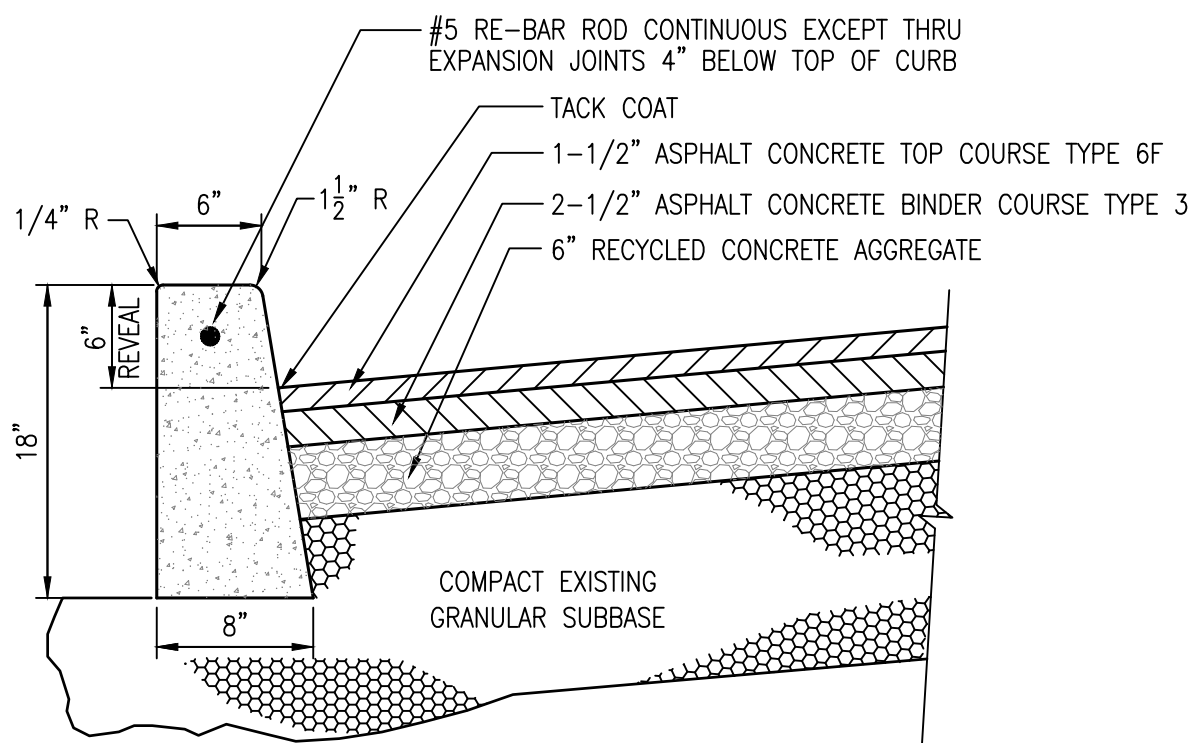
SHEET NO. 9 OF 53

SCALE: AS SHOWN  
DATE: 11/16/2021

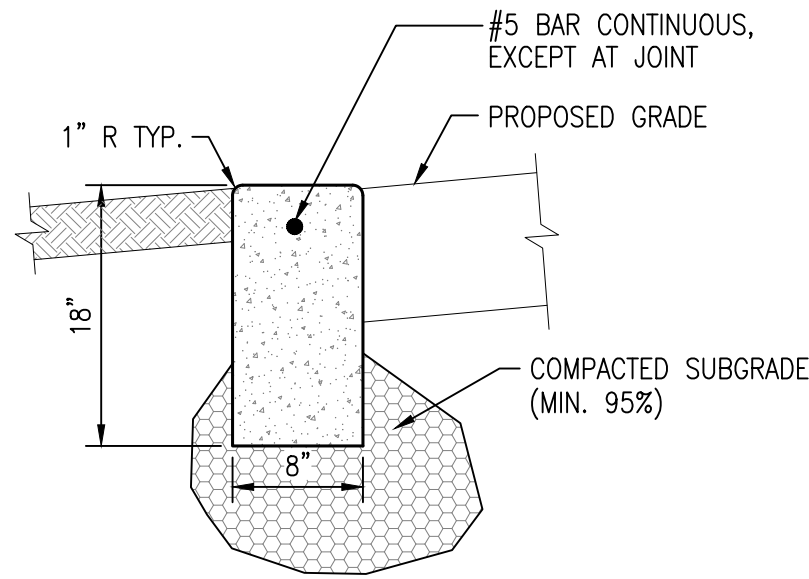
DPW FILE NO.  
38-47-C-691-0

REV. NO.  
0

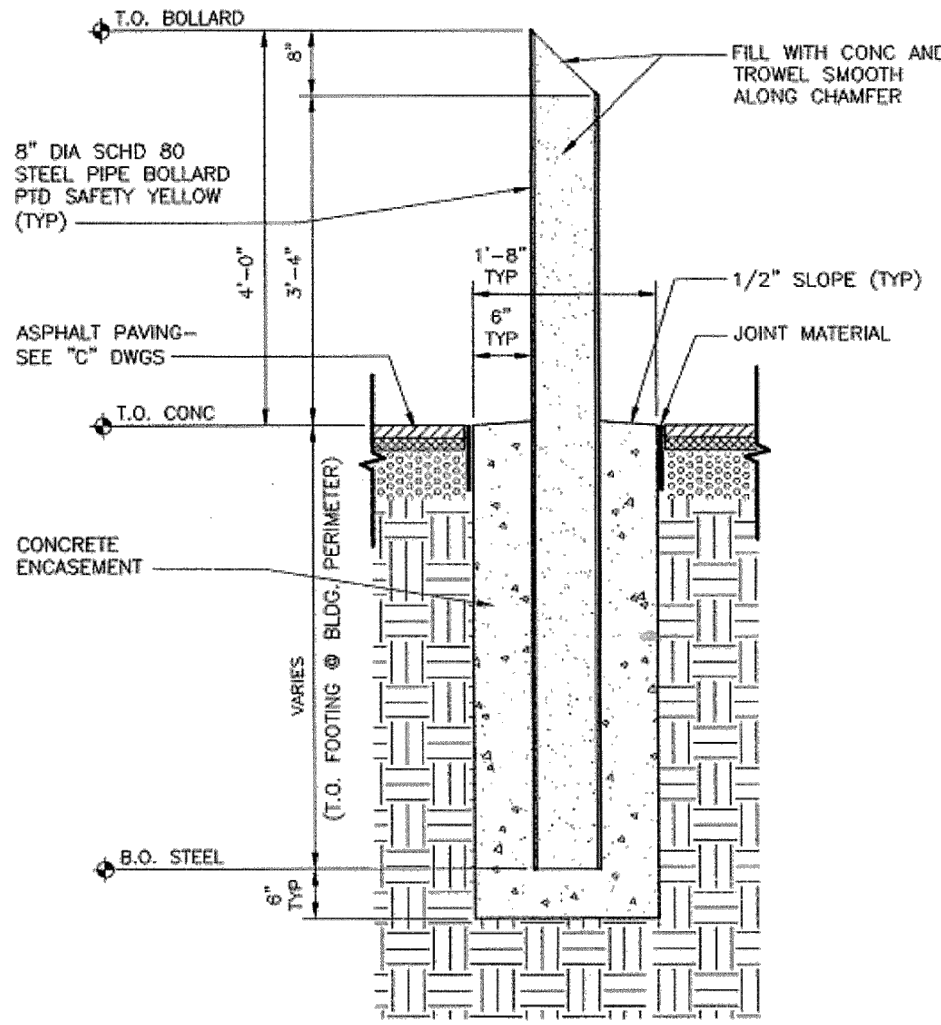




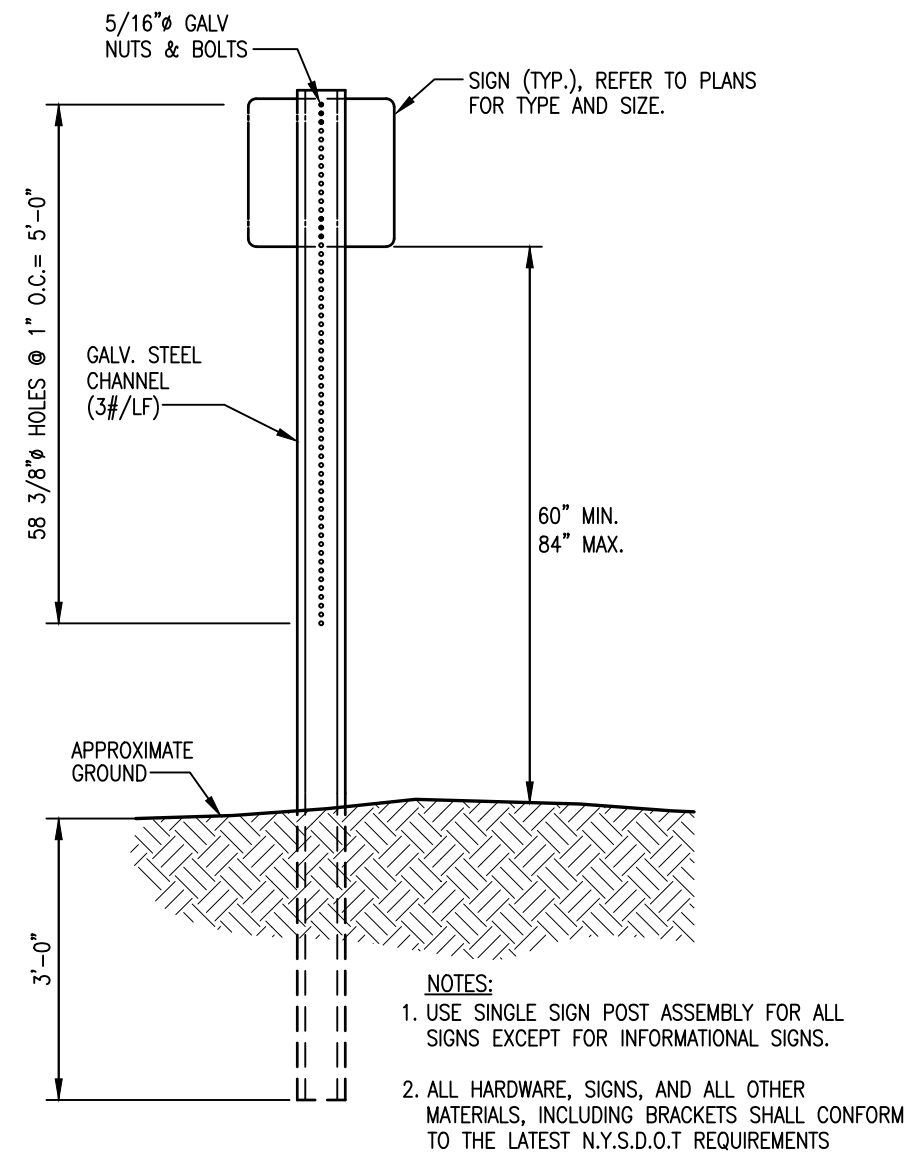
SEE CIVIL NOTES, THIS SHEET  
**CONCRETE CURB/PAVEMENT SECTION**  
 N.T.S.



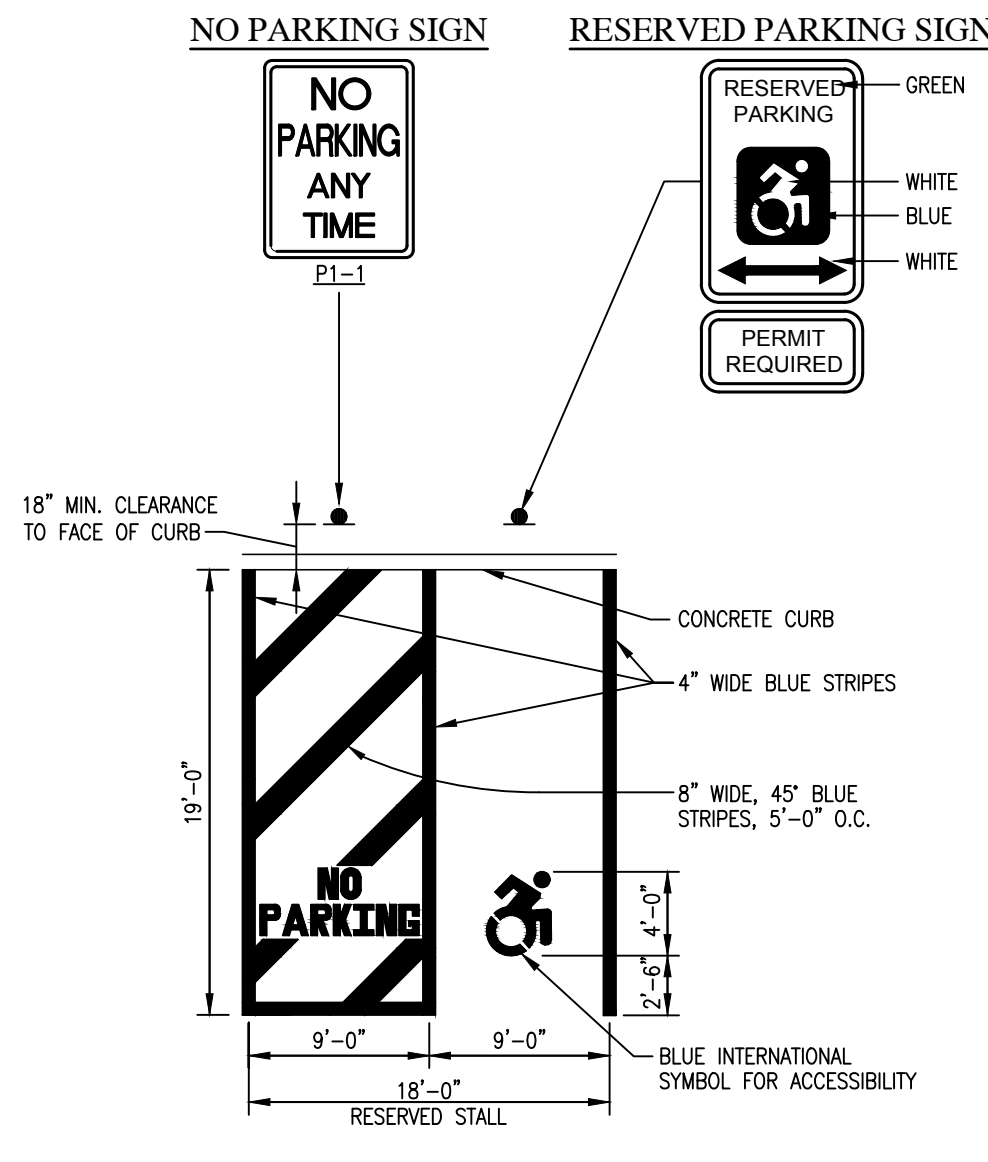
SEE CIVIL NOTES, THIS SHEET  
**FLUSH CONCRETE CURB DETAIL**  
 N.T.S.



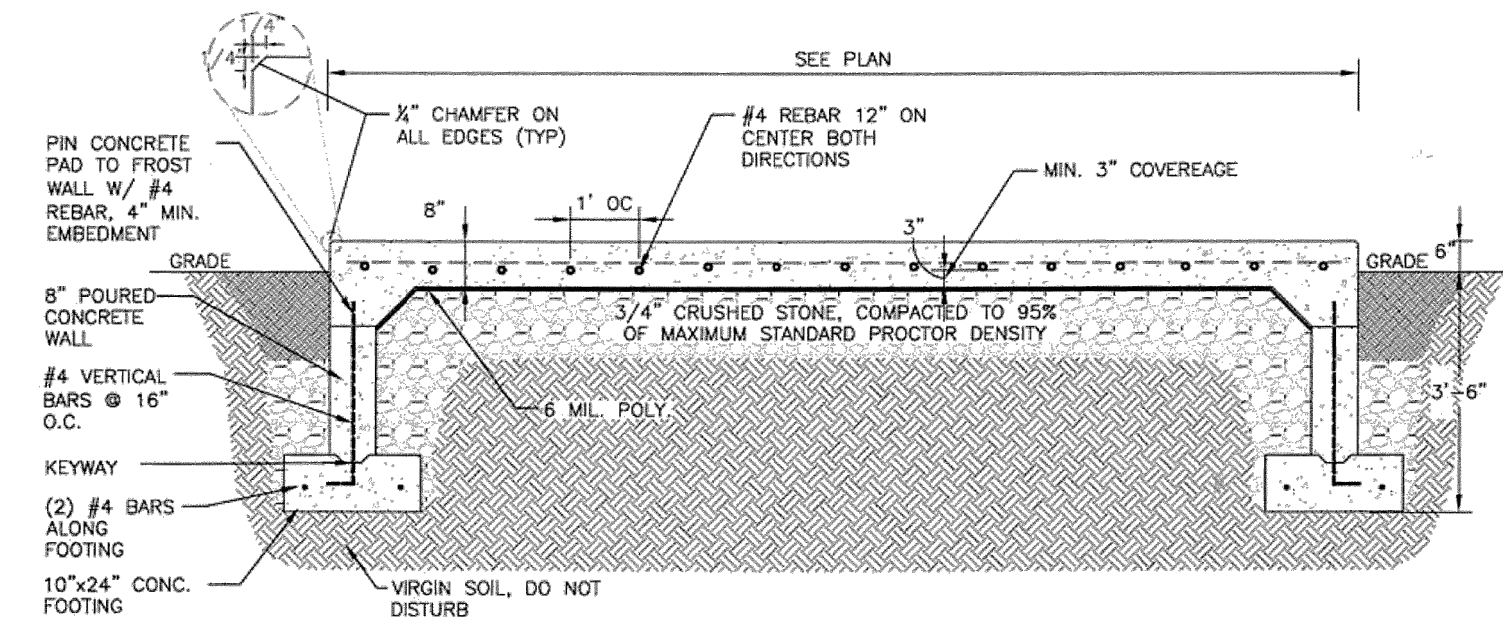
**BOLLARD DETAIL**  
 N.T.S.



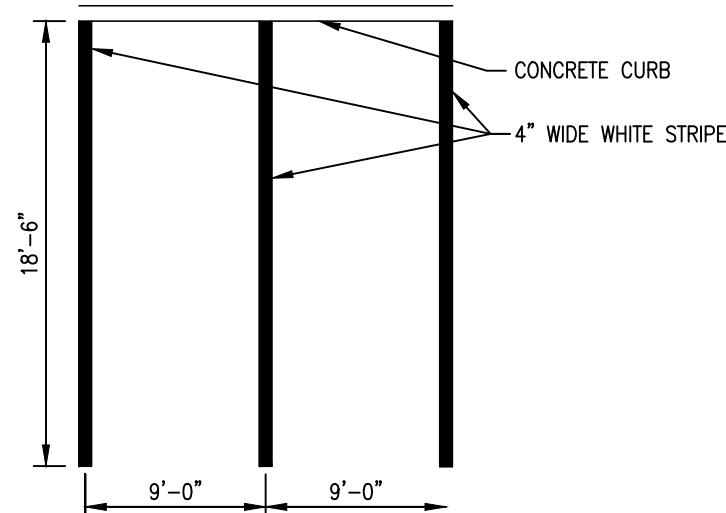
**SIGN ASSEMBLY DETAILS**  
 N.T.S.



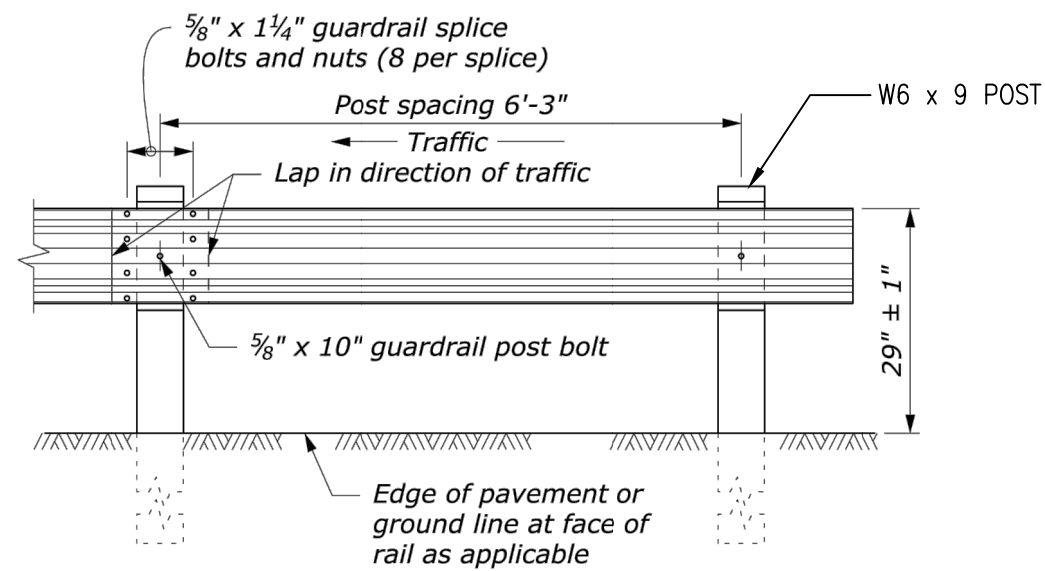
SEE CIVIL NOTES, THIS SHEET  
**RESERVED PARKING STALL DETAIL**  
 N.T.S.



**CONCRETE GENERATOR SLAB DETAIL**  
 N.T.S.

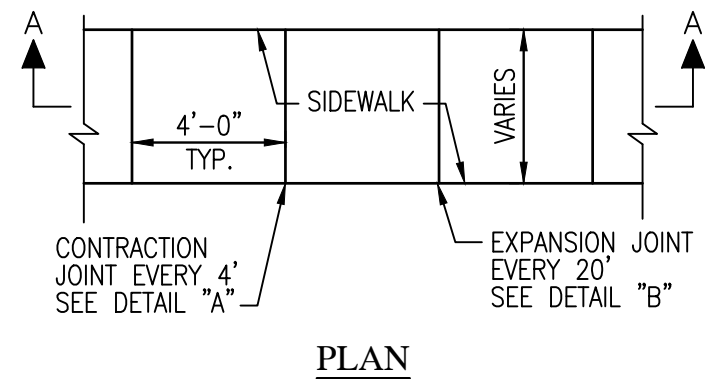


SEE CIVIL NOTES, THIS SHEET  
**TYPICAL PARKING STALL LAYOUT**  
 N.T.S.

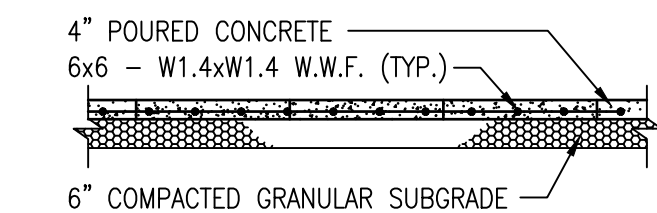


**POST SECTION**  
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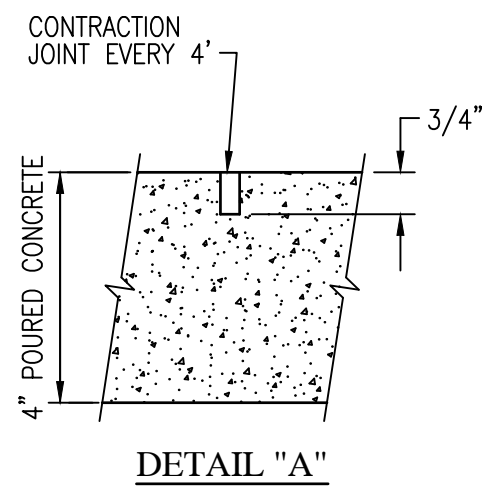
- CIVIL NOTES:**
- CONCRETE FOR CURBS AND SIDEWALKS SHALL HAVE A COMPRESSIVE STRENGTH OF 4,000 P.S.I. AT 28 DAYS.
  - MAXIMUM SPACING OF EXPANSION JOINTS TO BE 20 FEET.
  - CONCRETE CURBS TO CURE A MINIMUM OF 14 DAYS PRIOR TO ROADWAY PAVING.
  - SUBBASE TO BE MECHANICALLY COMPACTED TO 95% MAX. DENSITY PER AASHTO T-99
  - ALL HANDICAP RAMPS, PARKING SPACES AND ACCESS ISLES SHALL BE IN COMPLIANCE WITH THE LATEST NEW YORK STATE UNIFORM PREVENTION, BUILDING CODE AND ICC/ANSI A117.1 STANDARDS.
  - EXISTING PAVEMENT TO BE SAWCUT AS REQUIRED PRIOR TO PAVING OPERATIONS, MINIMUM 2' FROM PROPOSED CURBS



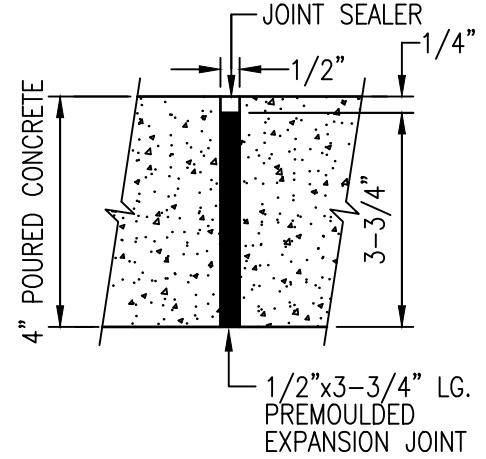
**PLAN**



**SECTION A-A**



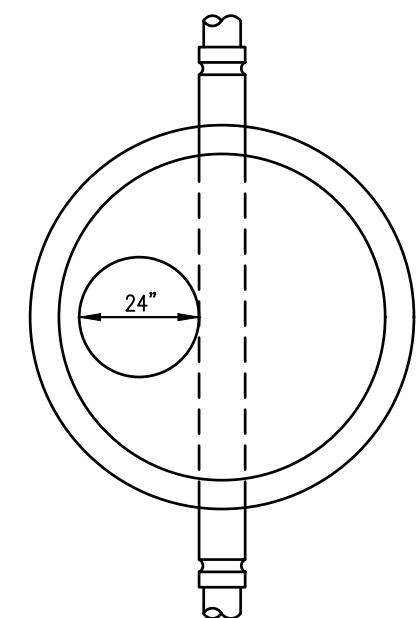
**DETAIL "A"**



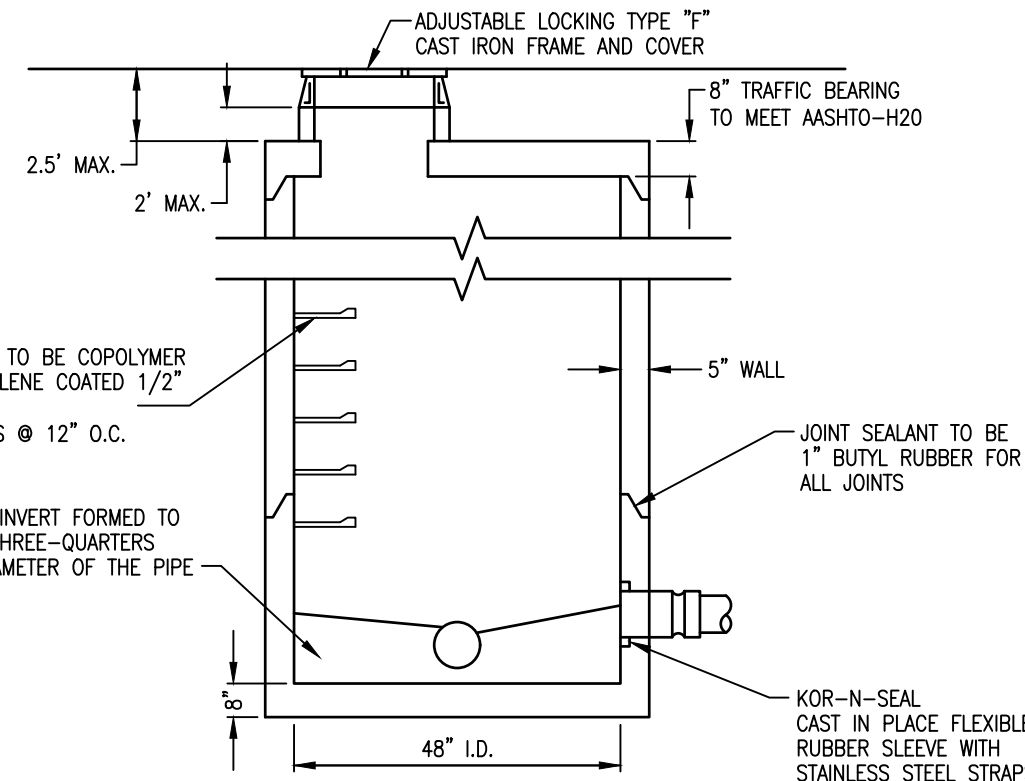
**DETAIL "B"**

1. NOT FOR GENERATOR PAD  
**CONCRETE SIDEWALK DETAILS**  
 N.T.S.

- NOTES:**
- ALL MANHOLE SECTIONS SHALL CONFORM TO A.S.T.M. C-478, LATEST REVISION STANDARD SPECIFICATIONS FOR PRECAST REINFORCED CONCRETE M.H. SECTIONS.
  - MANHOLE RISER SECTION TO BE FURNISHED IN 12.5, OR 4' HEIGHTS, AS REQUIRED.
  - LOADING TO CONFORM TO AASHTO H-20 LOADING
  - ALL CONCRETE IS TO MEET 4000 PSI AT 28 DAY SET.
  - OUTLET PIPE TO BE SET 0.1' MINIMUM BELOW INLET PIPES.
  - THE MAXIMUM CHANGE IN ELEVATION BETWEEN INLET AND OUTLET INVERT(S) SHALL BE NO GREAT THAN 2 FEET.



**PLAN**



**SECTION A-A**

**SANITARY MANHOLE DETAIL**  
 N.T.S.

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REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

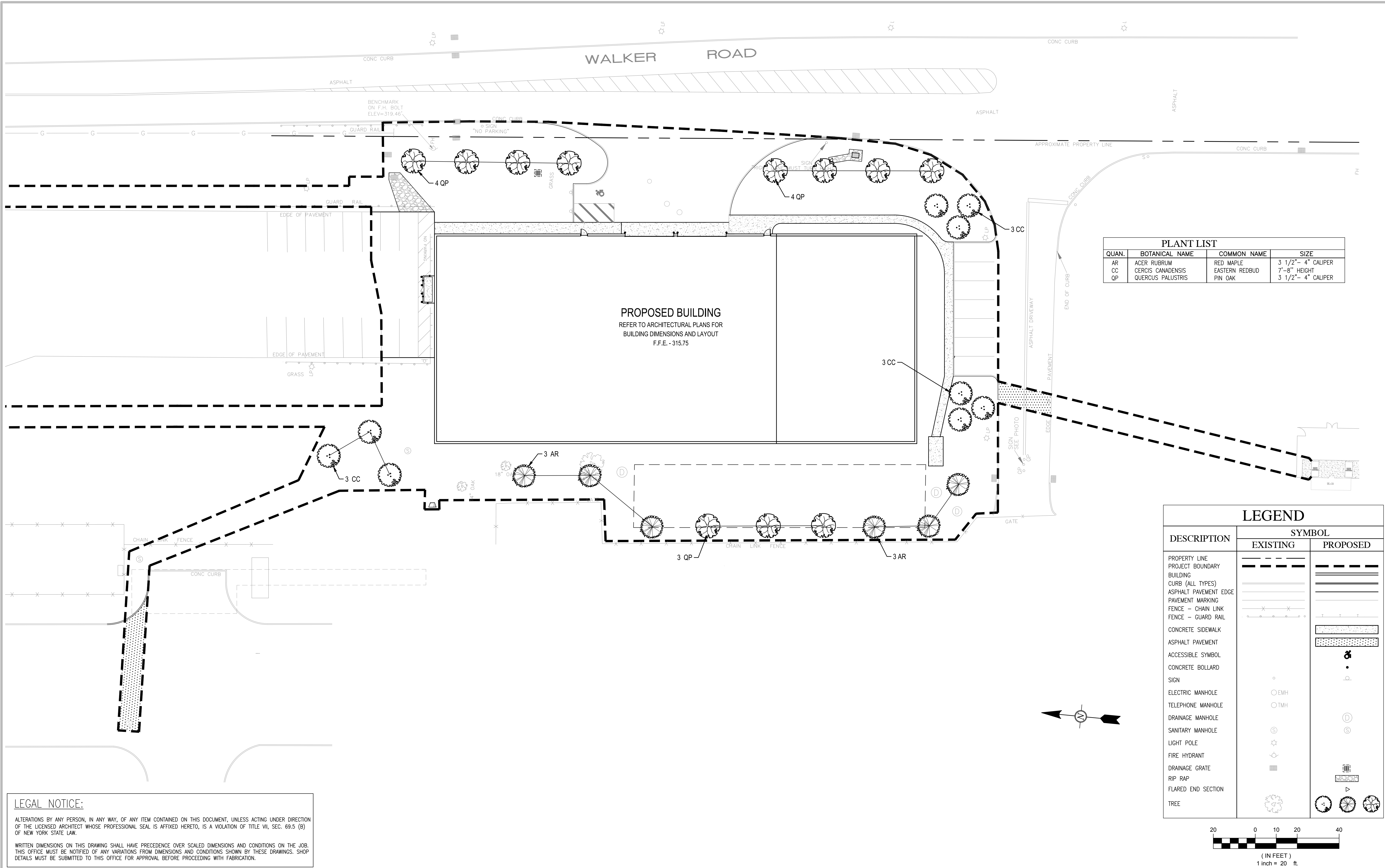
RECORD DRAWING CERTIFICATION			
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CONTRACTOR		PROJECT COORDINATOR	
NAME	NAME	NAME	NAME
SIGNATURE	SIGNATURE	SIGNATURE	SIGNATURE
TITLE	TITLE	TITLE	TITLE
DATE	DATE	DATE	DATE

**WESTCHESTER COUNTY, NEW YORK**  
**DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION**  
 DIVISION OF ENGINEERING

NEW EQUIPMENT STORAGE BUILDING  
 RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
 VALHALLA CAMPUS, VALHALLA, NEW YORK  
 CIVIL DETAILS III

CONTRACT NUMBER	SHEET NUMBER
17-521	C-106
SHEET NO. 10 OF 53	
SCALE: AS SHOWN	
DATE: 11/16/2021	
DPW FILE NO.	REV. NO.
38-47-C-692-0	0





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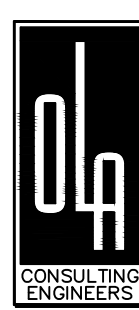
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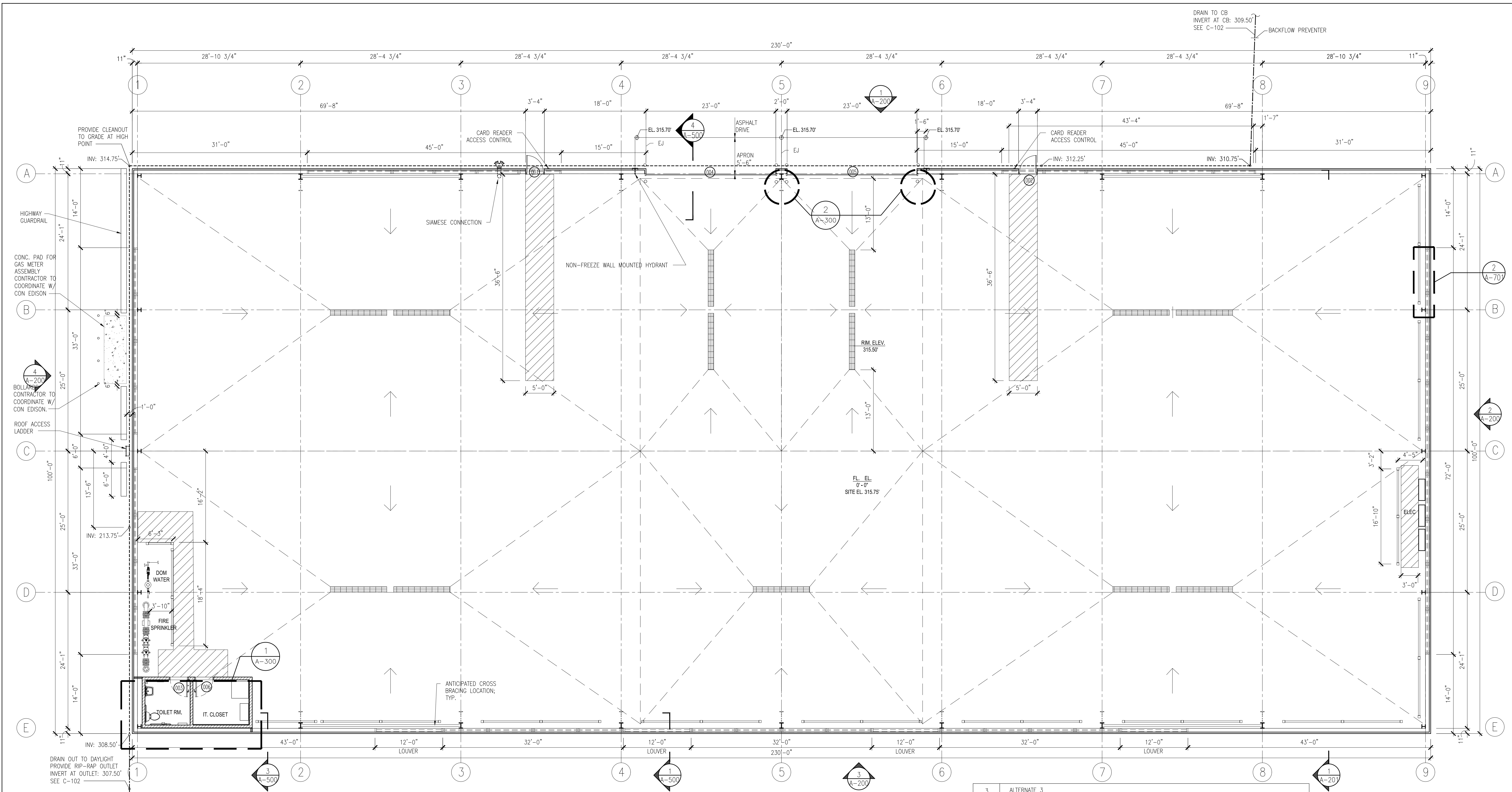
RECORD DRAWING CERTIFICATION

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NAME	NAME
SIGNATURE	SIGNATURE
TITLE	TITLE
DATE	DATE

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DIVISION OF ENGINEERING

NEW EQUIPMENT STORAGE BUILDING  
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
VALHALLA CAMPUS, VALHALLA, NEW YORK  
LANDSCAPE PLAN





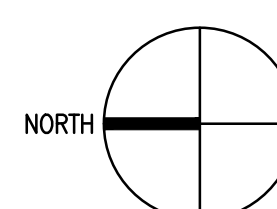
**1 FLOOR PLAN**  
SCALE: 1/8" = 1'-0"

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LEGEND	
	DOOR
	INTERIOR PARTITION
	PITCH TO DRAIN
	FLOOR DRAIN
	GUARD RAIL
	BOLLARD
	PAINTED FLOOR PATTERN SEE 3/A-300
	4" 3 HOLE 120" - PVC SMOOTH WALL DRAIN PIPE (HOLES ON TOP)
	4" SOLID DRAIN PIPE

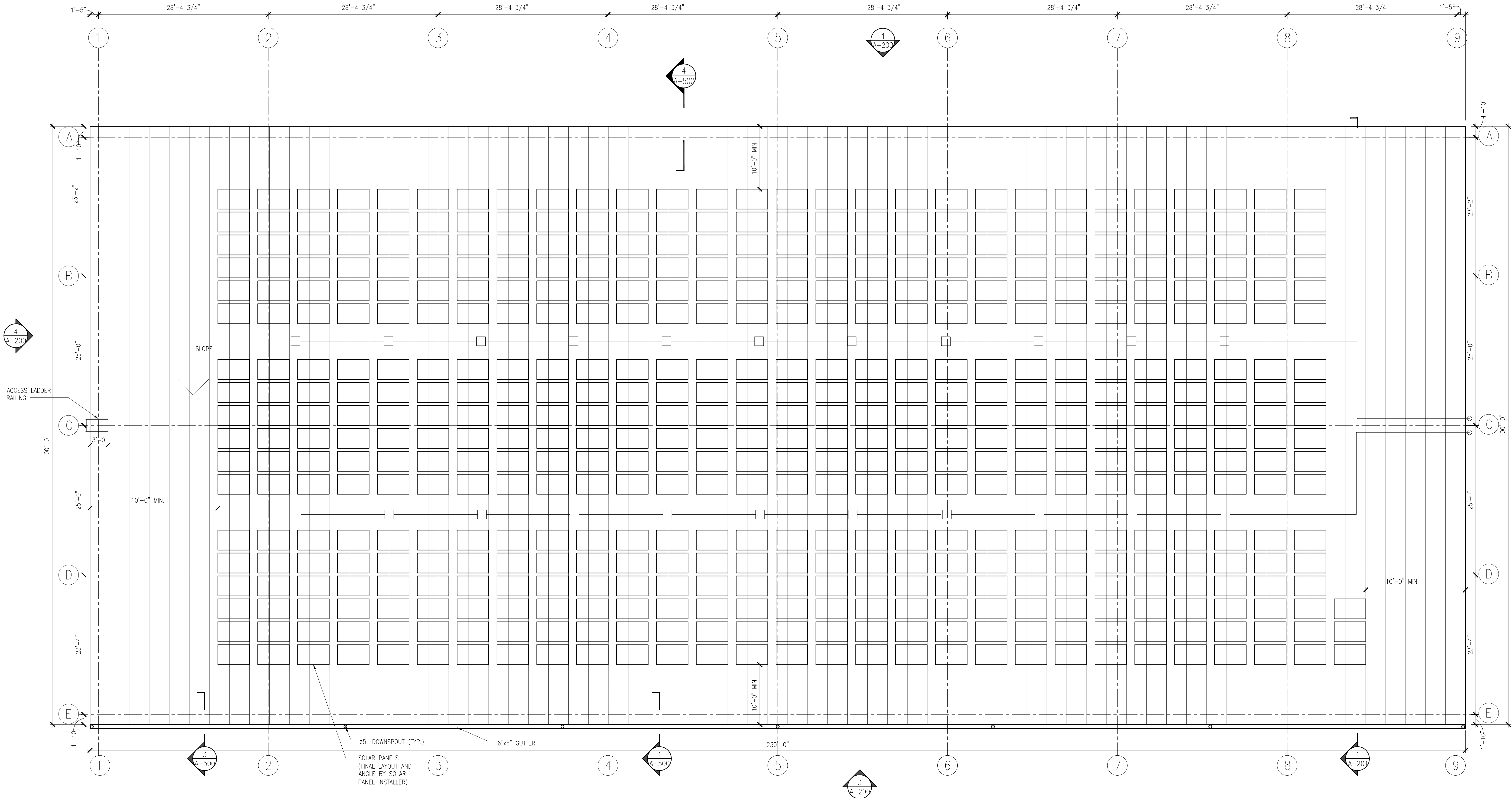
1	<b>ALTERNATE 1</b> OMIT MODULE FOR CONNECTION OF PORTABLE GENERATOR. PROVIDE 70KW OIL FIRED GENERATOR, EQUIPMENT AND ALL RELATED LABOR, MATERIAL AND EQUIPMENT NECESSARY FOR PURCHASE AND INSTALLATION OF FULLY FUNCTIONAL GENERATOR UNIT PER DRAWINGS AND SPECIFICATIONS. (BASE BID: CONCRETE PAD AND MODULE FOR CONNECTION OF PORTABLE GENERATOR.)
2	<b>ALTERNATE 2</b> OMIT NATURAL GAS SUPPLY FROM WALKER ROAD WITH ASSOCIATED CONSTRUCTION WORK. PROVIDE NEW GAS LINE FROM DANA ROAD, INCLUSIVE OF ALL LABOR, MATERIAL AND EQUIPMENT FOR TRENCHING, PIPING, BACKFILL AND RESTORATION, CONNECTIONS, AND TESTING FOR THE FULLY FUNCTIONAL NATURAL GAS SERVICE. (BASE BID: PROVIDE GAS SUPPLY UTILIZING INACTIVE GAS LINE ALONG WALKER ROAD, INCLUDING ALL LABOR, MATERIAL AND EQUIPMENT FOR WORK SHOWN ON THE DRAWINGS TO OBTAIN A FULLY FUNCTIONAL NATURAL GAS SUPPLY, INCLUSIVE OF TESTING THE INACTIVE LINE PER CON EDISON SPECIFICATIONS.)

3	<b>ALTERNATE 3</b> PROVIDE AIR COMPRESSOR UNIT. (BASE BID: ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY FOR ELECTRICAL AND PLUMBING WORK ASSOCIATED WITH COMPRESSED AIR, EXCLUSIVE OF ONLY AIR-COMPRESSOR UNIT.)
4	<b>ALTERNATE 4</b> PROVIDE LABOR AND MATERIAL FOR TWO COATS OF GLOSS WHITE FINISH PAINT OF ALL EXPOSED STRUCTURAL FRAMING MEMBERS. (BASE BID: STANDARD FINISH FROM PRE-ENGINEERED BUILDING MANUFACTURER OF ALL EXPOSED STRUCTURAL STEEL MEMBERS.)
5	<b>ALTERNATE 5</b> PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY FOR BASE BID PLUS ADDITIONAL AREAS OF BRICK VENEER AND CONCRETE FOUNDATION AND FOOTING SHELF ON SOUTH SIDE OF BUILDING. (BASE BID: PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY FOR BRICK INSTALLED WITH CAVITY WALL ON NORTH & EAST SIDE OF BUILDING, WHERE INDICATED ON DRAWINGS; PER ALL PROJECT DETAILS, SIZES, PROFILES, AND SPECIFICATIONS PROVIDED.)



	<b>DCAK · MSA</b> ARCHITECTURE AND ENGINEERING 53 HUDSON AVENUE NYACK, NEW YORK 10960 www.DCAK-MSA.com Email: info@DCAK-MSA.com Tel 845-353-1300 Fax 845-353-1614	<b>RCM Technologies</b> 99 BAUER DRIVE, SUITE 101 OAKLAND, NJ 07436 Tel: 201-416-4012 Fax: 201-337-1099		OLA Consulting Engineers 50 Broadway, Hawthorne, New York 10532 914.747.2800 12 East 49th Street, 11th Flr. New York, NY 10017 646.849.4110 olace.com	RECORD DRAWING CERTIFICATION		<b>WESTCHESTER COUNTY, NEW YORK</b> DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION DIVISION OF ENGINEERING	CONTRACT NUMBER 17-521	SHEET NUMBER A-101				
					AS BUILT - CHANGES AS NOTED AS BUILT - NO CHANGES								
					CONTRACTOR		PROJECT COORDINATOR		NEW EQUIPMENT STORAGE BUILDING RICHARD A. FLYNN, SR. FIRE TRAINING CENTER VALHALLA CAMPUS, VALHALLA, NEW YORK <b>FLOOR PLAN</b>	SCALE: AS SHOWN DATE: 11/16/2021	DPW FILE NO. 38-47-A-694-0	REV. NO. 0	
					NAME SIGNATURE TITLE		NAME SIGNATURE TITLE						
					REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION				



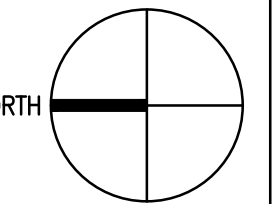


1 ROOF PLAN  
A-102 SCALE: 1/8" = 1'-0"

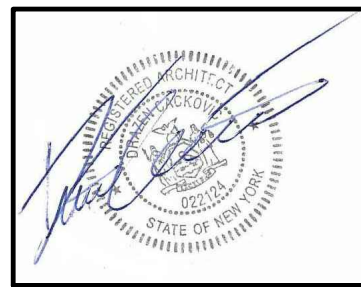
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Seal:

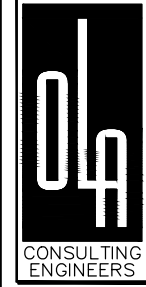


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RECORD DRAWING CERTIFICATION

☐ AS BUILT - CHANGES AS NOTED  
☐ AS BUILT - NO CHANGES

CONTRACTOR

NAME \_\_\_\_\_  
SIGNATURE \_\_\_\_\_  
TITLE \_\_\_\_\_ DATE \_\_\_\_\_

PROJECT COORDINATOR

NAME \_\_\_\_\_  
SIGNATURE \_\_\_\_\_  
TITLE \_\_\_\_\_ DATE \_\_\_\_\_

**WESTCHESTER COUNTY, NEW YORK**  
**DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION**  
DIVISION OF ENGINEERING

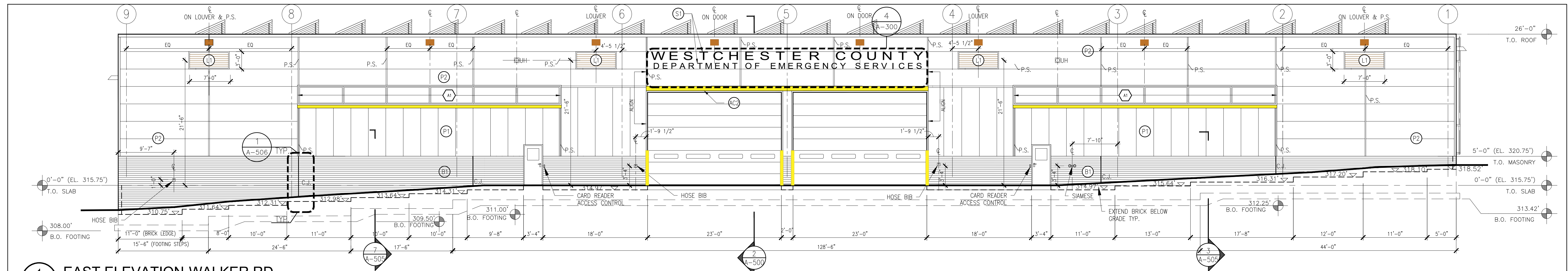
NEW EQUIPMENT STORAGE BUILDING  
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VALHALLA CAMPUS, VALHALLA, NEW YORK

ROOF PLAN

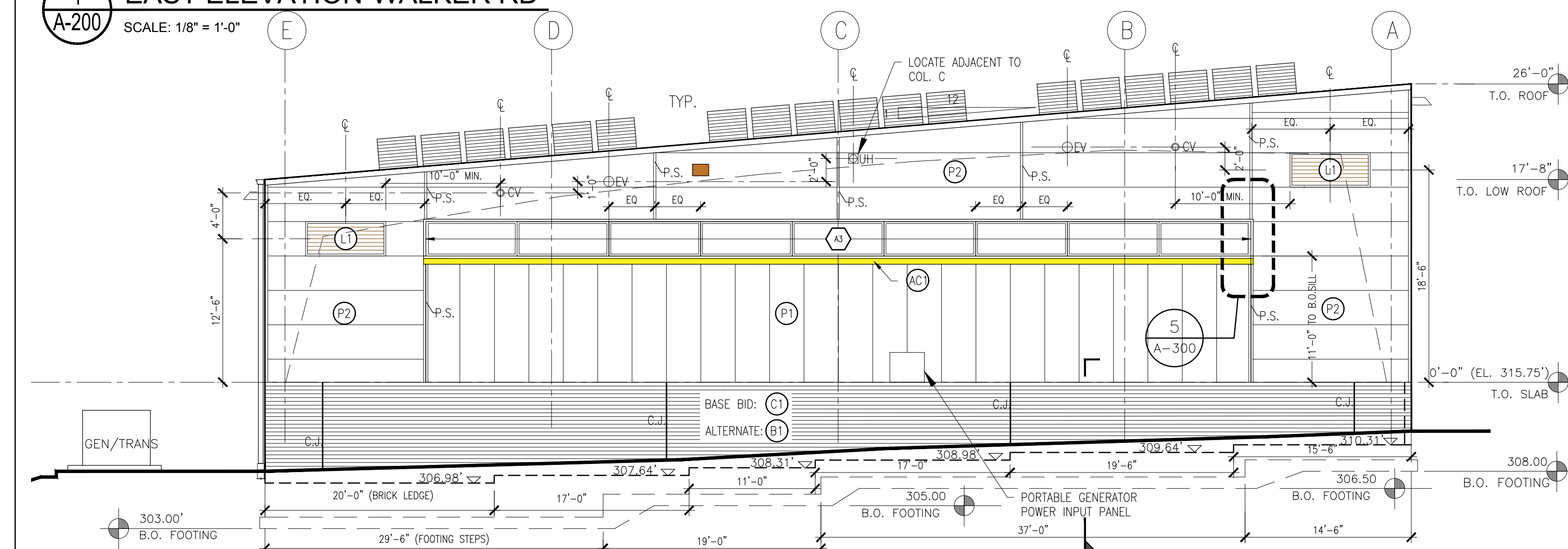
CONTRACT  
NUMBER  
17-521  
SHEET  
NUMBER  
A-102  
SHEET NO. 13 OF 53

SCALE: AS SHOWN  
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DPW FILE NO.  
38-47-A-695-0  
REV.  
NO.  
0

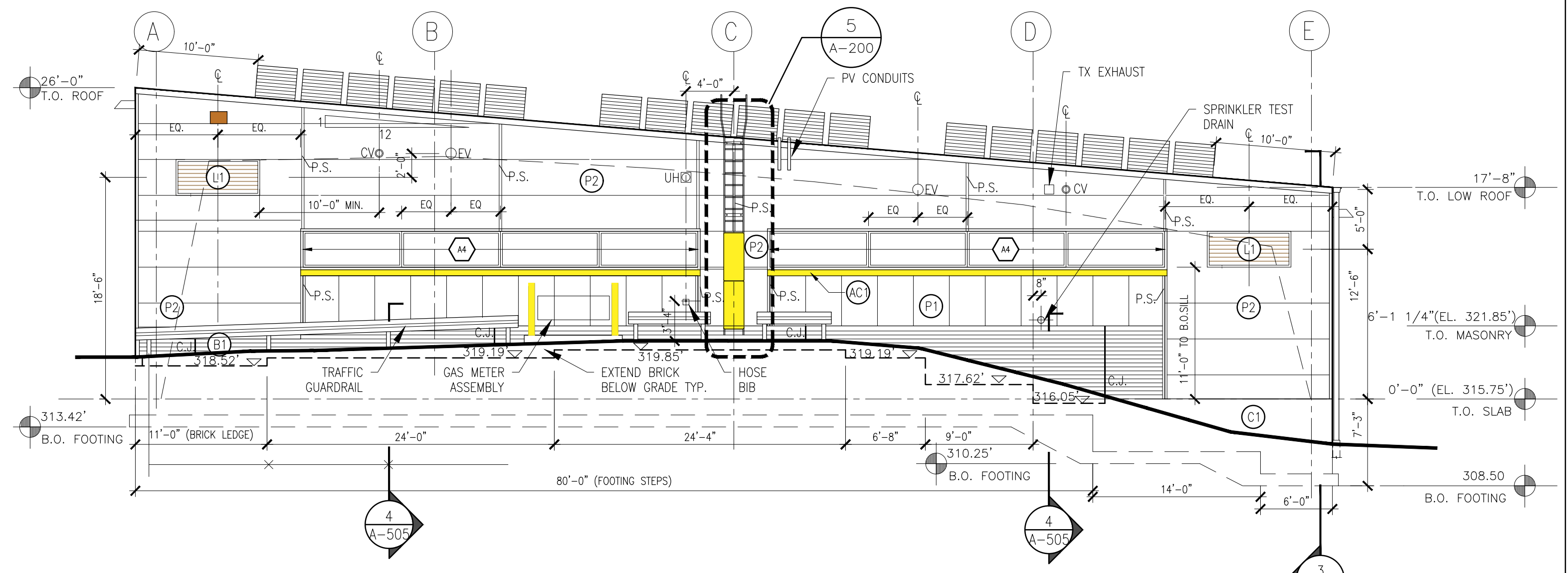




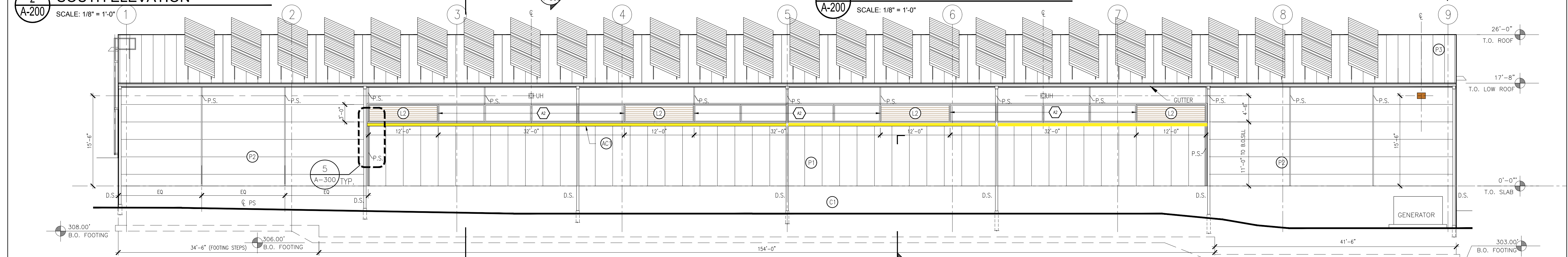
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SCALE: 1/8" = 1'-0"



**2 SOUTH ELEVATION**  
SCALE: 1/8" = 1'-0"

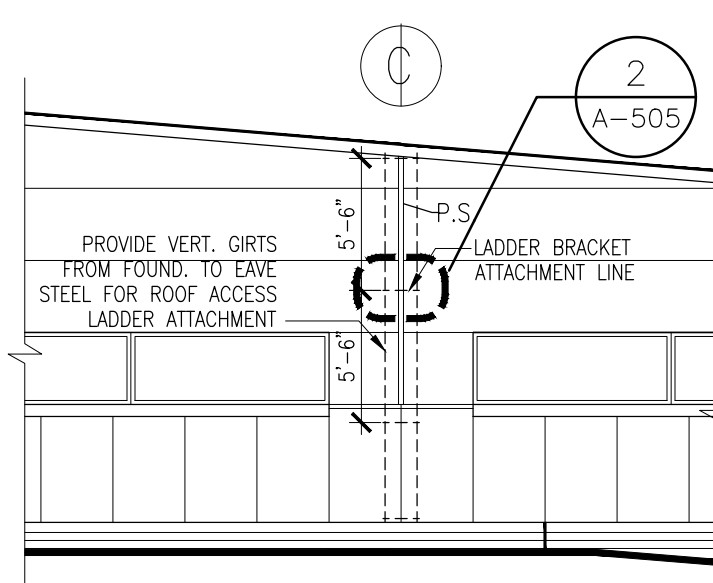


**4 NORTH ELEVATION**  
SCALE: 1/8" = 1'-0"



**3 WEST ELEVATION**  
SCALE: 1/8" = 1'-0"

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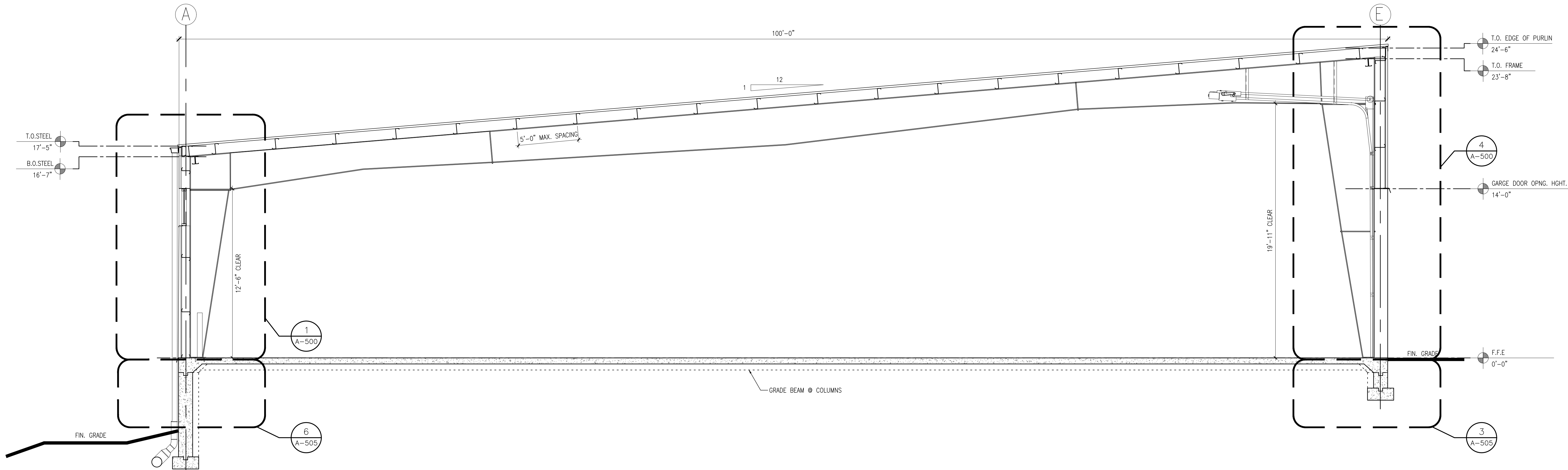
**5 PARTIAL NORTH ELEVATION**  
SCALE: 1/8" = 1'-0"

ITEM	DESCRIPTION AND COLOR
P1 -	VERTICAL PANEL SYSTEM: MFG-KINGSPAN MODEL-OPTIMO COLOR-SANDSTONE
P2 -	HORIZONTAL PANEL SYSTEM: MFG-KINGSPAN MODEL-OPTIMO COLOR-SANDSTONE
P3 -	ROOF PANEL SYSTEM: MFG-KINGSPAN MODEL-KINGSEAM COLOR-PEARL GRAY
L1 -	LOUVER
L2 -	LOUVER
AC-1 -	ACCENT TRIM - 6" FLASHING @ SILL: (RAL 1018, YELLOW)
AC-2 -	ACCENT TRIM - (RAL 1018, YELLOW)
A1/A2/A3/A4 -	ALUM. WINDOW
CV	CONCENTRIC VENT
EV	EXHAUST VENT
UH	UNIT HEATER VENT

ITEM	DESCRIPTION AND COLOR
B1 -	BRICK BASE: (COLOR & FINISH TO MATCH EXISTING D.E.S. BUILDING)
C1 -	PAINTED CONCRETE BASE
C.J.	CONTROL JOINT
D.S.	DOWNSPOUT/GUTTER: (MATCH KINGSPAN TAUPESTONE)
P.S.	PANEL SEAM
S1 -	SIGNAGE: POWDER COATED CUT ALUMINUM LETTERING, SIGN VENDOR MOUNT TO METAL PANELS WITH APPROVED ADHESIVE, ARIAL FONT (RAL 9003, WHITE)
B	BOLLARD
EXT. LIGHT FIXTURE	

	<b>DCAK - MSA</b> ARCHITECTURE AND ENGINEERING 53 HUDSON AVENUE NYACK, NEW YORK 10960 www.DCAK-MSA.com Email: info@DCAK-MSA.com Tel 845-353-1300 Fax 845-353-1614	<b>RCM Technologies</b> 99 BAUER DRIVE, SUITE 101 OAKLAND, NJ 07436 Tel: 201-416-4012 Fax: 201-337-1099	OLA Consulting Engineers 50 Broadway, Hawthorne, New York 10532 914-747-2800 12 East 49th Street, 11th Flr. New York, NY 10017 646-849-4110 olace.com	2021-5-18 REVISION		RECORD DRAWING CERTIFICATION <input type="checkbox"/> AS BUILT - CHANGES AS NOTED <input type="checkbox"/> AS BUILT - NO CHANGES		<b>WESTCHESTER COUNTY, NEW YORK</b> DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION DIVISION OF ENGINEERING		CONTRACT NUMBER 17-521	SHEET NUMBER A-200
				REVISION NUMBER DATE MADE BY APP'D BY	NAME SIGNATURE TITLE	PROJECT COORDINATOR NAME SIGNATURE TITLE	NEW EQUIPMENT STORAGE BUILDING RICHARD A. FLYNN, SR. FIRE TRAINING CENTER VALHALLA CAMPUS, VALHALLA, NEW YORK ELEVATIONS		SCALE: AS SHOWN DATE: 11/16/2021	DPW FILE NO. 38-47-A-696-0	REV. NO. 0





**1 BUILDING SECTION**  
A-201  
SCALE: 1/4" = 1'-0"

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NYACK, NEW YORK 10960  
www.DCAK-MSA.com  
Email: info@DCAK-MSA.com  
Tel 845-353-1300 Fax 845-353-1614

**RCM Technologies**  
99 BAUER DRIVE, SUITE 101  
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Fax: 201-337-1099

**OLA Consulting Engineers**  
OLA Consulting Engineers  
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New York 10532  
914.747.2800  
12 East 49th Street, 11th Flr.  
New York, NY 10017  
646.849.4110  
olace.com

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION	

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CONTRACTOR	
NAME _____	PROJECT COORDINATOR
SIGNATURE _____	SIGNATURE _____
TITLE _____ DATE _____	TITLE _____ DATE _____

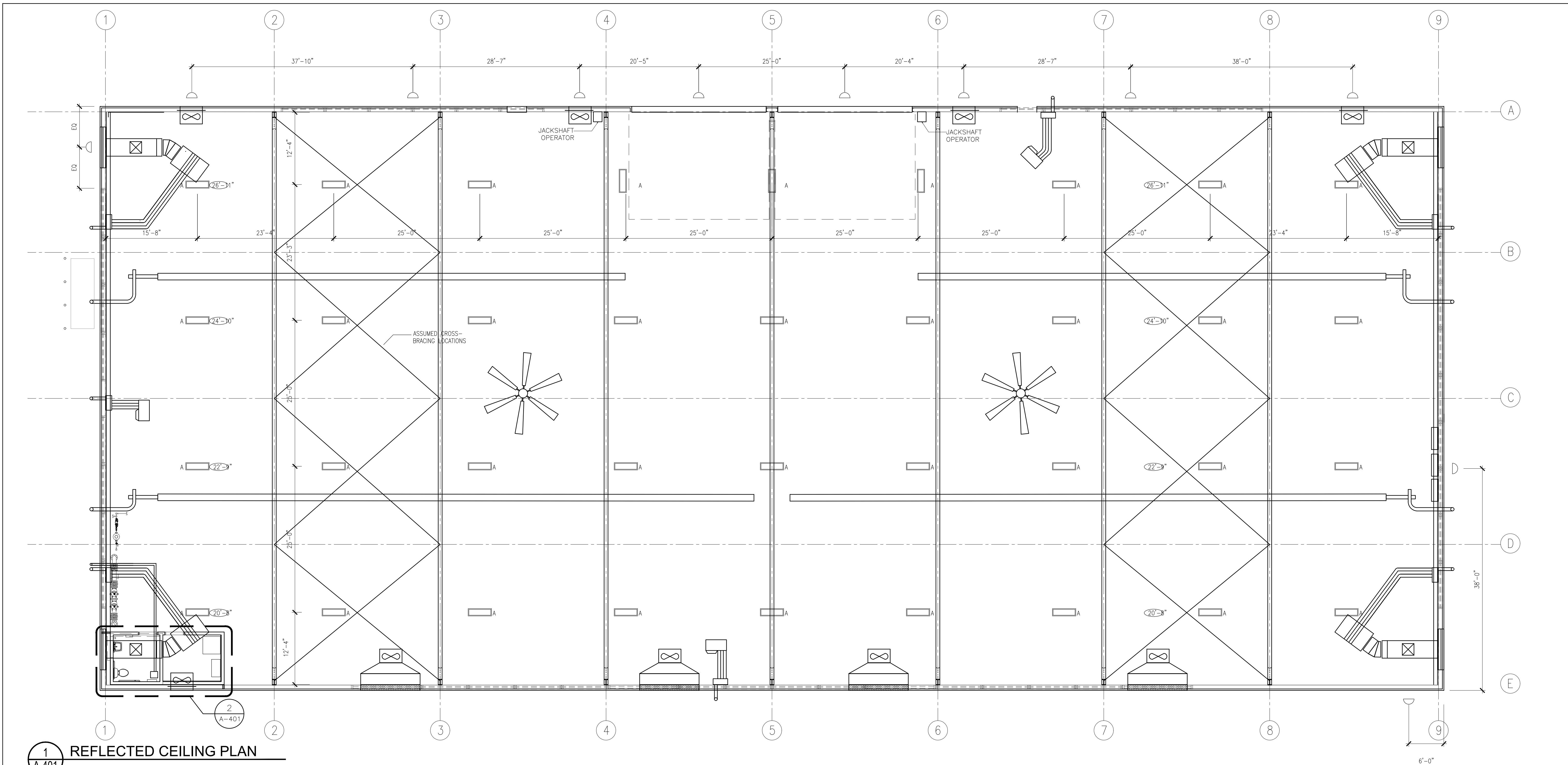
**WESTCHESTER COUNTY, NEW YORK**  
**DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION**  
DIVISION OF ENGINEERING  
NEW EQUIPMENT STORAGE BUILDING  
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
VALHALLA CAMPUS, VALHALLA, NEW YORK  
BUILDING SECTION

CONTRACT NUMBER 17-521	SHEET NUMBER A-201
SHEET NO. 15 OF 53	
SCALE: AS SHOWN DATE: 11/16/2021	
DPW FILE NO. 38-47-A-697-0	REV. NO. 0

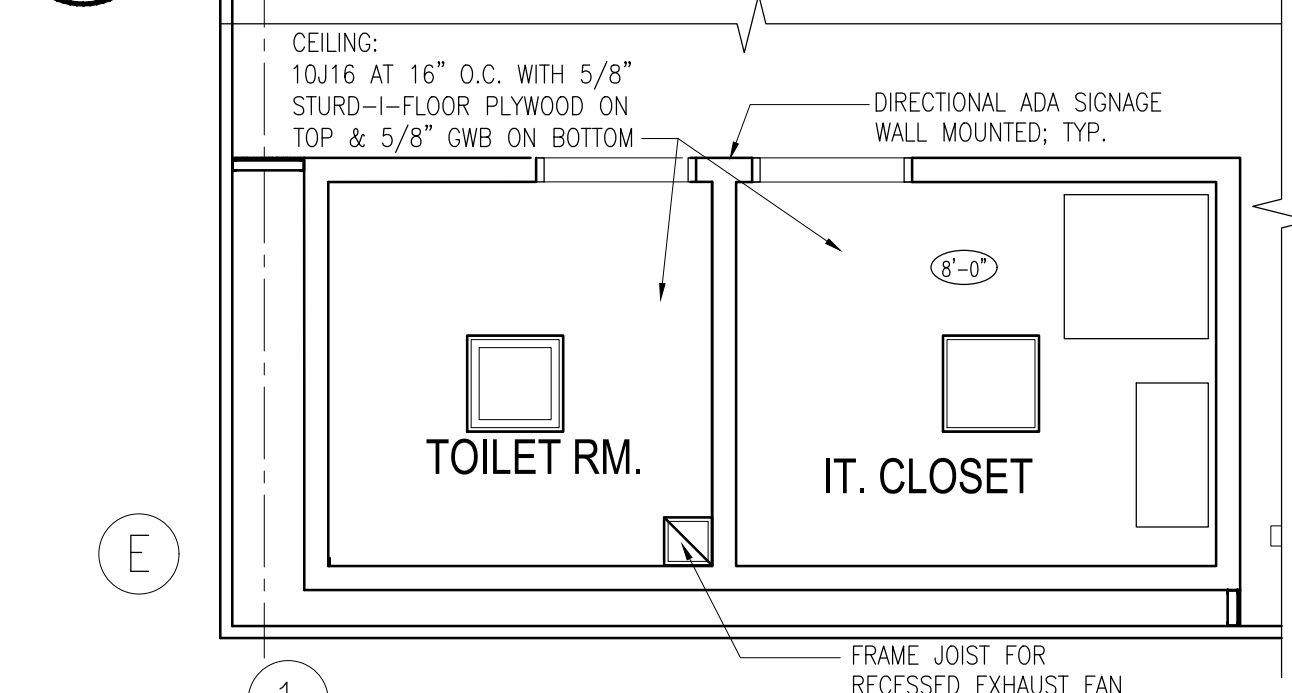








1 REFLECTED CEILING PLAN  
SCALE: 1/8" = 1'-0"



2 TOILET ROOM & IT CLOSET RCP  
SCALE: 1/4" = 1'-0"

**LEGEND**

10'-0" CEILING HEIGHT DESIGNATION

**GENERAL NOTES:**

A. BATHRM LIGHT FIXTURE TO BE CENTER IN ROOMS, COFFERS ETC. U.O.N.

B. SPRINKLER HEAD LOCATIONS NOT SHOWN ON REFLECTED CEILING PLANS. SEE SPRINKLER PLANS FOR LOCATIONS.

EMERGENCY LIGHTING:  
25% OF CEILING LIGHTS TO BE CONNECTED TO EMERGENCY GENERATOR

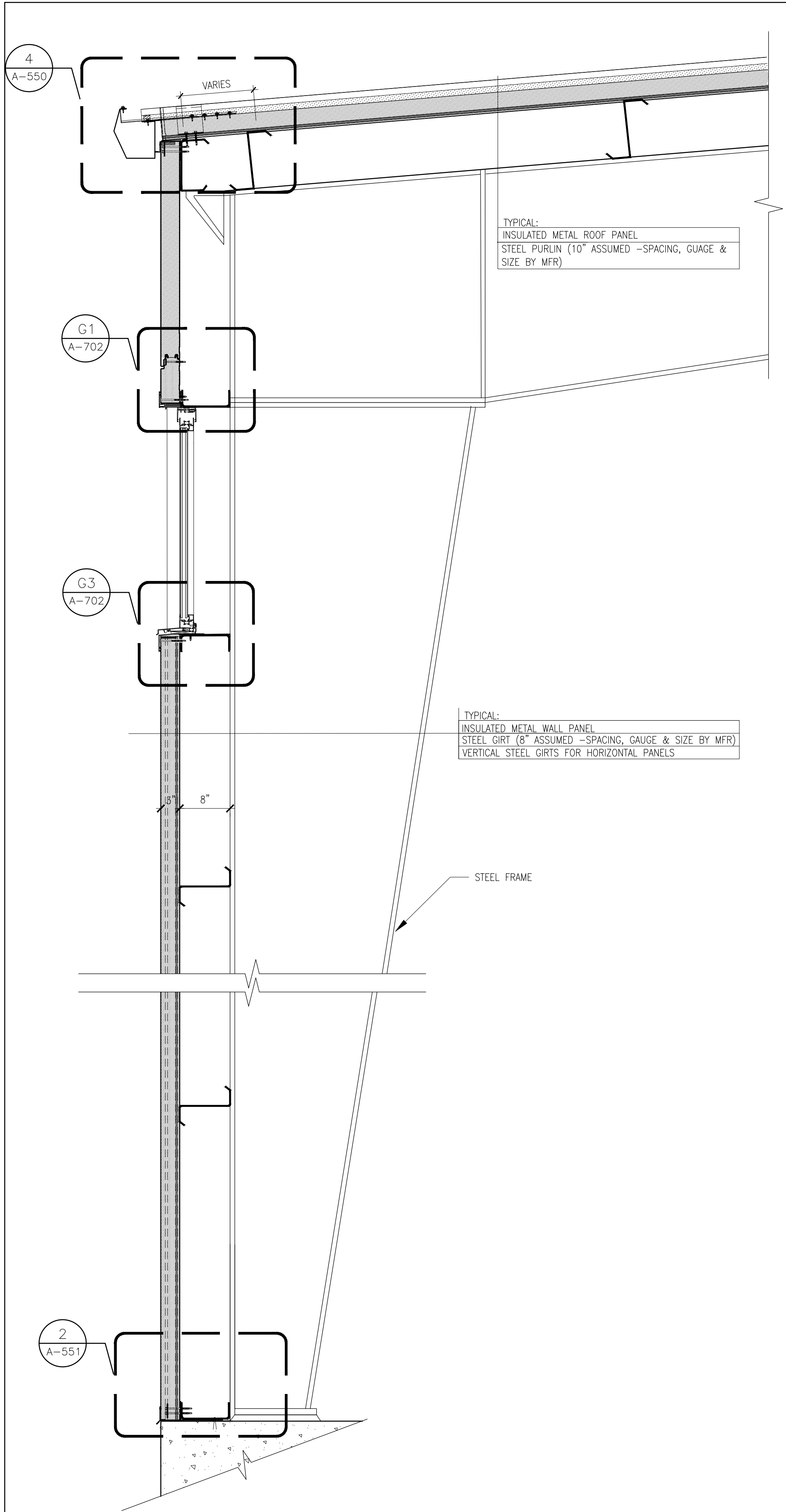
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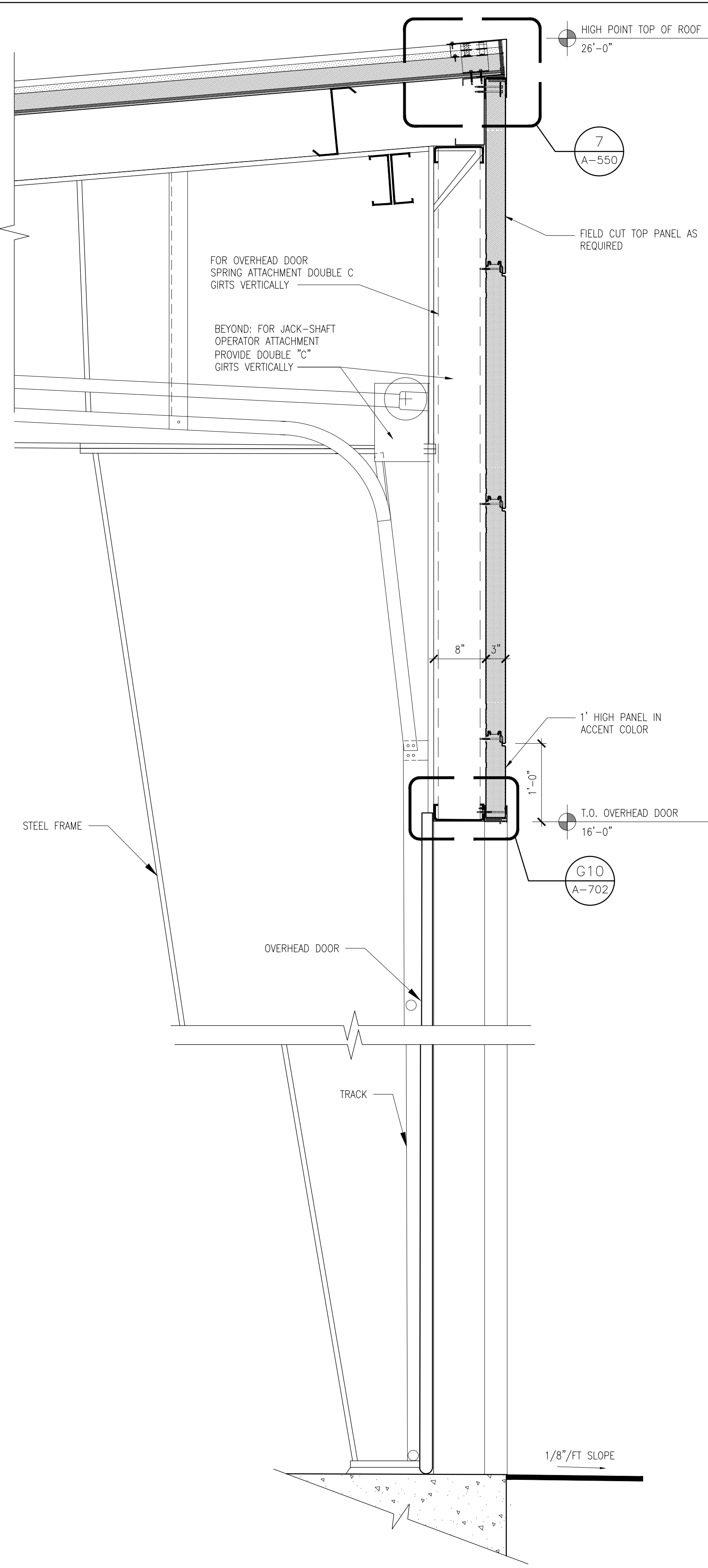
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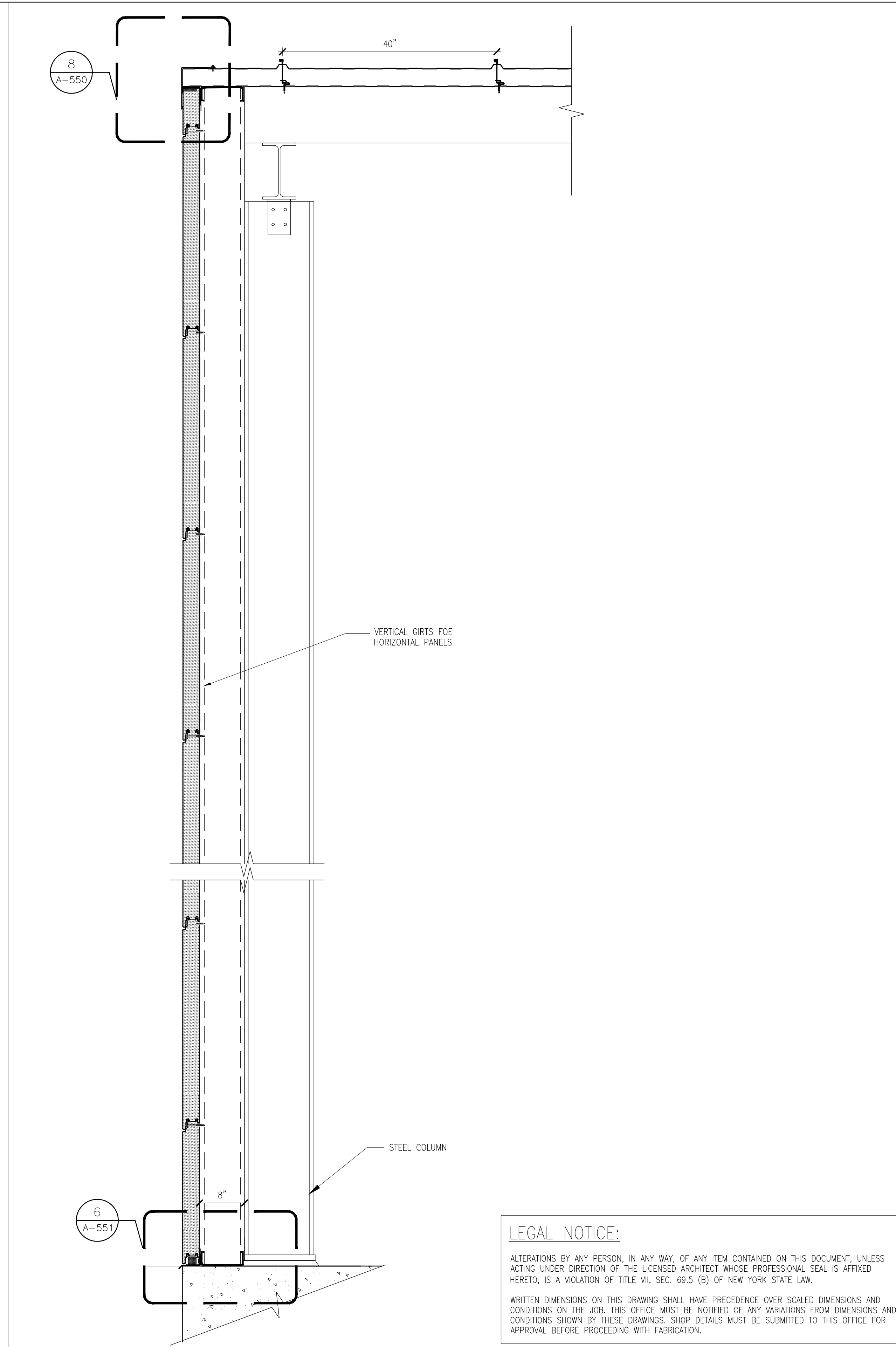




**1 BUILDING SECTION**  
**A-500** SCALE: 1" = 1'-0"



**2 BUILDING SECTION @ GARAGE DOOR**  
**A-500** SCALE: 1" = 1'-0" FOR NOTES AND DIMS. SEE 1/A-500 U.O.M

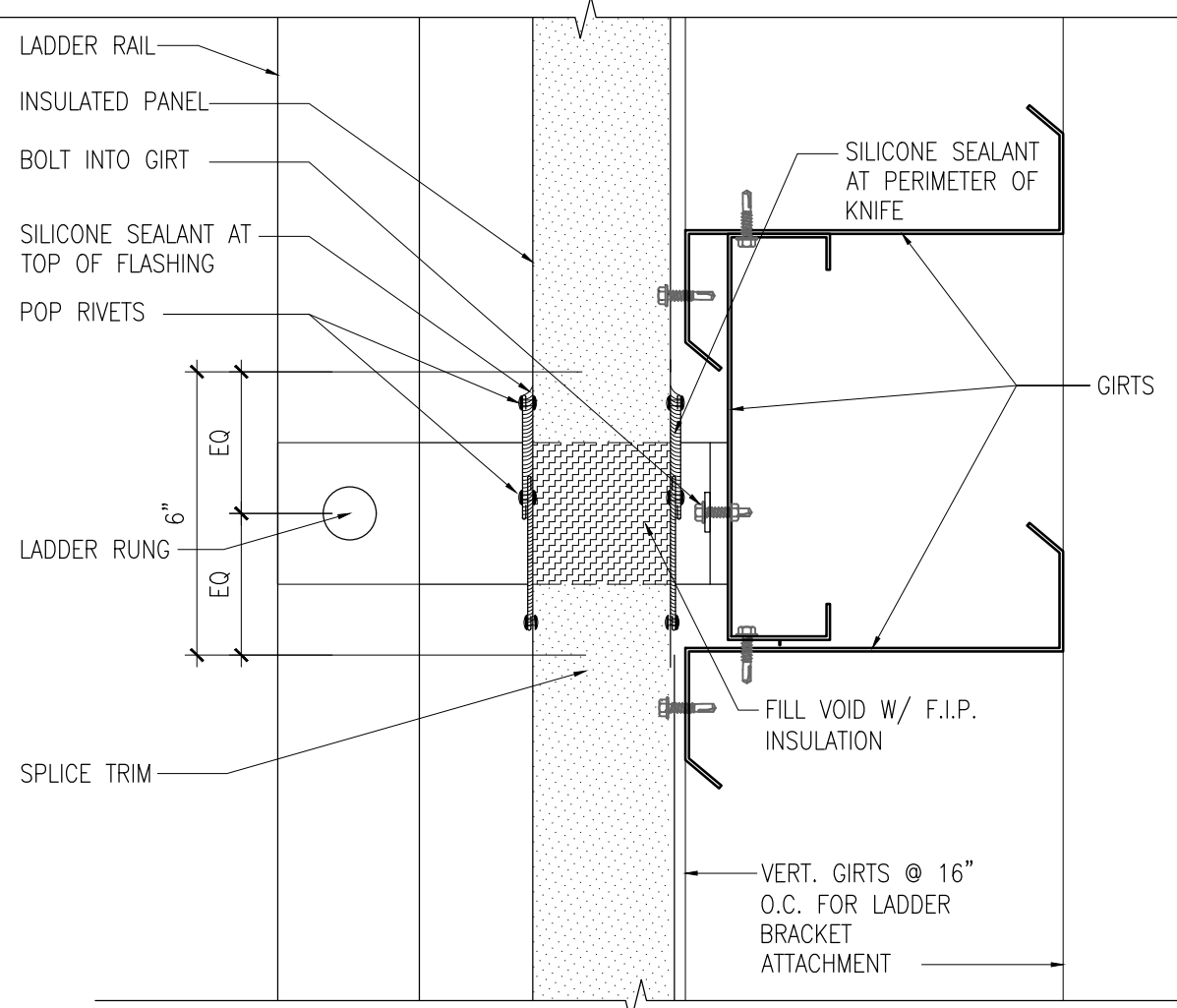
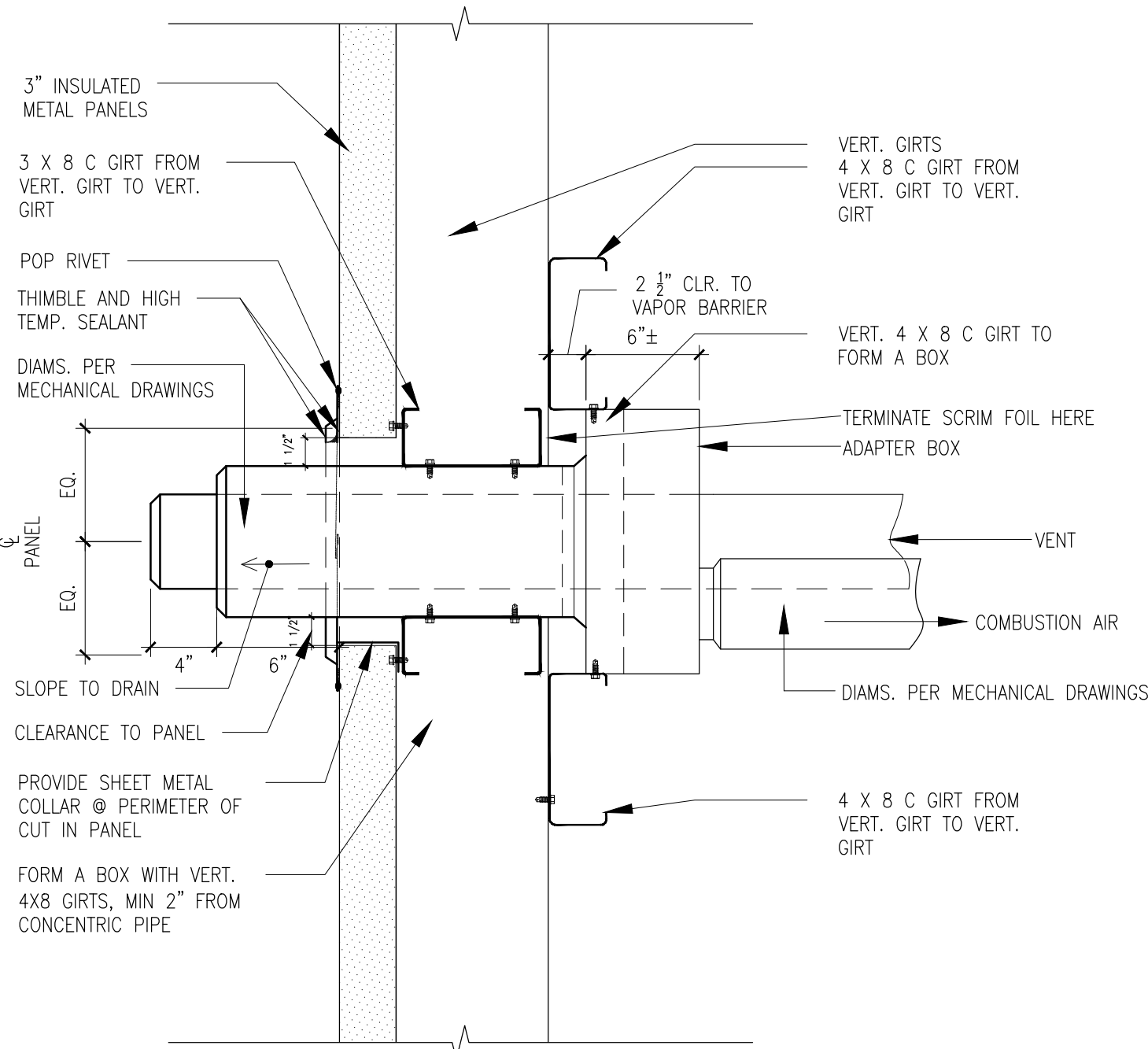


**3 BUILDING SECTION @ HORIZONTAL PANEL**  
**A-500** SCALE: 1" = 1'-0" FOR NOTES AND DIMS. SEE 1/A-500 U.O.M

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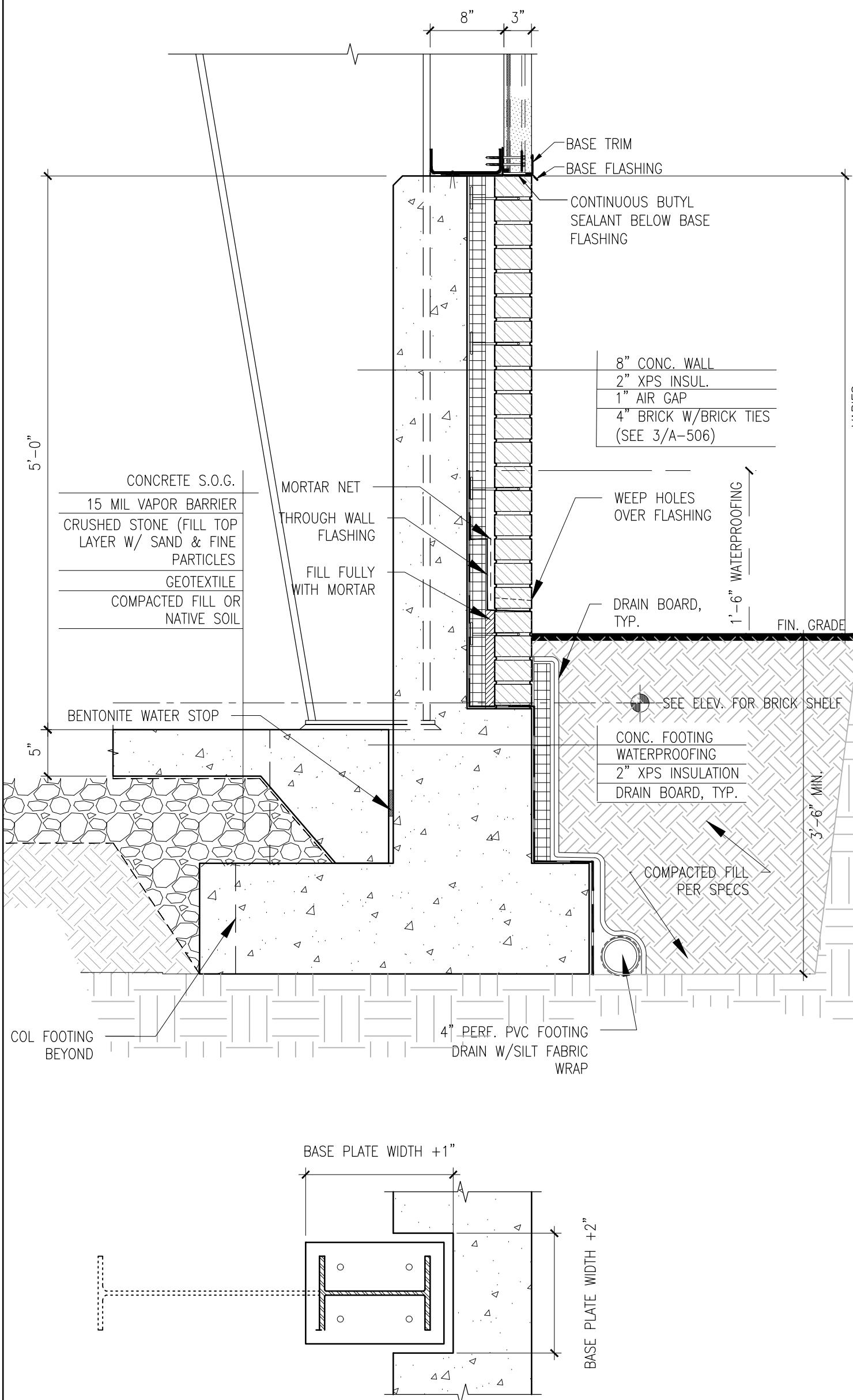


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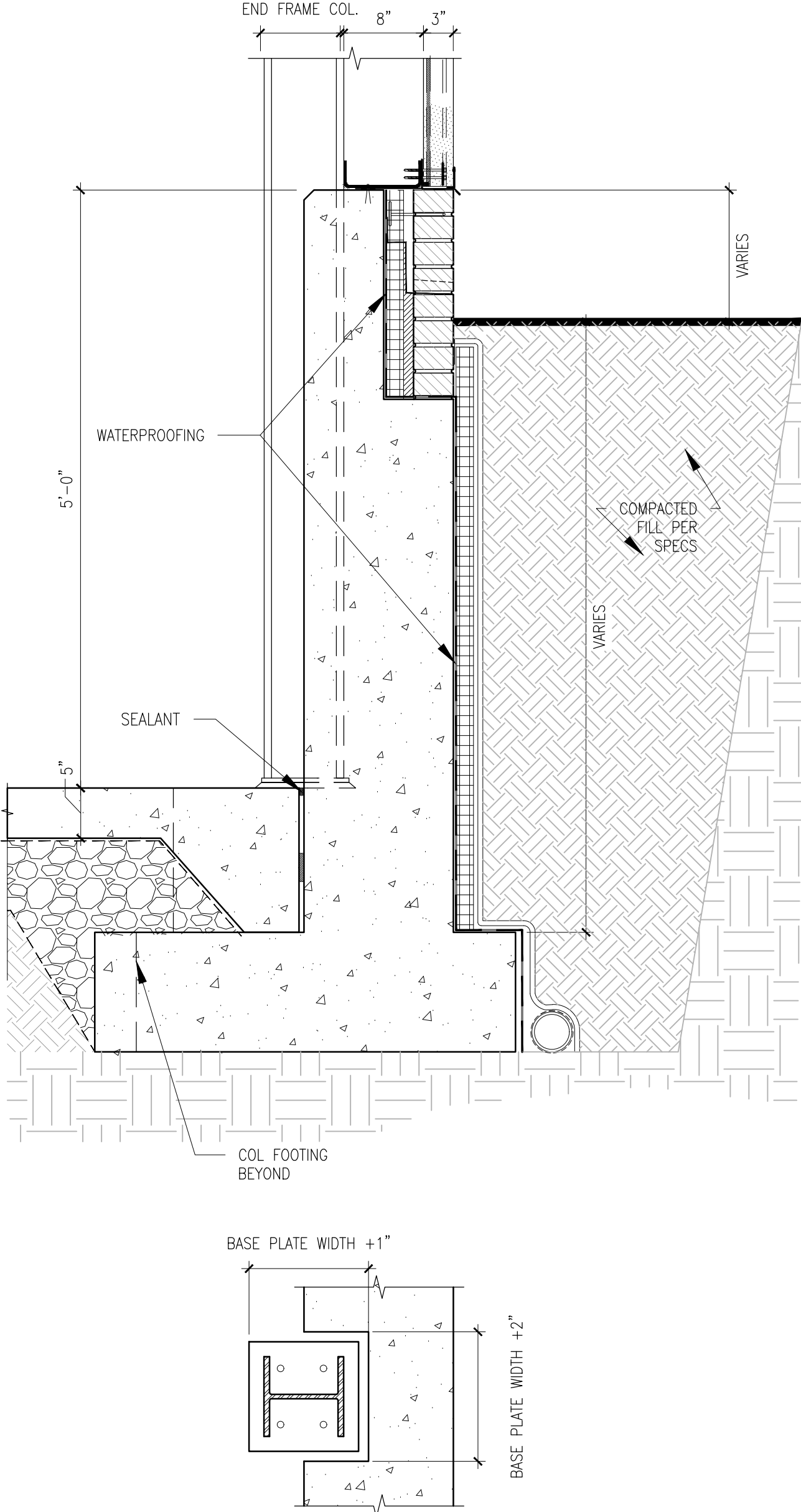


1 CONC. VENT PENETRATION  
A-505  
SCALE: 1 1/2" = 1'-0"

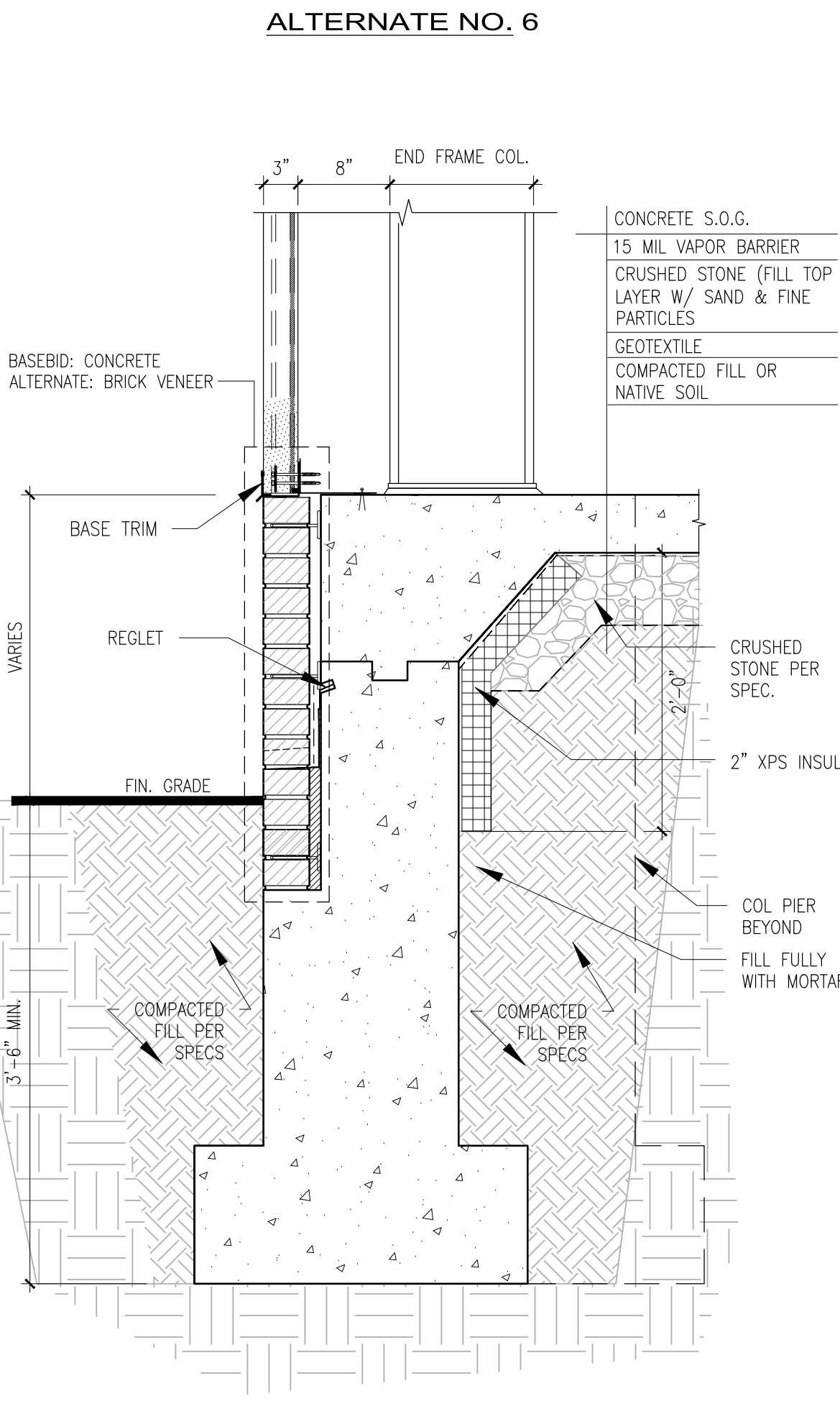
2 LADDER MOUNTING DETAIL  
A-505  
3"=1'-0"



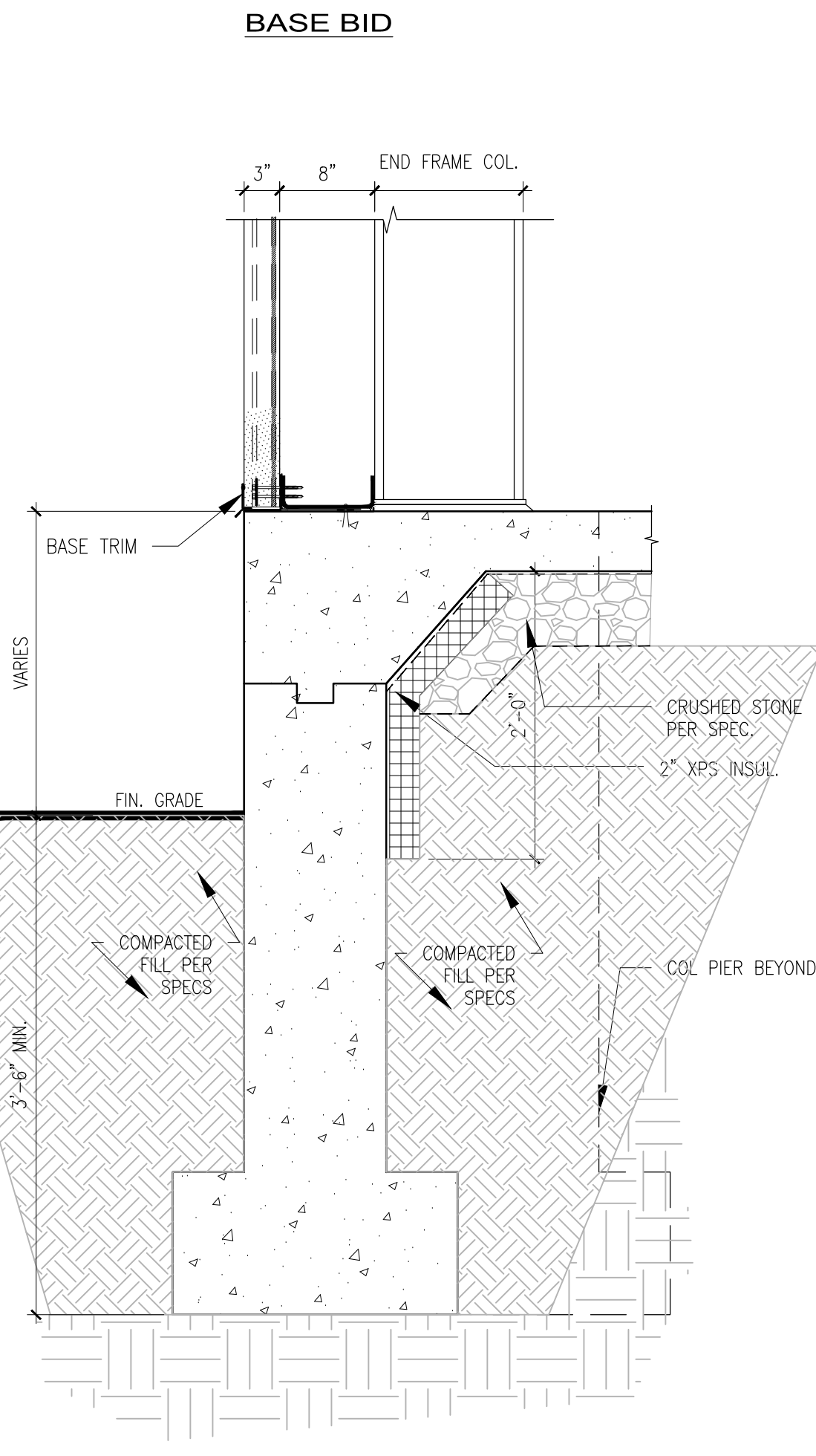
3 EAST WALL DETAIL  
A-505  
1"=1'-0"



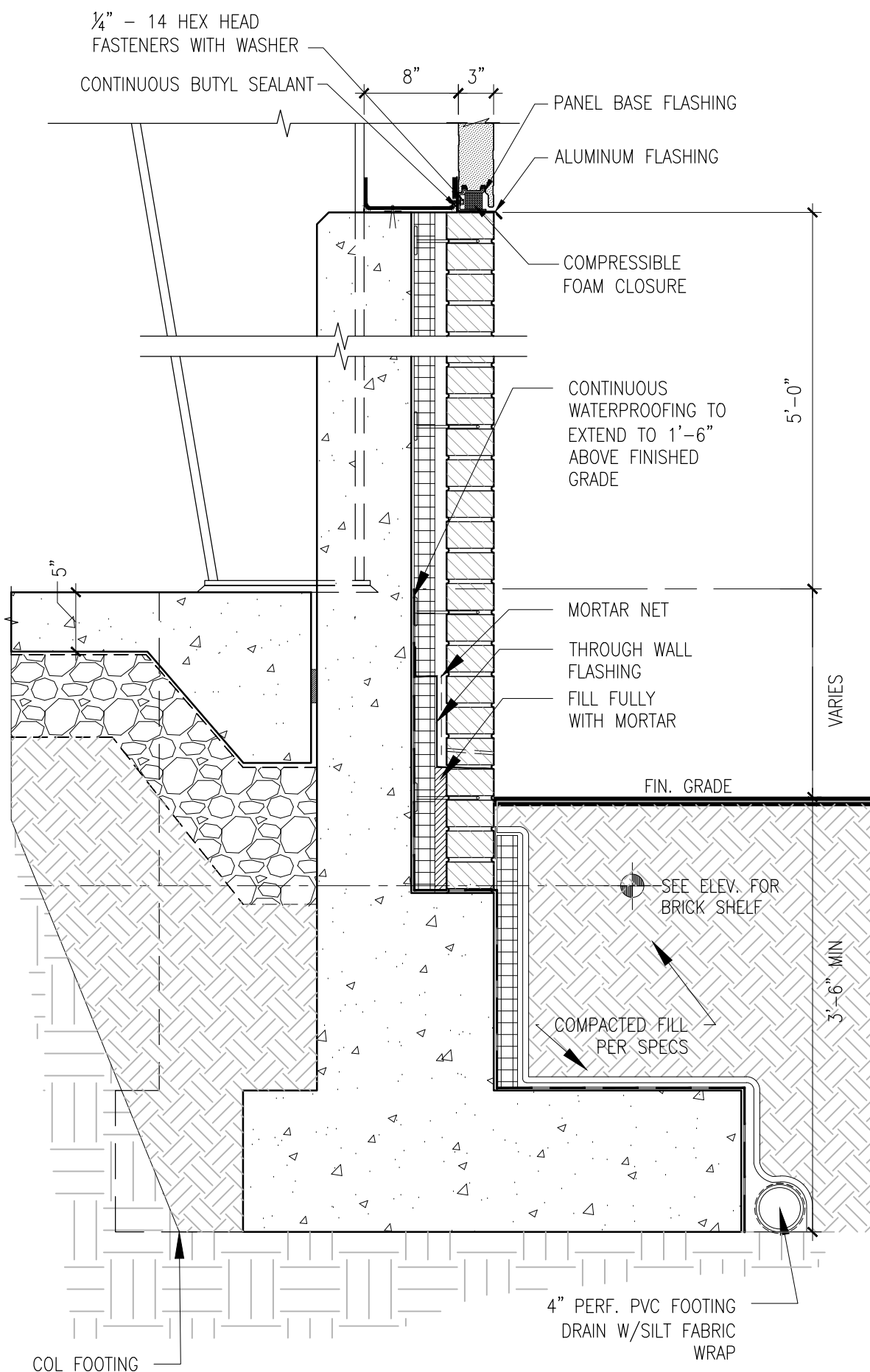
4 NORTH WALL DETAIL  
A-505  
1"=1'-0" SEE 3/A-505 FOR NOTES & DIMS U.O.N



5 SOUTH WALL  
A-505  
1"=1'-0" SEE 3/A-505 FOR NOTES & DIMS U.O.N

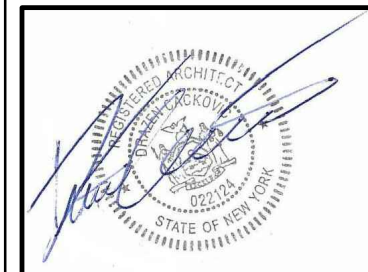


6 WEST WALL  
A-505  
1 1/2"=1'-0" SEE 3/A-505 FOR NOTES & DIMS U.O.N



7 EAST WALL  
A-505  
1"=1'-0" SEE 3/A-505 FOR NOTES & DIMS U.O.N

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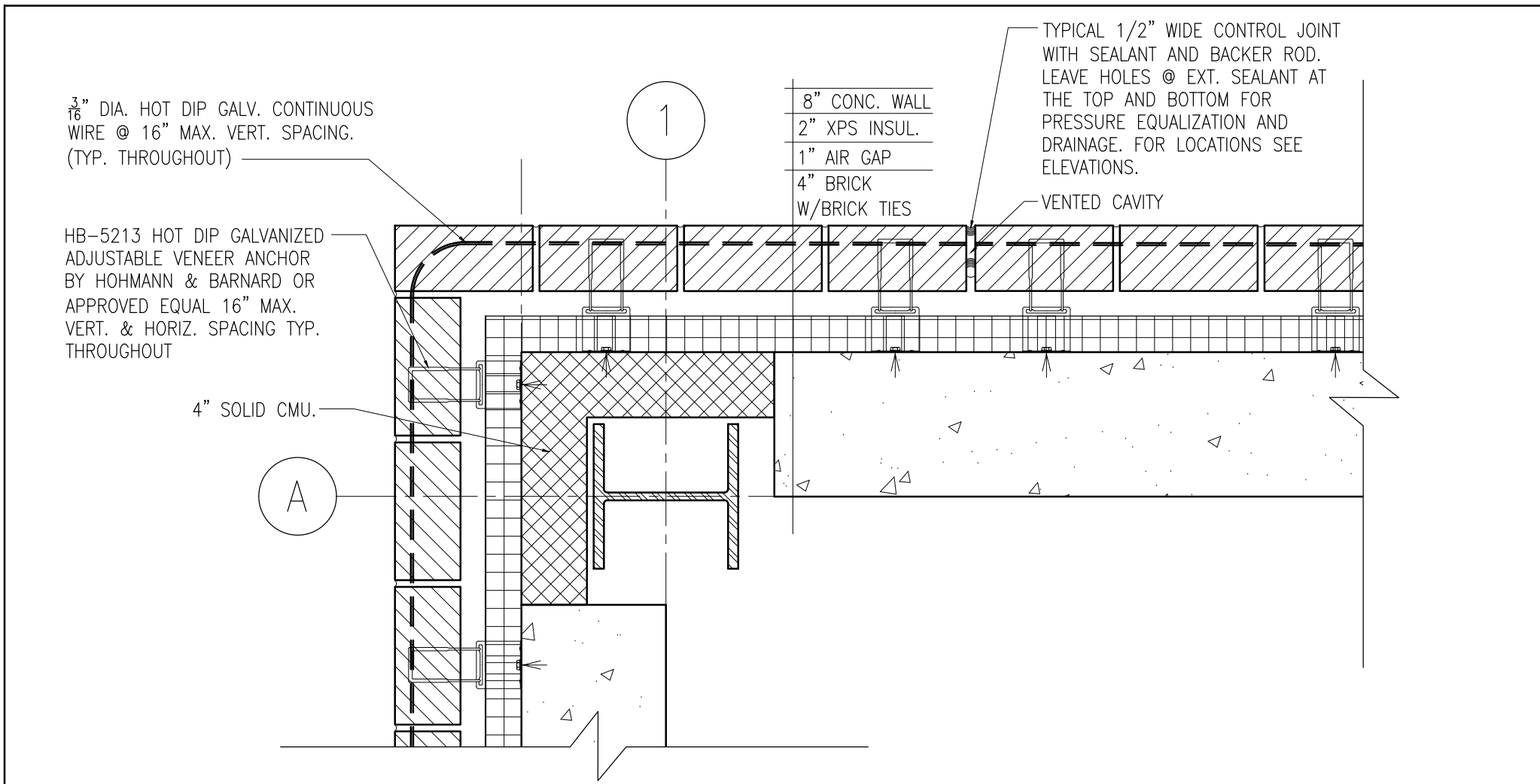
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CONTRACTOR		PROJECT COORDINATOR	
NAME		NAME	
SIGNATURE		SIGNATURE	
TITLE		TITLE	

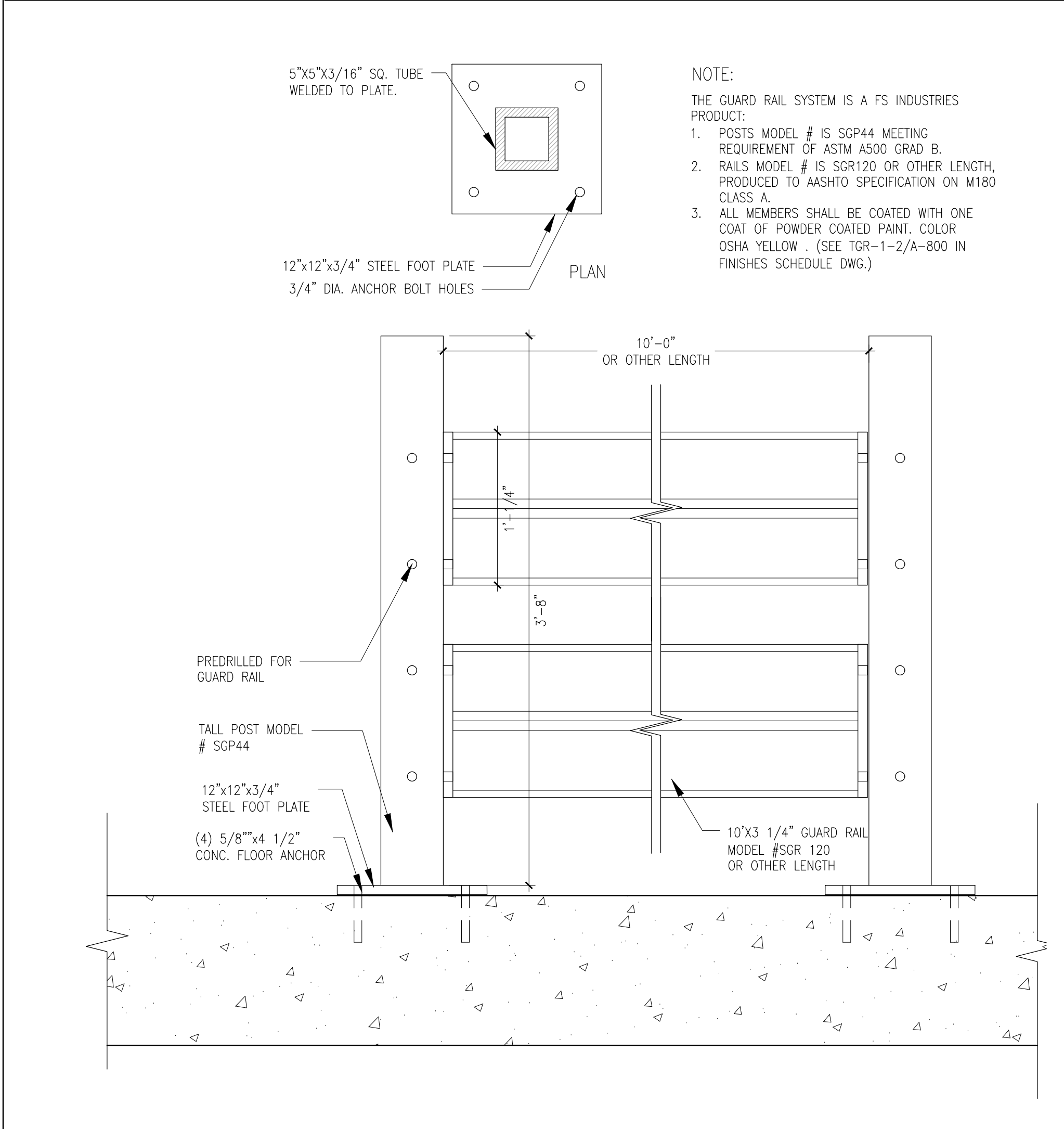
**WESTCHESTER COUNTY, NEW YORK**  
**DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION**  
DIVISION OF ENGINEERING  
NEW EQUIPMENT STORAGE BUILDING  
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
VALHALLA CAMPUS, VALHALLA, NEW YORK  
**WALL DETAILS I**

CONTRACT NUMBER	SHEET NUMBER
17-521	A-505
SHEET NO. 19 OF 53	
SCALE: AS SHOWN DATE: 11/16/2021	
DPW FILE NO.	REV. NO.
38-47-A-701-0	0





**1**  
**A-506**  
**MASONRY VENEER ANCHORING**  
**TYPICAL THROUGHOUT U.O.N.**  
SCALE: 1 1/2"=1'-0"

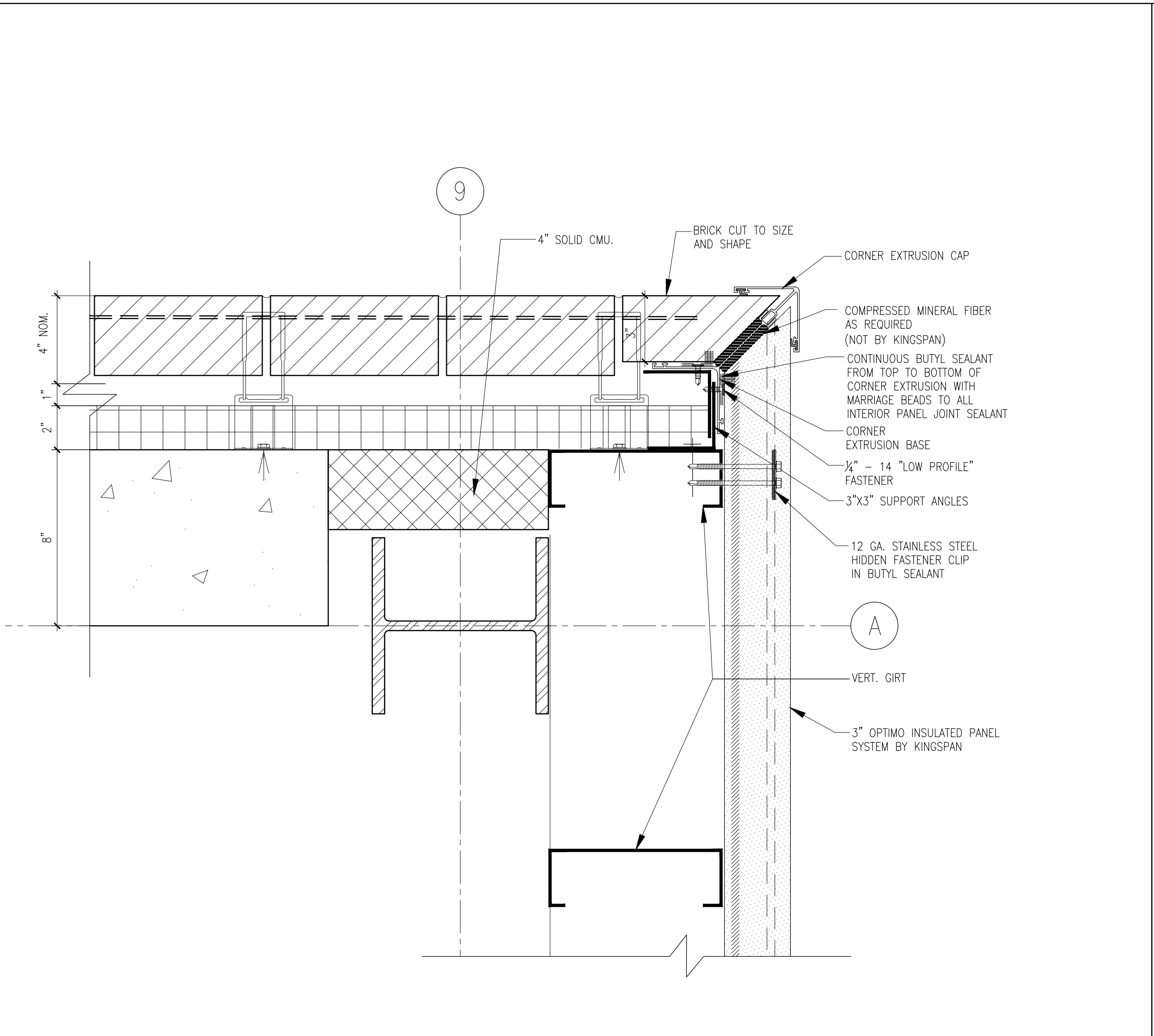


**2**  
**A-506**  
**PROTECTIVE GUARD RAIL**  
1 1/2"=1'-0"

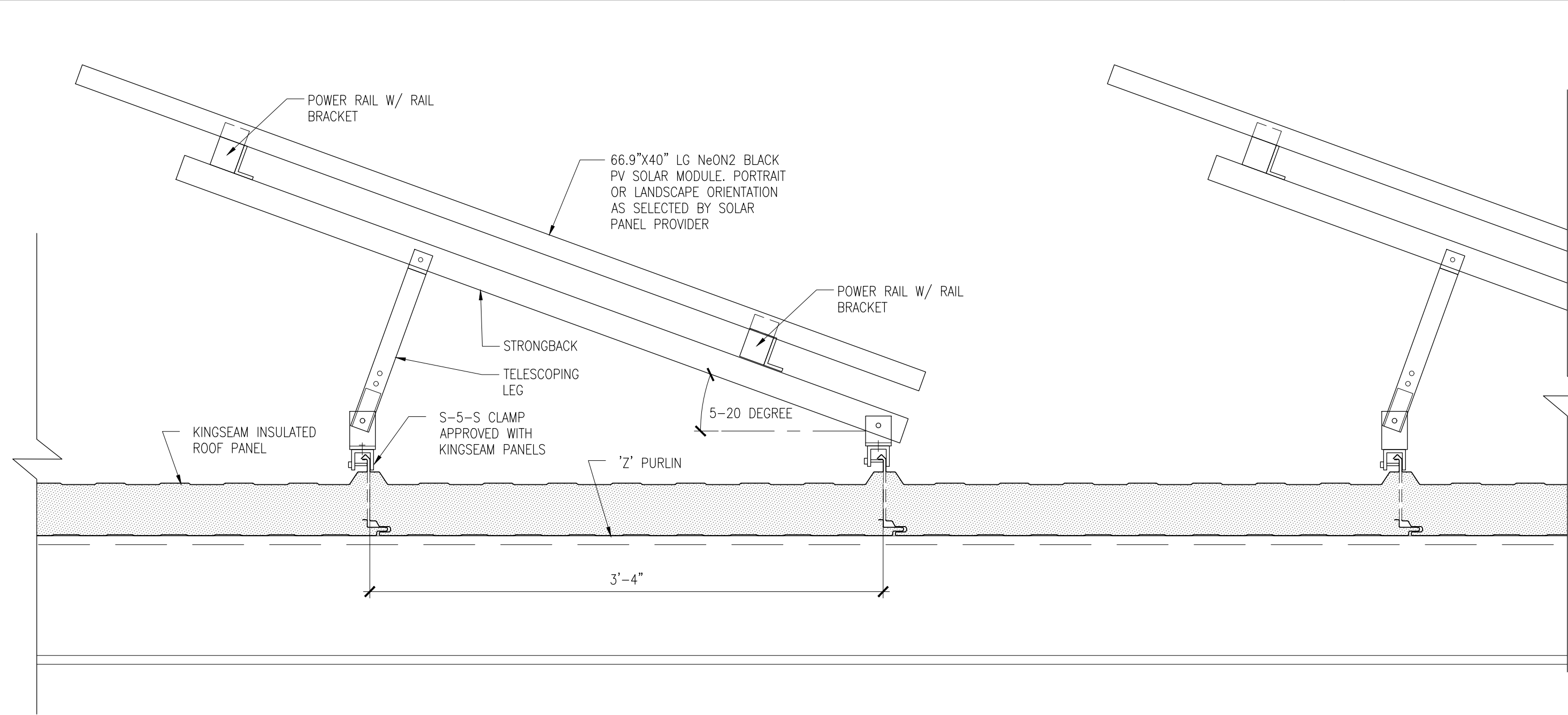
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**3**  
**A-506**  
**BRICK & METAL PANEL CORNER DETAIL**  
3"=1'-0"



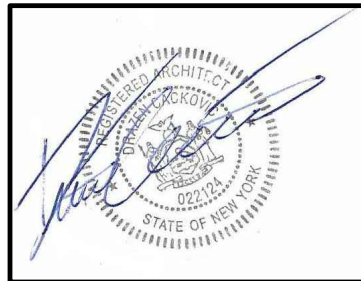
SOLAR PANEL ROOF INSTALLATION IS A DELEGATED DESIGN & ENGINEERING FOR SOLAR PANEL INSTALLER.

BASIS OF DESIGN ON THIS DRAWING: PLP PREFORMED LINE PRODUCTS, POWER RAIL P6 TILT INSTALLATION.

- SOLAR PANEL RAIL SYSTEM SHALL INCLUDE:
- NON PENETRATING:
  - CLAMP TO ROOF PANEL STANDING SEAM (S-5-S OR SIMILAR)
  - TILT KIT WITH MOUNTING FEET COMPATIBLE W/ STANDING SEAM CLAMP, FIXED LEG, TELESCOPING LEG, STRONGBACK RAIL BRACKETS, AND HARDWARE.
  - POWER RAILS W/ CLAMPS, EXTENSINS, SPLICES AND HARDWARE INCLUDING HARDWARE FOR SELECTED SOLAR PANEL MOUNTING.
  - LATERAL FORCE BRACING.
  - GROUNDING SYSTEM.
  - OTHER HARDWARE, ATTACHMENTS & ACCESSORIES FOR A FULLY COMPLIANT SOLAR PANEL RACK SYSTEM.
  - SHOP DRAWINGS AND SUBMITTALS SIGNED AND SEALED BY PROFESSIONAL ENGINEER IN N.Y.S. CERTIFYING COMPLIANCE W/ DEAD, LIVE, SNOW, WIND AND SEISMIC LOADING IN ACCORDANCE W/ N.Y.S. CODES.

**4**  
**A-506**  
**SOLAR PANEL INSTALLATION DETAIL**  
SCALE: 1 1/2"=1'-0"

Seal:



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ARCHITECTURE AND ENGINEERING  
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<input type="checkbox"/> AS BUILT — NO CHANGES			
CONTRACTOR		PROJECT COORDINATOR	
NAME	NAME	SIGNATURE	SIGNATURE
SIGNATURE	SIGNATURE	TITLE	TITLE
TITLE	TITLE	DATE	DATE

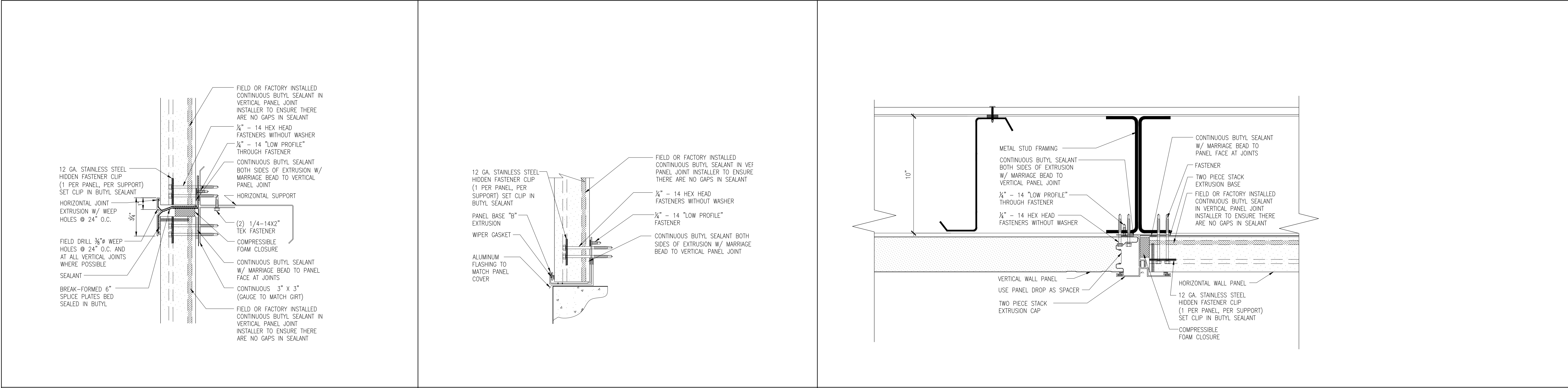
**WESTCHESTER COUNTY, NEW YORK**  
**DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION**  
DIVISION OF ENGINEERING  
NEW EQUIPMENT STORAGE BUILDING  
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
VALHALLA CAMPUS, VALHALLA, NEW YORK  
**DETAILS II**

CONTRACT NUMBER 17-521	SHEET NUMBER A-506
SHEET NO. 20 OF 53	
SCALE: AS SHOWN DATE: 11/16/2021	
DPW FILE NO. 38-47-A-702-0	REV. NO. 0



CONTRACT NUMBER 17-521	SHEET NUMBER A-550
SHEET NO. 21 OF 53	
SCALE: AS SHOWN DATE: 11/16/2021	
DPW FILE NO. 38-47-A-703-0	REV. NO. 0

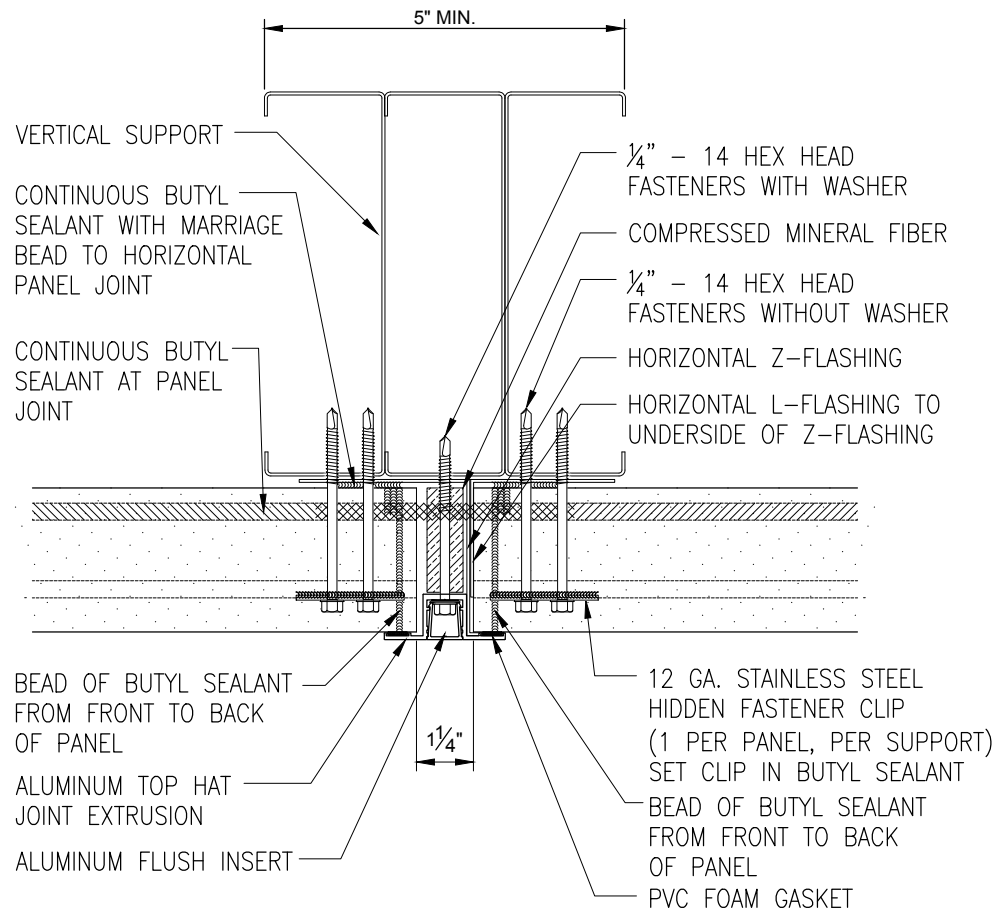




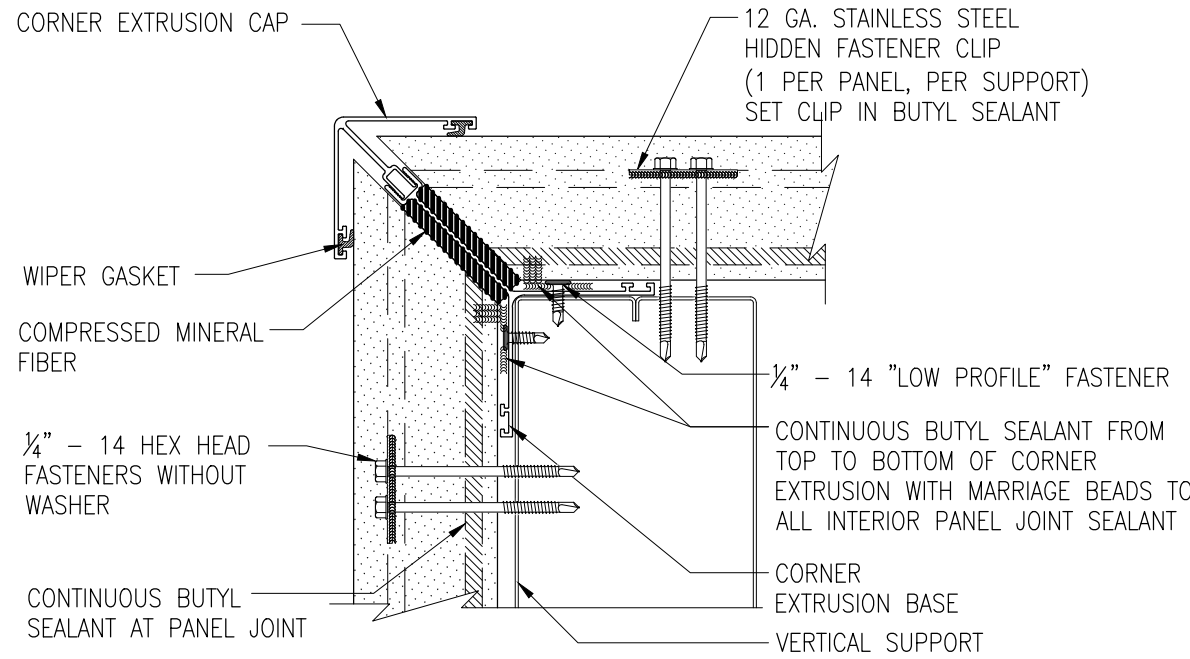
**1**  
**A-551**  
**VERTICAL WALL PANELS STACK JOINT**  
SCALE: 3" = 1'-0" (ALSO APPLICABLE TO HORIZONTAL PANELS STACKED ON TOP OF VERTICAL PANELS)

**2**  
**A-551**  
**VERTICAL WALL PANELS BASE CONDITION**  
SCALE: 3" = 1'-0"

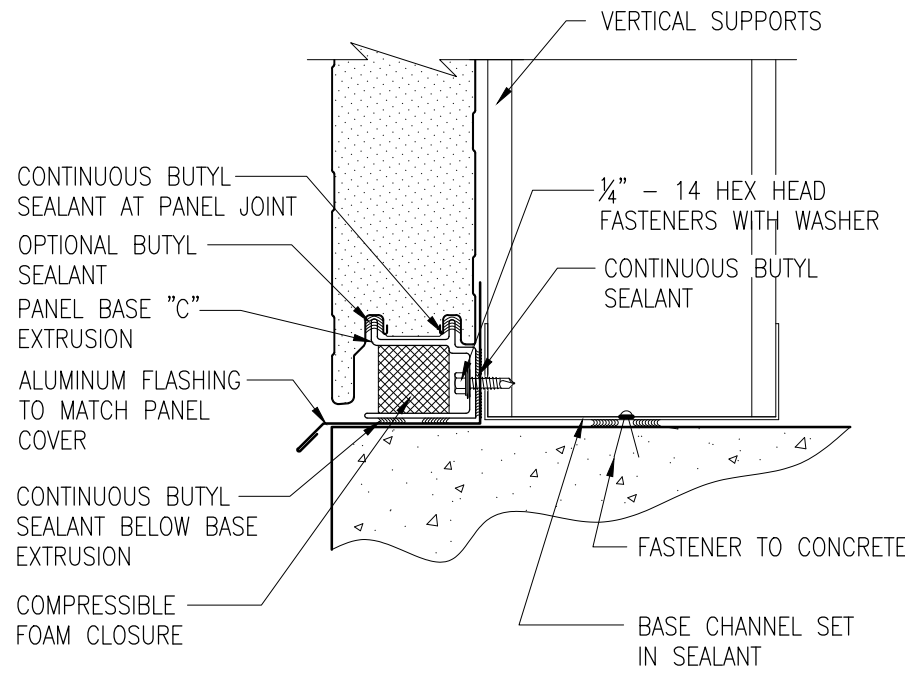
**2**  
**A-551**  
**VERTICAL & HORIZONTAL WALL PANEL VERTICAL JOINT**  
SCALE: 3" = 1'-0"



**4**  
**A-551**  
**HORIZONTAL WALL PANELS VERTICAL JOINT**  
SCALE: 3" = 1'-0"



**5**  
**A-551**  
**HORIZONTAL WALL PANELS OUTSIDE CORNER**  
SCALE: 3" = 1'-0"



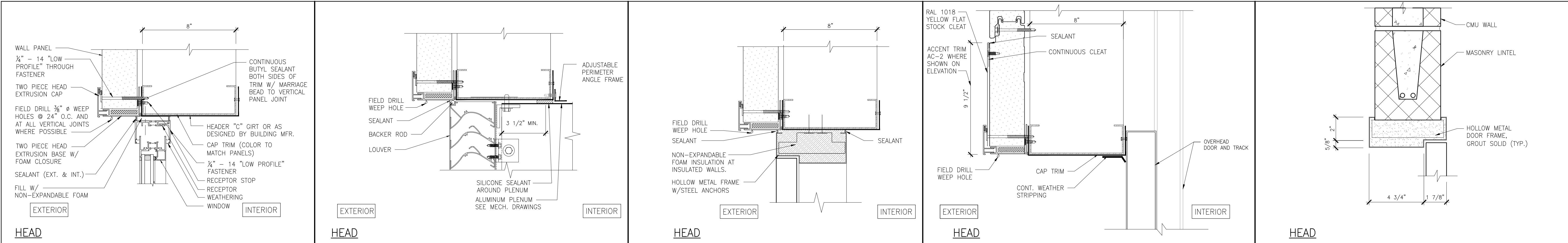
**6**  
**A-551**  
**HORIZONTAL WALL PANELS BASE DETAIL - FRONT**  
SCALE: 3" = 1'-0"

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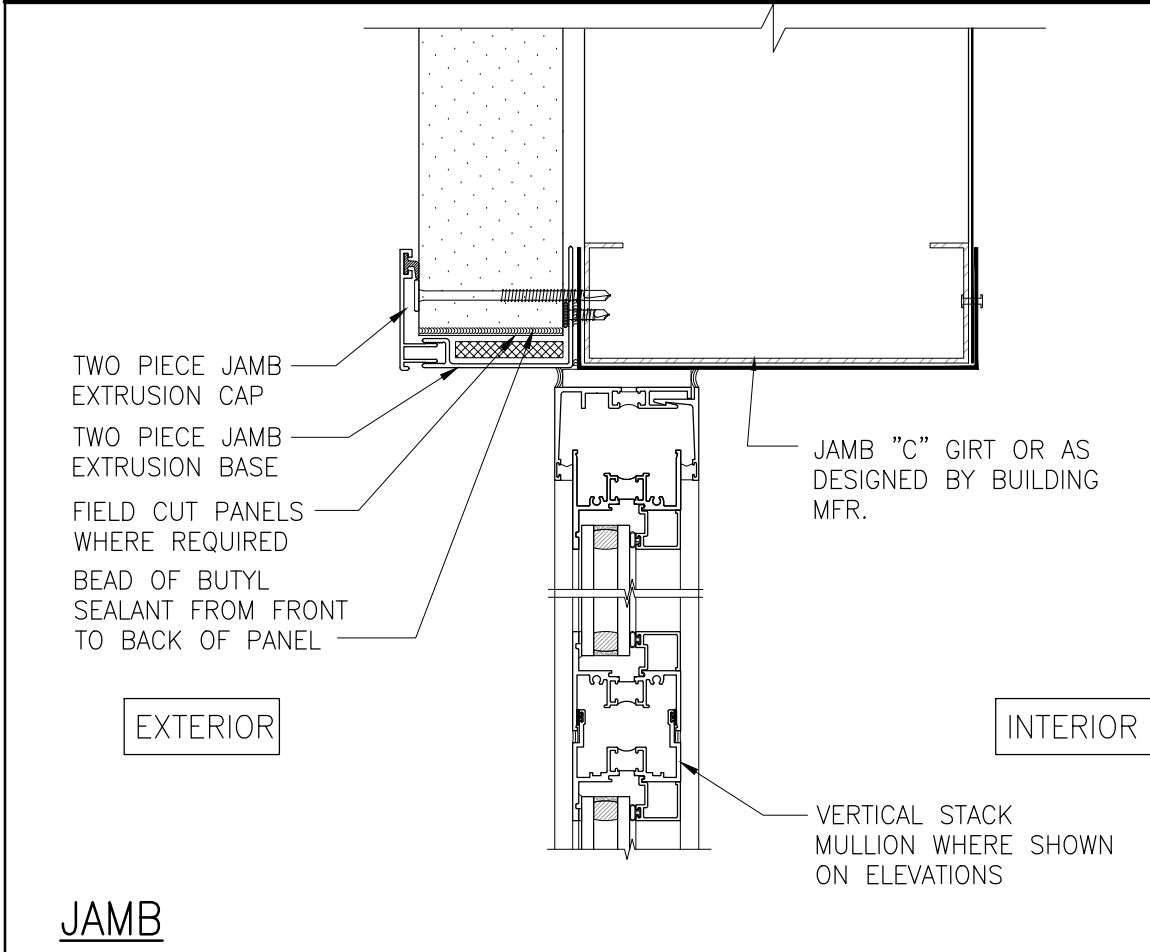
**G1 WINDOW HEAD**  
A-702 SCALE: 3" = 1'-0"

**G4 LOUVER HEAD**  
A-702 SCALE: 3" = 1'-0" (FOR NOTES AND DIMS SEE G1/A-702 U.O.N.)

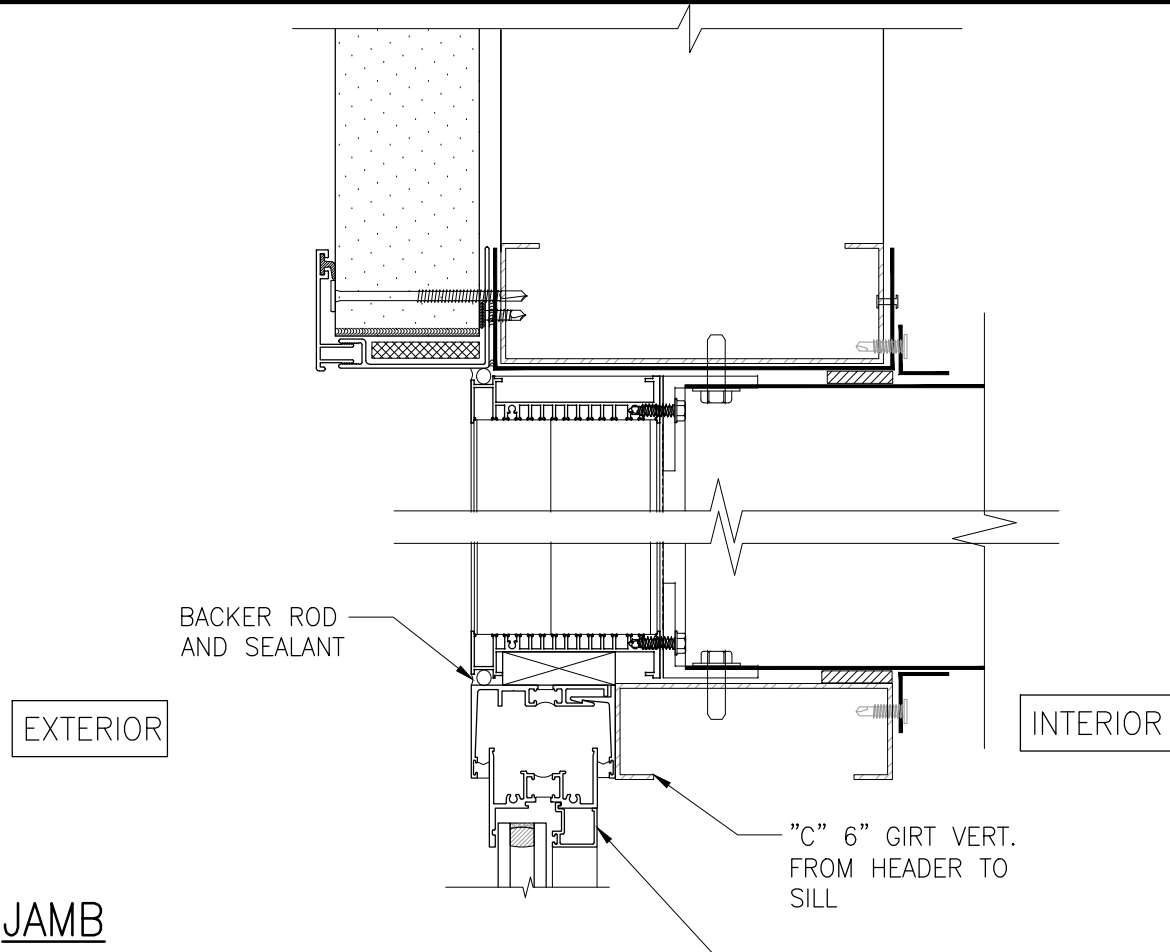
**G7 EXTRIOR DOOR HEAD**  
A-702 SCALE: 1 1/2" = 1'-0" (FOR NOTES AND DIMS SEE G1/A-702 U.O.N.)

**G10 OVERHEAD DOOR HEAD**  
A-702 SCALE: 1 1/2" = 1'-0" (FOR NOTES AND DIMS SEE G1/A-702 U.O.N.)

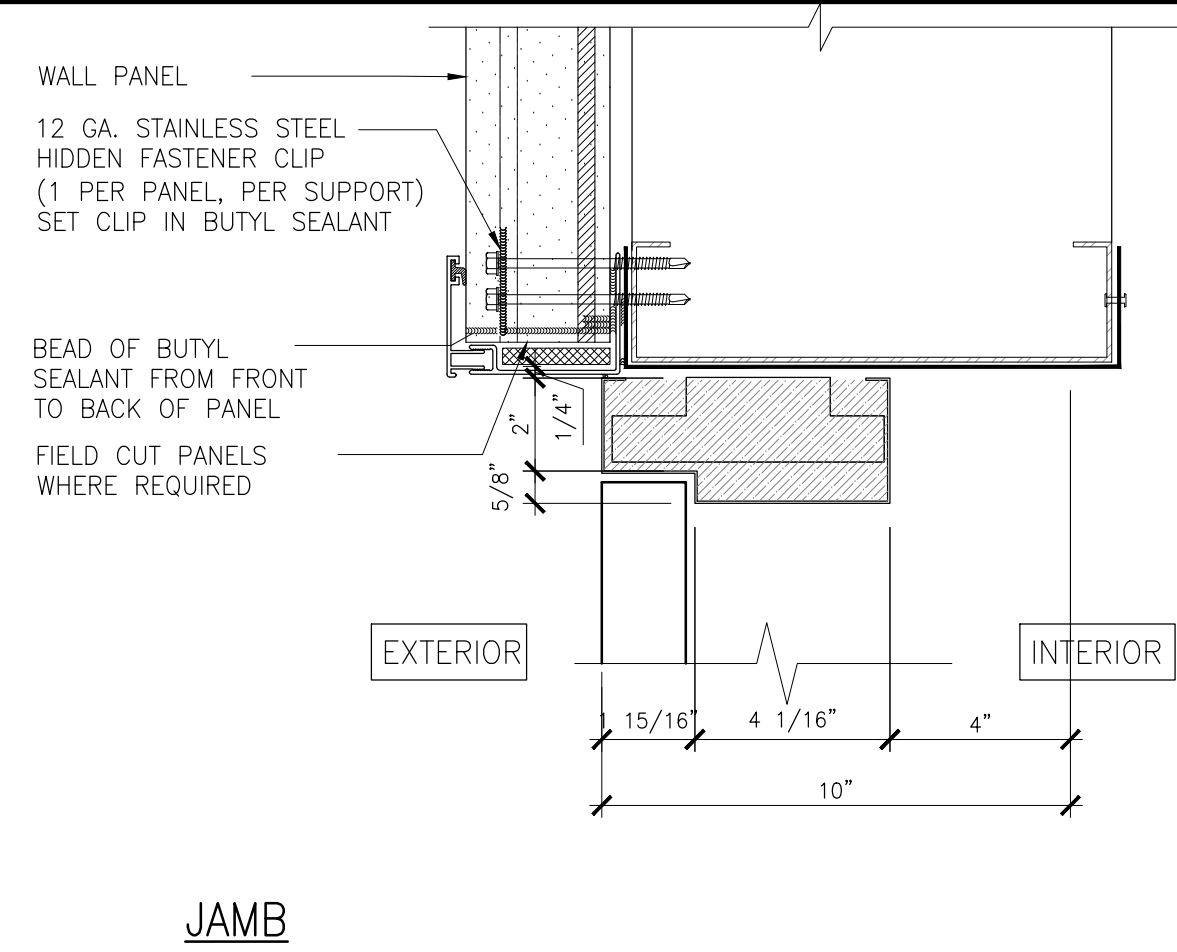
**G13 INTERIOR DOOR HEAD**  
A-702 SCALE: 3" = 1'-0" (FOR NOTES AND DIMS SEE G1/A-702 U.O.N.)



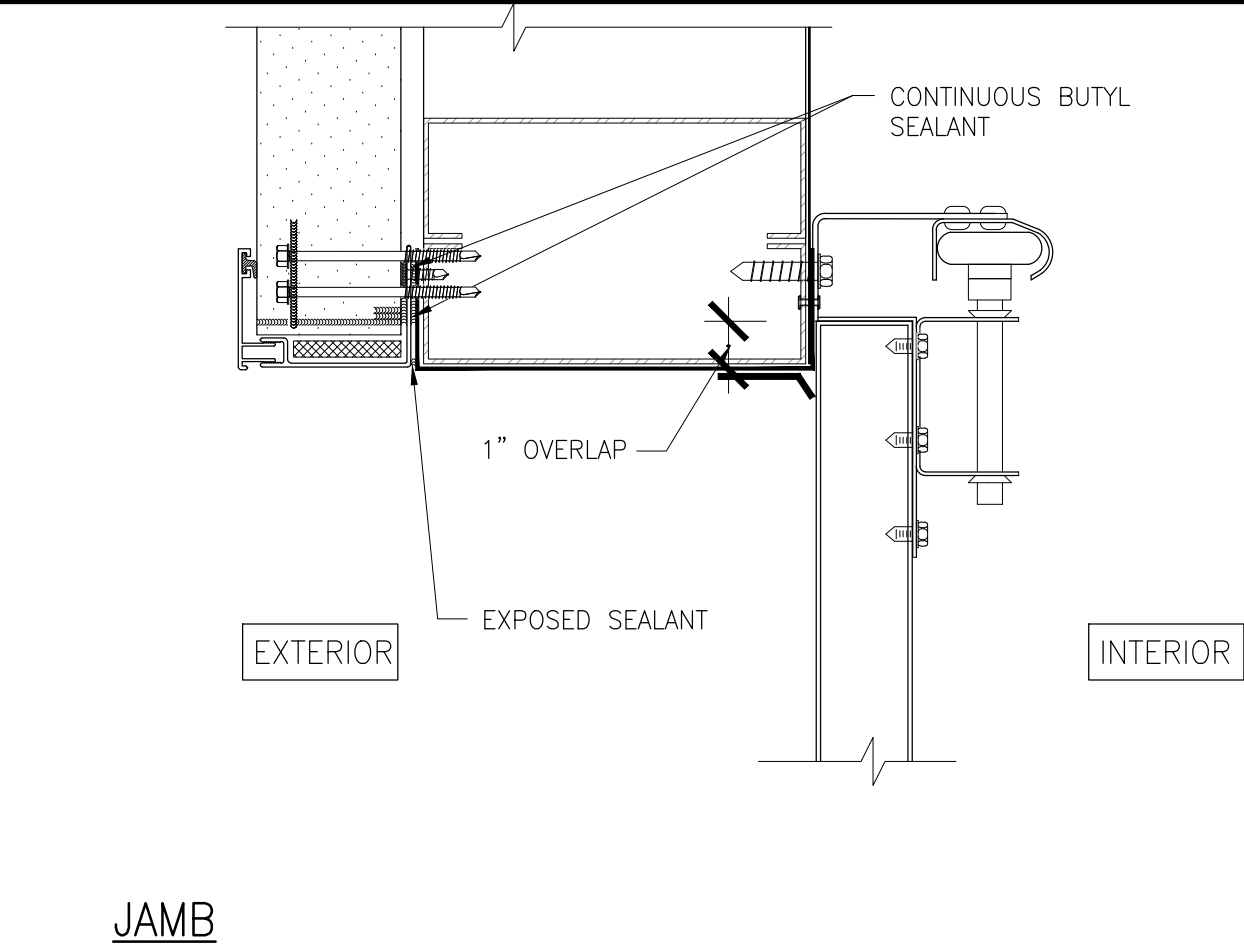
**G2 WINDOW JAMB**  
A-702 SCALE: 3" = 1'-0" (FOR NOTES AND DIMS SEE HEAD U.O.N.)



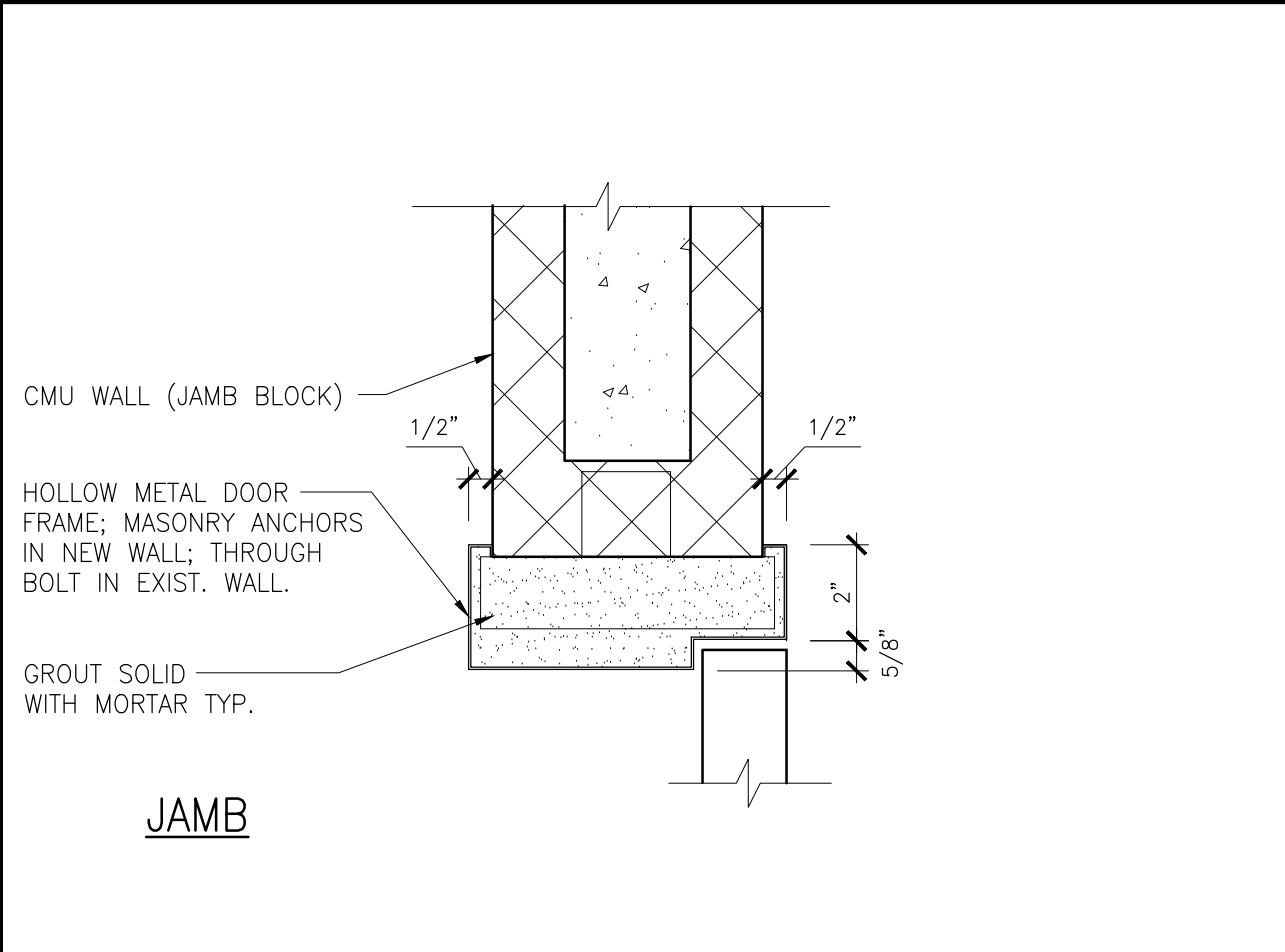
**G5 LOUVER JAMB**  
A-702 SCALE: 3" = 1'-0" (FOR NOTES AND DIMS SEE HEAD U.O.N.)



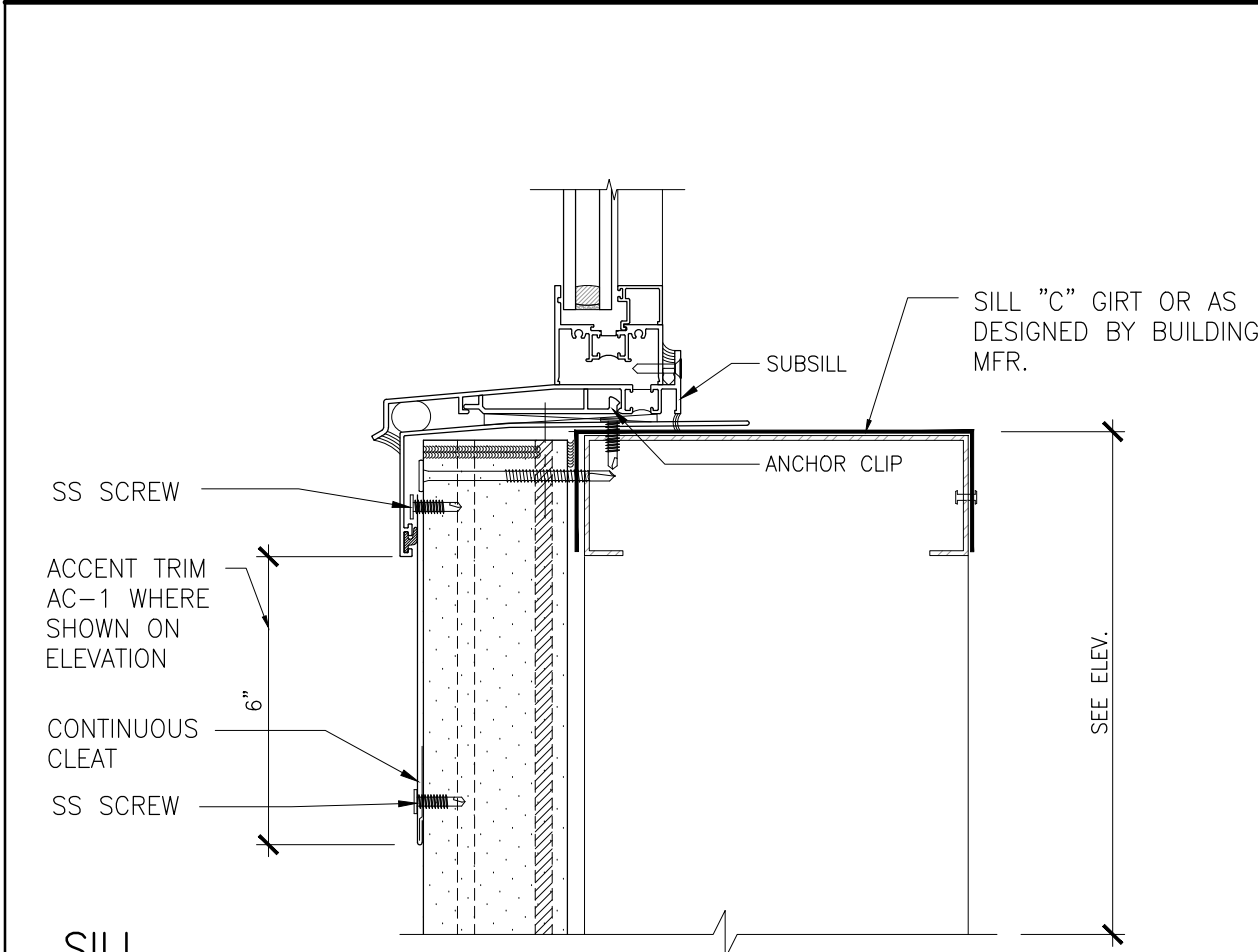
**G8 EXTRIOR DOOR JAMB**  
A-702 SCALE: 1 1/2" = 1'-0" (FOR NOTES AND DIMS SEE HEAD U.O.N.)



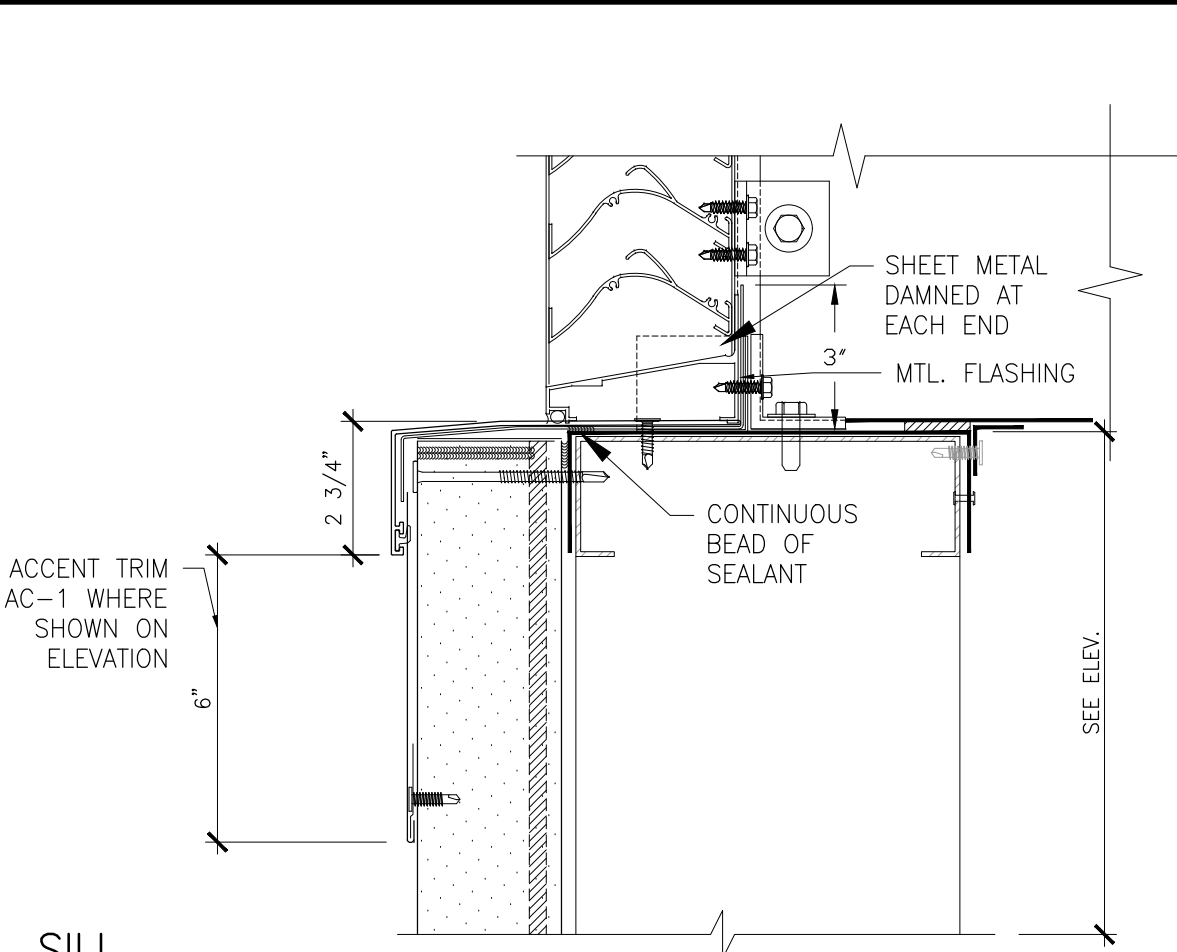
**G11 OVERHEAD DOOR JAMB**  
A-702 SCALE: 1 1/2" = 1'-0" (FOR NOTES AND DIMS SEE HEAD U.O.N.)



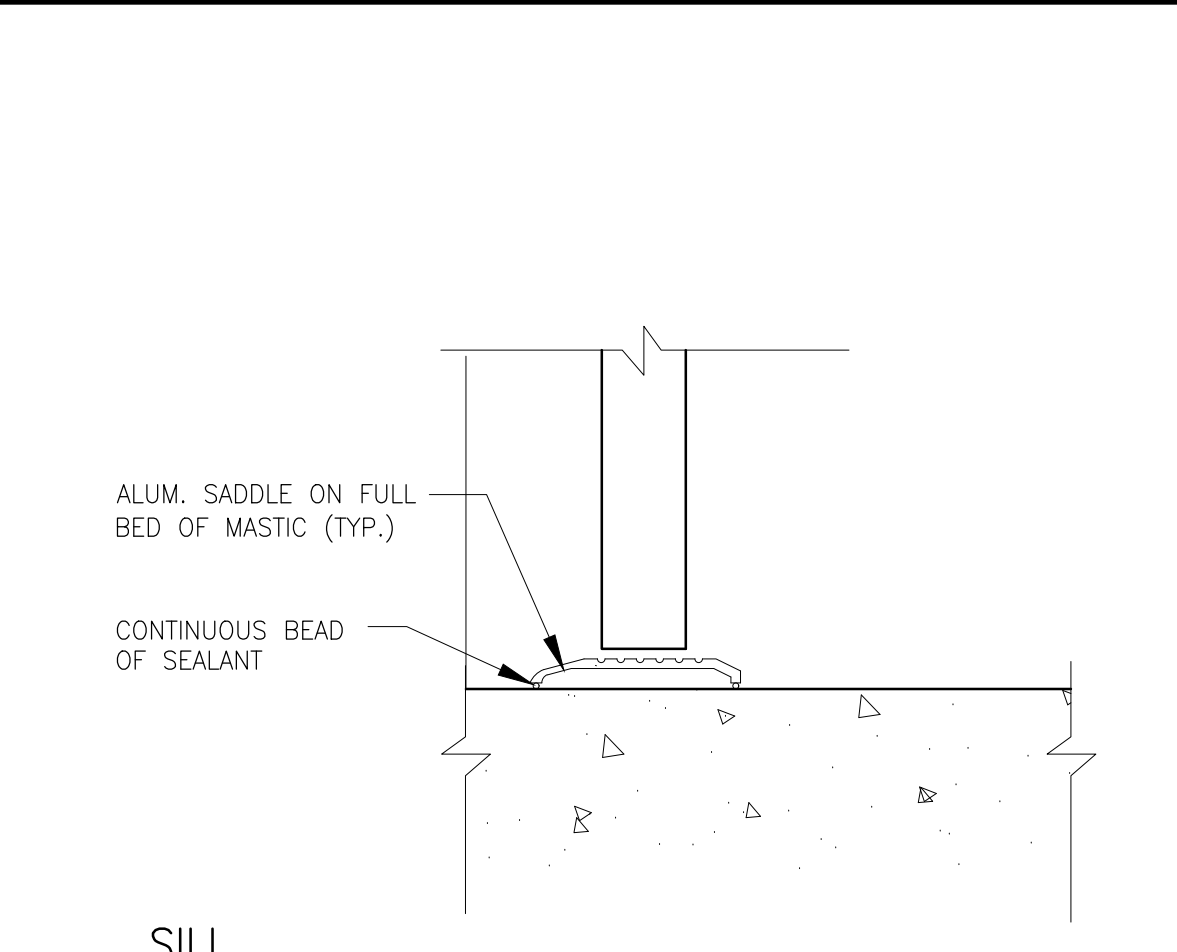
**G14 INTERIOR DOOR JAMB**  
A-702 SCALE: 3" = 1'-0" (FOR NOTES AND DIMS SEE HEAD U.O.N.)



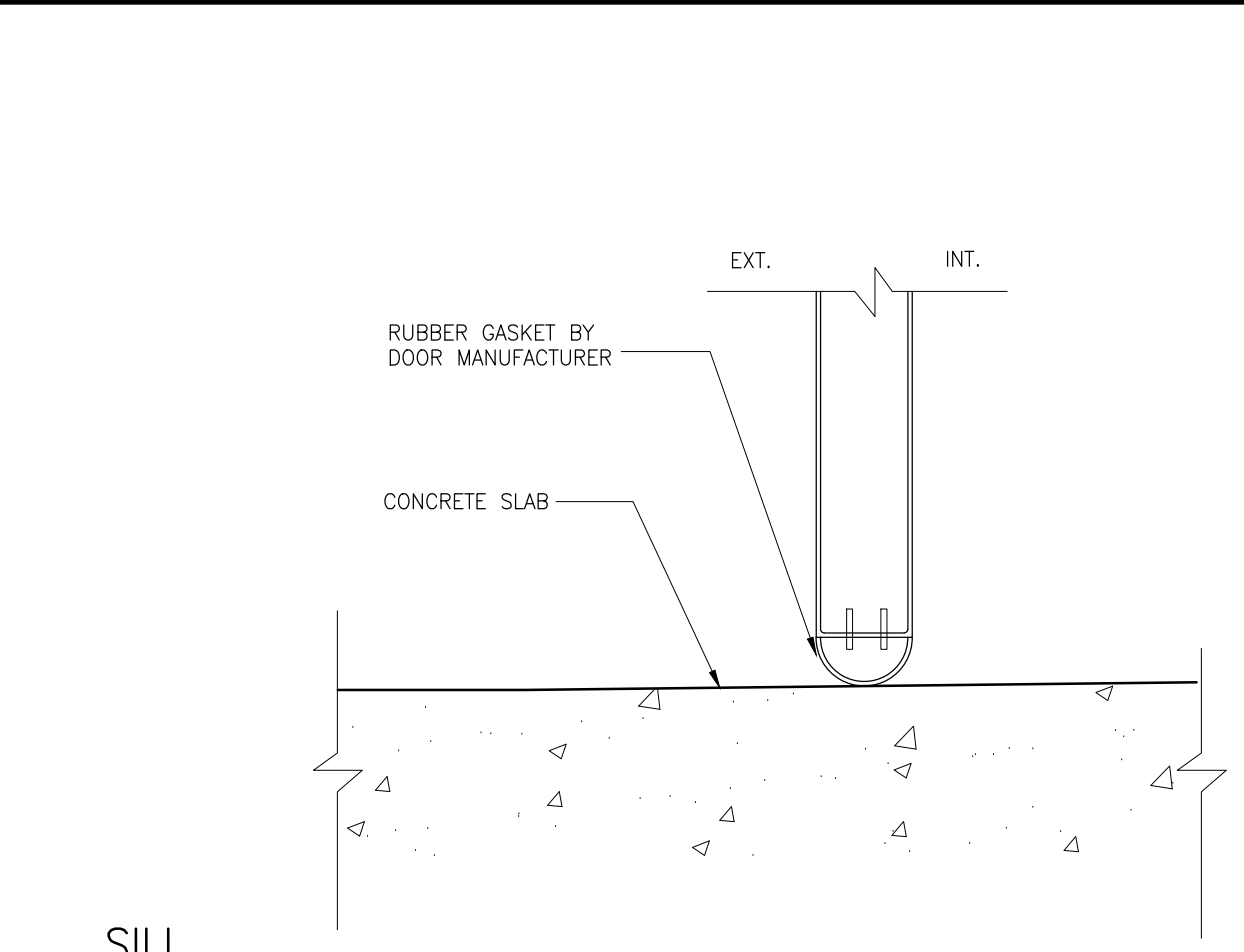
**G3 WINDOW SILL**  
A-702 SCALE: 3" = 1'-0" (FOR NOTES AND DIMS SEE HEAD U.O.N.)



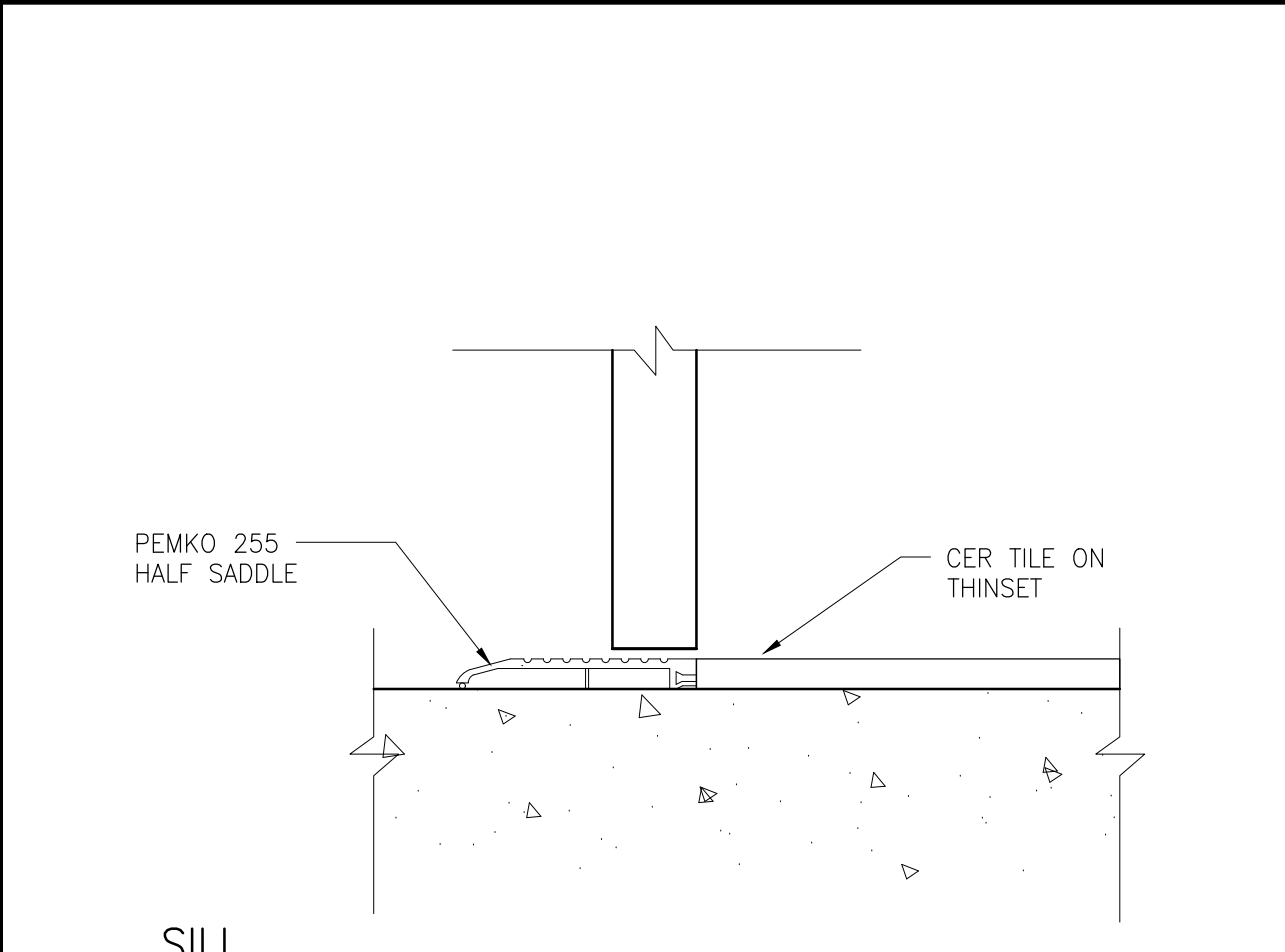
**G6 LOUVER SILL**  
A-702 SCALE: 3" = 1'-0" (FOR NOTES AND DIMS SEE HEAD U.O.N.)



**G9 EXTRIOR DOOR SILL**  
A-702 SCALE: 3" = 1'-0" (FOR NOTES AND DIMS SEE HEAD U.O.N.)



**G12 OVERHEAD DOOR SILL**  
A-702 SCALE: 3" = 1'-0" (FOR NOTES AND DIMS SEE HEAD U.O.N.)



**G15 INTERIOR DOOR SILL**  
A-702 SCALE: 3" = 1'-0" (FOR NOTES AND DIMS SEE HEAD U.O.N.)

**LEGAL NOTICE:**

ALTERATIONS BY ANY PERSON, IN ANY WAY, OF ANY ITEM CONTAINED ON THIS DOCUMENT, UNLESS ACTING UNDER DIRECTION OF THE LICENSED ARCHITECT WHOSE PROFESSIONAL SEAL IS AFFIXED HERETO, IS A VIOLATION OF TITLE VII, SEC. 69.5 (B) OF NEW YORK STATE LAW.

WRITTEN DIMENSIONS ON THIS DRAWING SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS AND CONDITIONS ON THE JOB. THIS OFFICE MUST BE NOTIFIED OF ANY VARIATIONS FROM DIMENSIONS AND CONDITIONS SHOWN BY THESE DRAWINGS. SHOP DETAILS MUST BE SUBMITTED TO THIS OFFICE FOR APPROVAL BEFORE PROCEEDING WITH FABRICATION.



FINISH SCHEDULE

RM.#	LOCATION	FLOOR	BASE	WALL	CEILING	REMARKS
001	BATHROOM	CT-1	CT-2	P-1, P-3, CT-3, CT-4	PQWB	WALL SCHEDULE APPLIES TO INTERIOR & EXTERIOR WALL SURFACES EXPOSED TO GARAGE
002	IT CLOSET	VCT-1	VB-1	P-1, P-4	PQWB	
003	STORAGE	SC-1	NB	M-3	M-3	

ACOUSTICAL TILE CEILING NOTE

LAYOUT - CENTER CEILING TO ROOMS OR SPACES. COORDINATE WITH LIGHTING LAYOUT (SEE ELECTRICAL DRAWINGS) IF LIGHT FIXTURE IS IN THE CENTER OF THE ROOM THEN THE CENTER LINE OF ROOM IS AT THE CENTER LINE OF FIXTURE. IF THERE ARE TWO ROWS OF LIGHTS IN THE CENTER OF THE ROOM THEN THE CENTER LINE OF THE ROOM IS CENTERED BETWEEN LIGHTS.

GENERAL FINISH NOTES

- A. PROVIDE SMOOTH AND LEVEL TRANSITION BETWEEN DIFFERENT FLOOR MATERIALS.
- B. EXTEND ROOM FINISHES INTO ADJACENT CLOSETS AND SIMILAR SPACES U.O.N.
- C. INSTALL FLOORING PRIOR TO INSTALLATION OF CASEWORK & EQUIPMENT
- D. WALL PAINT PATTERN : REFER TO INTERIOR ELEVATION 7/A-300

E. CERAMIC TILE INSTALLATION: PROCEED IN ACCORDANCE W/ DETAILS AND SPECS OF TCA ( TILE COUNCIL OF AMERICA) HAND BOOK FOR CERAMIC TILE INSTALLATION. ALL FLOOR INSTALLATION OVER CONCRETE SLABS SHALL BE IN ACCORDANCE TO #113-11

SAFETY ITEMS

EXTERIOR

MFR. : BENJAMIN MOORE		MFR. : BENJAMIN MOORE		MFR. : BENJAMIN MOORE		MFR. : BENJAMIN MOORE	
1) FIRST COAT: COLORTECH ACRYLIC METAL PRIMER V110		1) FIRST COAT: COLORTECH ACRYLIC METAL PRIMER V110		1) FIRST COAT: COLORTECH ACRYLIC METAL PRIMER V110		1) FIRST COAT: COLORTECH ACRYLIC METAL PRIMER V110	
2) SECOND COAT: BM UNTRA SPEC HD ACRYLIC DTM GLOSS HP28		2) SECOND COAT: BM UNTRA SPEC HD ACRYLIC DTM GLOSS HP28		2) SECOND COAT: BM UNTRA SPEC HD ACRYLIC DTM GLOSS HP28		2) SECOND COAT: BM UNTRA SPEC HD ACRYLIC DTM GLOSS HP28	
3) THIRD COAT: BM UNTRA SPEC HD ACRYLIC DTM GLOSS HP28		3) THIRD COAT: BM UNTRA SPEC HD ACRYLIC DTM GLOSS HP28		3) THIRD COAT: BM UNTRA SPEC HD ACRYLIC DTM GLOSS HP28		3) THIRD COAT: BM UNTRA SPEC HD ACRYLIC DTM GLOSS HP28	
COLOR : SAFETY BLUE 35		COLOR : RAL 1018 YELLOW		COLOR : SAFETY ORANGE 65		COLOR : RAL 1018 YELLOW	

FLOOR FINISHES

VCT-1	VINYL COMPOSITION TILE	CT-1	PORCELAIN TILE	SC-1	SEALED CONCRETE															
SIZE: 12" x 12" MFR.: ARMSTRONG MODEL: EXCELOD SDT COLOR: FOSSIL GREY 51956 INSTALLATION: MASTIC GAUGE: 1/8"		SIZE: 12"x24" MFR.: ATLAS CONCORDE MODEL: SEASTONE COLORED IN BODY PORCELEAN COLOR: BLACK GROUT: COLOR TO MATCH TILE		MFR.: SONNEBORN - CONCRETE REPAIR SYTEMS PRODUCT: KURE-N-SEAL WB WATERBORNE ACRYLIC TRANSPARENT CURING, SEALING AND DUSTPROOFING COMPOUND  APPLY 2 COATS. COLOR : CLEAR																

WALL BASE

CT-2	BASE PORCELAIN TILE	VB-1	VINYL BASE	NB																
SIZE: 12"x24"- CUT TO 6"x24" MFR.: ATLAS CONCORDE MODEL: SEASTONE COLORED IN BODY PORCELEAN COLOR: BLACK GROUT: COLOR TO MATCH TILE		SIZE: 4" MFR.: JOHNSONITE MODEL: COVEBASE COLOR: #20 CHARCAOL INSTALLATION: MASTIC		NO BASE																

WALL FINISHES INTERIOR

P-1	PAINTED CMU	P-2	PAINTED CONCRETE	P-2A	PAINTED CONCRETE	P-3	PAINTED GYPSUM BOARD	P-3A	PAINTED GYPSUM BOARD	P-4	PAINTED PLYWOOD	NWF								
MFR. : BENJAMIN MOORE  1) FIRST COAT: COROTECN ACRYLIC BLOCK FILLER V114 2) SECOND COAT: COROTECN PRE-CATALYZED WATERBORNE EPOXY SEMI-GLOSS V341 3) THIRD COAT: COROTECN PRE-CATALYZED WATERBORNE EPOXY SEMI-GLOSS V341 COLOR : SEAPEANE OC-19 NOTE:		MFR. : BENJAMIN MOORE  1) FIRST COAT: BENJAMIN MOORE ULTRA SPEC INTERIOR/ EXTERIOR ACRYLIC HIGH BUILD MASONRY PRIMER 609 2) SECOND COAT: COROTECN PRE-CATALYZED WATERBORNE EPOXY SEMI-GLOSS V341 3) THIRD COAT: COROTECN PRE-CATALYZED WATERBORNE EPOXY SEMI-GLOSS V341 COLOR : SEAPEANE OC-19 NOTE:		MFR. : BENJAMIN MOORE  1) FIRST COAT: BENJAMIN MOORE ULTRA SPEC INTERIOR/ EXTERIOR ACRYLIC HIGH BUILD MASONRY PRIMER 609 2) SECOND COAT: COROTECN PRE-CATALYZED WATERBORNE EPOXY SEMI-GLOSS V341 3) THIRD COAT: COROTECN PRE-CATALYZED WATERBORNE EPOXY SEMI-GLOSS V341 COLOR : SEAPEANE OC-19 NOTE:		MFR. : BENJAMIN MOORE  1) FIRST COAT: BENJAMIN MOORE ULTRA SPEC 500 INTERIOR LATEX PRIMER NS34 2) SECOND COAT: BENJAMIN MOORE ULTRA SPEC SCUFF-X LATEX EGGSHELL 485 3) THIRD COAT: BENJAMIN MOORE ULTRA SPEC SCUFF-X LATEX EGGSHELL 485 COLOR : TBD NOTE:		MFR. : BENJAMIN MOORE  1) FIRST COAT: BENJAMIN MOORE ULTRA SPEC 500 INTERIOR LATEX PRIMER NS34 2) SECOND COAT: BENJAMIN MOORE ULTRA SPEC SCUFF-X LATEX EGGSHELL 485 3) THIRD COAT: BENJAMIN MOORE ULTRA SPEC SCUFF-X LATEX EGGSHELL 485 COLOR : TBD NOTE:		MFR. : BENJAMIN MOORE  1) FIRST COAT: BENJAMIN MOORE ULTRA SPEC 500 INTERIOR LATEX PRIMER NS34 2) SECOND COAT: BENJAMIN MOORE ULTRA SPEC SCUFF-X LATEX EGGSHELL 487 3) THIRD COAT: BENJAMIN MOORE ULTRA SPEC SCUFF-X LATEX EGGSHELL 487 COLOR : SEAPEANE OC-19 NOTE:		NO WALL FINISH								

WALL FINISHES INTERIOR

CT-3	PORCELAIN TILE	CT-4	BULLNOSE PORCELAIN TILE	P-5	PAINTED CONCRETE	P-6	PAINTED BLOCK	BR-1	BRICK BASE											
SIZE: 12"x24" MFR.: ATLAS CONCORDE MODEL: SEASTONE COLORED IN BODY PORCELEAN COLOR: GREY GROUT: COLOR TO MATCH TILE		SIZE: 3X24" MFR.: ATLAS CONCORDE MODEL: SEASTONE COLORED IN BODY PORCELEAN COLOR: BLACK GROUT: COLOR TO MATCH TILE		MFR. : BENJAMIN MOORE  1) FIRST COAT: BENJAMIN MOORE SUPER SPEC INTERIOR /EXTERIOR ACRYLIC HIGH BUILD MASONRY PRIMER N088 2) SECOND COAT: BENJAMIN MOORE ULTRA SPEC EXT SATIN N448 3) THRD COAT: BENJAMIN MOORE ULTRA SPEC EXT SATIN N448 COLOR : COLOR TO MATCH BRICK BASE ON EXISTING DES BLDG		MFR. : BENJAMIN MOORE  1) FIRST COAT: COROTECN ACRYLIC BLOCK FILLER V114 2) SECOND COAT: BENJAMIN MOORE ULTRA SPEC EXT SATIN N448 3) THIRD COAT: BENJAMIN MOORE ULTRA SPEC EXT SATIN N448 COLOR : TBD		BRICK TO MATCH BRICK ON EXISTING DES BUILDING												

CEILING FINISHES

PGWB	PAINTED GYPSUM BOARD	NC																		
MFR. : BENJAMIN MOORE  1) FIRST COAT: BENJAMIN MOORE ULTRA SPEC 500 INTERIOR LATEX PRIMER NS34 2) SECOND COAT: BENJAMIN MOORE ULTRA SPEC 500 INTERIOR LATEX FLAT NS36 3) THIRD COAT: BENJAMIN MOORE ULTRA SPEC 500 INTERIOR LATEX FLAT NS36 COLOR : TBD  SHEEN : SATIN		NO CEILING FINISH																		

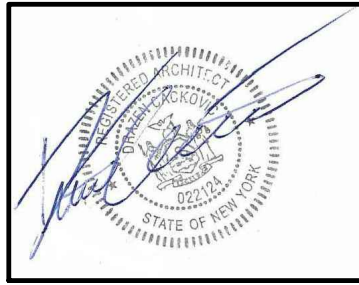
DOOR FINISHES INTERIOR

D-1	DOOR - STEEL	FR-1	DOOR FRAMES - STEEL	D-3	DOOR - GALVANIZED, HM	FR-3	DOOR FRAMES - GALVANIZED, HM													
MFR. : BENJAMIN MOORE PRIMER : (1) COAT - BM SUPER SPEC HP ALKID METAL PRIMER HP96 FINISH COAT: (2) COATS- BM SUPER SPEC HP D.T.M. ACRYLIC SEMI-GLOSS HP29 COLOR : SHENANDOAH TAUPE AC 36 SHEEN : SEMI-GLOSS		SAME AS D-1		MFR. : BENJAMIN MOORE  1) FIRST COAT: COLORTECH ACRYLIC METAL PRIMER V110 2) SECOND COAT: BM UNTRA SPEC HD ACRYLIC DTM SEMI-GLOSS HP29 3) THIRD COAT: BM UNTRA SPEC HD ACRYLIC DTM SEMI-GLOSS HP29 COLOR : SHENANDOAH TAUPE AC 36		MFR. : BENJAMIN MOORE  1) FIRST COAT: COLORTECH ACRYLIC METAL PRIMER V110 2) SECOND COAT: BM UNTRA SPEC HD ACRYLIC DTM SEMI-GLOSS HP29 3) THIRD COAT: BM UNTRA SPEC HD ACRYLIC DTM SEMI-GLOSS HP29 COLOR : SHENANDOAH TAUPE AC 36														

FINISH OF MISCELLANEOUS ITEMS

M-2	MISC. STEEL ITEMS	M-3	STEEL FRAMES & COLUMNS	M-4	STEEL UNTELS & COLUMNS	M-5	GALVANIZED	M-7		M-8		F-1	ROOF FACIA	RL	ROOF ACCESS, LADDER & LADDER DOOR				
MFR. : BENJAMIN MOORE  1) FIRST COAT: COLORTECH ACRYLIC METAL PRIMER V110 2) SECOND COAT: BM UNTRA SPEC HD ACRYLIC DTM GLOSS HP28 3) THIRD COAT: BM UNTRA SPEC HD ACRYLIC DTM GLOSS HP28 COLOR : TBD		MFR. : BENJAMIN MOORE  1) FIRST COAT: COLORTECH ACRYLIC METAL PRIMER V110 2) SECOND COAT: BM UNTRA SPEC HD ACRYLIC DTM GLOSS HP28 3) THIRD COAT: BM UNTRA SPEC HD ACRYLIC DTM GLOSS HP28 COLOR : SEA PEARL		MFR. : BENJAMIN MOORE  1) FIRST COAT: COLORTECH ACRYLIC METAL PRIMER V110 2) SECOND COAT: BM UNTRA SPEC HD ACRYLIC DTM SEMI-GLOSS HP29 3) THIRD COAT: BM UNTRA SPEC HD ACRYLIC DTM SEMI-GLOSS HP29 COLOR : TBD		MFR. : BENJAMIN MOORE  1) FIRST COAT: COLORTECH ACRYLIC METAL PRIMER V110 2) SECOND COAT: BM UNTRA SPEC HD ACRYLIC DTM SEMI-GLOSS HP29 3) THIRD COAT: BM UNTRA SPEC HD ACRYLIC DTM SEMI-GLOSS HP29 COLOR : TBD		ALUMINUM GUTTERS & DOWNSPOUTS COLOR : TERRATONE		ALUMINUM LOUVERS COLOR : CLEAR ANODIZED ALUMINUM		MFR. : ROOF MANUFACTURER TO MATCH ROOF SYSTEM MODEL : TO MATCH WALL PANELS TYPE P-2 COLOR :		MFR. : BENJAMIN MOORE  1) FIRST COAT: COLORTECH ACRYLIC METAL PRIMER V110 2) SECOND COAT: BM UNTRA SPEC HD ACRYLIC DTM GLOSS HP28 3) THIRD COAT: BM UNTRA SPEC HD ACRYLIC DTM GLOSS HP28 COLOR : RAL 1018 YELLOW					

Seal:



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REVISION NUMBER	DATE	MADE BY	APP'D BY																	

RECORD DRAWING CERTIFICATION

- ☐ AS BUILT - CHANGES AS NOTED
- ☐ AS BUILT - NO CHANGES

CONTRACTOR

NAME \_\_\_\_\_  
SIGNATURE \_\_\_\_\_  
TITLE \_\_\_\_\_

PROJECT COORDINATOR

NAME \_\_\_\_\_  
SIGNATURE \_\_\_\_\_  
TITLE \_\_\_\_\_

**WESTCHESTER COUNTY, NEW YORK**  
**DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION**  
DIVISION OF ENGINEERING

NEW EQUIPMENT STORAGE BUILDING  
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
VALHALLA CAMPUS, VALHALLA, NEW YORK  
FINISH SCHEDULE

CONTRACT  
NUMBER:

17-521

SHEET  
NUMBER

A-800

SHEET NO. 25 OF 53

SCALE: AS SHOWN

DATE: 11/16/2021

DPW FILE NO.

38-47-A-707-0

REV.  
NO.

0



GENERAL NOTES:

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NEW YORK STATE BUILDING CODE, LATEST EDITION.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO COMMENCING WORK, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER/ ARCHITECT OF ANY DISCREPANCY THAT MAY EXIST.
3. PRINCIPAL OPENINGS THROUGH THE FRAMING ARE SHOWN ON THESE DRAWINGS. PROVIDE ALL OPENINGS REQUIRED BY MECHANICAL, ELECTRICAL, OR PLUMBING TRADES, WHETHER OR NOT SHOWN IN THE STRUCTURAL DRAWINGS. ANY DEVIATION FROM THE OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR REVIEW.
4. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS AND CODES NECESSARY TO ADEQUATELY PROTECT ALL PERSONS PROPERTY FROM INJURY, DAMAGE OR LOSS. HE SHALL INSTALL AND MAINTAIN ALL REASONABLE SAFEGUARDS, NOTICES, BARRIERS, SCAFFOLDING, LADDERS, AND PRECAUTIONS REQUIRED TO PROVIDE ALL PROTECTION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ALL DEBRIS FROM THE CONSTRUCTION SITE IMMEDIATELY AFTER COMPLETION OF THEIR WORK IN SAFE AND LEGAL MANNER.
6. THE CONTRACTOR SHALL COORDINATE THESE DRAWINGS WITH ALL ARCHITECTURAL AND MECHANICAL DRAWINGS AND COORDINATE THE WORK AMONG THE VARIOUS TRADES.
7. ALTERNATE CONNECTION DETAILS MAY BE APPROVED IF SUCH DETAILS ARE SUBMITTED TO THE ENGINEER FOR REVIEW. HOWEVER, THE ENGINEER SHALL BE THE SOLE JUDGE OF ACCEPTABILITY.
8. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR THE SAFETY OF ADJACENT STRUCTURES, PROPERTY, HIS WORKMEN, AND THE PUBLIC, AS AFFECTED BY THE CONSTRUCTION OF THIS PROJECT.

FOUNDATION NOTES:

1. THE FOUNDATION DESIGN IS BASED ON BORING AND GEOTECHNICAL REPORTS PERFORMED BY KEVIN L. PATTON, P.E., DATED JANUARY 5, 2018.
2. ALL STRUCTURES SHALL BE CARRIED DOWN TO SOIL HAVING A MINIMUM BEARING CAPACITY OF 1.5 TONS PER SQUARE FOOT. ELEVATIONS GIVEN ARE TOP OF CONCRETE & ARE NOT TO BE CONSTRUED AS LIMITING IN ANY WAY THE DEPTH OF EXCAVATION INQUIRED TO REACH GOOD BEARING.
3. COMPACT FILL TO 95% OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE MODIFIED PROCTOR IN ACCORDANCE WITH (ASTM D-1557 OR D-2922) FOR EACH 2000 SQUARE FEET OF EACH LAYER. LOCATION OF TESTS RANDOMLY SELECTED BY TESTING AGENCY.
4. EXTERIOR CONSTRUCTION SHALL BE CARRIED DOWN TO A MINIMUM OF 3'-6" BELOW FINISHED EXTERIOR GRADE.
5. NO FOUNDATIONS SHALL BE PLACED IN WATER OR ON FROZEN GROUND.
6. ALL FOOTING EXCAVATIONS ARE TO BE FINISHED BY HAND.
7. UNLESS OTHERWISE NOTED, ALL FOOTINGS AND PILASTERS SHALL BE CENTERED UNDER SUPPORTED MEMBERS.
8. WHERE FOUNDATION ELEMENTS ARE TO HAVE FILL ON BOTH SIDES, EACH SIDE SHALL BE FILLED SIMULTANEOUSLY, MAINTAINING A COMMON ELEVATION.
9. COORDINATE UNDER FLOOR DRAIN REQUIREMENTS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS AND THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER.
10. CONTRACTOR SHALL PROVIDE CONTINUOUS CONTROL OF SURFACE AND UNDERGROUND WATER AS REQUIRED DURING CONSTRUCTION SUCH THAT THE WORK IS DONE IN A DRY CONDITION. HOWEVER, THE CONTRACTOR SHALL INSURE THAT GROUND WATER LEVELS UNDER ADJACENT STRUCTURES ARE NOT LOWERED BY CONSTRUCTION TECHNIQUES.
11. BUILDING WALLS RETAINING EARTH RELY ON THE COMPLETED FLOOR SLABS FOR LATERAL SUPPORT. IF REQUIRED BY THE CONSTRUCTION SEQUENCE, THE CONTRACTOR SHALL TEMPORARILY BRACE ALL BUILDING WALLS AGAINST WHICH BACK FILL IS TO BE PLACED UNTIL ALL FLOOR SLABS SUPPORTING THE WALLS ARE IN PLACE AND HAVE ATTAINED AT LEAST 75% OF THEIR SPECIFIED DESIGN STRENGTH. DESIGN OF TEMPORARY BRACES SHALL BE BY A REGISTERED PROFESSIONAL STRUCTURAL ENGINEER LICENSED BY THE STATE OF NEW YORK.
12. IN NO CASE SHALL BULLDOZERS OR OTHER HEAVY EQUIPMENT BE PERMITTED CLOSER THAN 8 FEET FROM ANY FOUNDATION WALL. IF IT IS NECESSARY TO OPERATE SUCH EQUIPMENT CLOSER THAN 8 FEET TO THE WALL, THE CONTRACTOR SHALL BE THE SOLE RESPONSIBLE PARTY AND AT HIS OWN EXPENSE SHALL PROVIDE ADEQUATE SUPPORTS OR BRACE THE WALL TO WITHSTAND THE ADDITIONAL LOADS SUPERIMPOSED FROM SUCH EQUIPMENT.
13. THE MAXIMUM SLOPE BETWEEN THE BOTTOMS OF TWO ADJACENT FOOTINGS BEARING ON COMPETENT SOIL SHALL NOT EXCEED 2 HORIZONTAL TO 1 VERTICAL.
14. FURNISH AND PLACE ALL SUPPORTS, TEMPORARY AND PERMANENT, WHETHER SHORING, BRACING, NEEDLING, UNDERPINNING, OR SHEET PILING, NECESSARY TO BRACE EXCAVATIONS.

CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF THE ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318) AND THE NEW YORK STATE BUILDING CODE. IN CASE OF CONFLICT, THE STATE BUILDING CODE SHALL GOVERN.
2. ALL CONCRETE SHALL BE CONTROLLED CONCRETE, MIXED AND PLACED UNDER THE SUPERVISION OF AN APPROVED CONCRETE TESTING AGENCY.
3. FOR LOCATIONS LISTED BELOW, CONCRETE SHALL BE NORMAL WEIGHT CONCRETE WITH SAND AND GRAVEL AGGREGATE, TYPE I OR TYPE II PORTLAND CEMENT AND A MINIMUM COMPRESSIVE STRENGTH (f'c) IN 28 DAYS AS FOLLOWS:

WALLS	4,000 PSI
SLABS ON GRADE	5,000 PSI
FOUNDATION	4,000 PSI
4. ALL CONCRETE SHALL CONTAIN AN AIR ENTRAINMENT ADMIXTURE, AIR CONTENT TO BE 5%± 1%.
5. MAXIMUM WATER/CEMENT RATIO FOR SLAB ON GRADE SHALL BE 0.40.
6. ALL CONCRETE SHALL BE PLACED WITHOUT HORIZONTAL CONSTRUCTION JOINTS, UNLESS OTHERWISE NOTED. HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS THROUGH VERTICAL CONSTRUCTION JOINTS.
7. CONSTRUCTION JOINT LOCATIONS OTHER THAN SHOWN ON THE DRAWINGS ARE PERMITTED SUBJECT TO PRIOR APPROVAL OF THE ENGINEER. EXPANSION JOINT AND CONTROL JOINT LOCATIONS ARE MANDATORY AS SHOWN. CONTRACTOR SHALL SUBMIT DRAWINGS SHOWING INTENDED PLACING SEQUENCES AND LOCATIONS OF CONSTRUCTIONS JOINTS TO THE ENGINEER FOR APPROVAL. CONSTRUCTION JOINTS SHALL BE LOCATED SO AS TO PROVIDE A 60'-0" MAXIMUM HORIZONTAL LENGTH OF CONCRETE PLACEMENT IN ANY DIRECTION.
8. UNLESS OTHERWISE SHOWN ON DRAWINGS, SLABS ON GRADE SHALL BE CAST IN ALTERNATING STRIPS, ONE (1) COLUMN BAY WIDE. ADJACENT SECTIONS SHALL BE PLACED NO SOONER THAN THREE DAYS APART. CONTRACTOR MAY PROPOSE A JOINTING METHOD OR PLACEMENT SCHEDULE THAT VARIES FROM THE FOREGOING FOR THE ENGINEER'S CONSIDERATION.
9. GROUT UNDER COLUMN BASE PLATES AND UNDER OTHER BEARING PLATES SHALL BE NON-SHRINK, NONMETALLIC GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI AT 3 DAYS.
10. PIPES OR CONDUITS PLACED IN SLABS ON GRADE SHALL NOT BE PLACED CLOSER THAN 3 DIAMETERS ON CENTERS AND SHALL HAVE AN OUTSIDE DIAMETER LESS THAN 1/3 OF THE SLAB THICKNESS AND BE POSITIONED SO THAT THEY DO NOT INTERFERE WITH SLAB REINFORCEMENT.
11. ALL KEYS SHALL BE 2" X 4" (NOMINAL) UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
12. CONCRETE CAST ON SLOPED SURFACES SHALL BEGIN AT THE LOWEST ELEVATION AND CONTINUE MONOLITHICALLY TOWARD THE HIGHER ELEVATIONS UNTIL THE INTENDED POUR IS COMPLETED.
13. NO CONCRETE SHALL BE CAST BEFORE REVIEW AND APPROVAL OF THE REINFORCING AND EMBEDDED ITEMS HAVE BEEN OBTAINED FROM THE ARCHITECT, OR HIS DESIGNATED REPRESENTATIVE.
14. ALL EXPOSED EDGES OF CONCRETE MEMBERS SHALL BE CHAMFERED UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
15. CONCRETE MUST REACH THE FOLLOWING PERCENTAGES OF ITS 28-DAY COMPRESSIVE STRENGTH (f'c) BEFORE FORMS OR SHORES MAY BE REMOVED:

WALLS AND BEAM SIDES	20%
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16. WHERE FINISH IS NOT SPECIFIED, CONFORM TO REQUIREMENTS OF ACI 301 – "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS."
17. INSTALL DOWELED CONSTRUCTION JOINTS BETWEEN POURS FOR SLABS ON GROUND AND WHERE INDICATED.

REINFORCED MASONRY:

1. ALL MASONRY WORK SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530-95/ASCE 5-95/TMS 402-95).
2. ALL CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO ASTM C90, LIGHTWEIGHT WITH NET COMPRESSIVE STRENGTH OF 1,900 PSI.
3. MORTAR FOR BLOCK WALL CONSTRUCTION SHALL BE TYPE M OR S CONFORMING TO ASTM C270.
4. GROUT FOR BLOCK PIERS AND BLOCK WALLS SHALL CONFORM TO ASTM C476 WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI DETERMINED IN ACCORDANCE WITH THE PROVISIONS OF ASTM C1019.
5. REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, EXCEPT BARS TO BE WELDED SHALL CONFORM TO ASTM A706.
6. WIRE FOR JOINT REINFORCING SHALL CONFORM TO ASTM A82, YIELD POINT = 70 KSI (MIN.).
7. UNLESS NOTED OTHERWISE ON PLANS, PROVIDE THE FOLLOWING MINIMUM REINFORCEMENT:

6" CMU WALL – 3/16" DUR-O-WAL	● 16" O.C. VERTICALLY.
8", 10" AND 12" CMU WALL – HEAVY 3/16" DUR-O-WAL	● 16 O.C. VERTICALLY.

REINFORCED MASONRY CONTINUED:

8. PROVIDE BOND BEAMS WITH 2 – #5 CONTINUOUS, AT THE TOP OF WALLS AND PARAPETS, AT EACH FLOOR LEVEL, AND WHERE SHOWN ON THE DRAWINGS.
9. UNLESS NOTED OTHERWISE ON THE PLANS OR DETAILS, PROVIDE #4 BARS VERTICAL AT 4'-0" ON CENTER IN ALL MASONRY WALLS, AND PROVIDE (1) #4 VERTICAL REINFORCEMENT BAR AT EACH SIDE OF THE MASONRY OPENINGS AND ALT BAR SHOWN FOR THE WALL.
10. EXTEND ADDITIONAL REINFORCEMENT A MINIMUM OF 36 BAR DIAMETERS BEYOND THE OPENING, UNLESS OTHERWISE NOTED.
11. THE MINIMUM LENGTH OF LAP FOR REINFORCING BARS EMBEDDED IN GROUT IS 48 BAR DIAMETERS, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
12. PLACE REINFORCING BARS BEFORE GROUTING. PLACE GROUT IN LIFTS NOT EXCEEDING 5 FEET. CONSOLIDATE EACH LIFT BY MECHANICAL VIBRATION.
13. PROPERLY SECURE REINFORCING BARS TO MAINTAIN THE POSITIONS INDICATED ON THE DRAWINGS. BARS TO BE LOCATED IN CENTER OF CELL UNLESS OTHERWISE NOTED.
14. ALL CMU SHALL BE BRACED DURING CONSTRUCTION FOR CODE LATERAL DESIGN LOADS UNTIL PERMANENT RESTRAINTS HAVE BEEN INSTALLED.
15. FOR ATTACHMENT OF MASONRY DIRECTLY TO STEEL BEAMS OR STEEL COLUMN ANCHORS TO BE HOHMANN & BARNARD 360 HOT GALVANIZED 12 GA. STEEL CHANNELS MINIMUM 8" LONG WELDED TO BEAM OR COLUMN WITH #365 BEND GRIPSTAY ANCHOR 1 1/4" x12 GA. HOT DIPPED GALVANIZED, 4" LONG x1 1/2" HOOK. FILL ALL BLOCK CELLS RECEIVING ANCHORS SOLID WITH GROUT.

REINFORCING NOTES:

1. ALL CONCRETE REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60 EXCEPT WHERE NOTED. ALL REINFORCING BARS TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCING BARS MAY NOT BE WELDED WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
2. ALL WELDED WIRE FABRIC (W.W.F.) SHALL CONFORM TO ASTM 185. (FY=65 KSI MIN.) W.W.F. SHALL BE PROVIDED IN FLAT SHEETS. THE FOLLOWING W.W.F. SHALL BE USED FOR AREAS SPECIFIED BELOW UNLESS OTHERWISE SHOWN ON THE DRAWINGS:

SLAB ON GRADE:	4x4 / W4.0 x W4.0
----------------	-------------------
3. REINFORCEMENT SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS UNLESS OTHERWISE NOTED ON DRAWINGS.
4. DETAILING OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI 315 – "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," LATEST EDITION.
5. PROVIDE AND SCHEDULE WITH THE SHOP DRAWINGS, ALL NECESSARY ACCESSORIES TO HOLD REINFORCING SECURELY IN POSITION. MINIMUM REQUIREMENTS SHALL BE:

HIGH CHAIRS	4'-0" ON CENTER
SLAB BOLSTERS	4'-0" ON CENTER
SUPPORT BARS FOR HIGH CHAIRS	NO. 5
6. ALL CONTINUOUS REINFORCEMENT SHALL HAVE A MINIMUM LAP AS REQUIRED FOR A CLASS B SPLICE (ACI 318-95, SECTION 12.15.1) UNLESS NOTED OTHERWISE.
7. ALL LAPS IN W.W.F. SHALL BE ONE MESH PLUS TWO INCHES AT SPLICES.
8. CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE PROVIDED AS FOLLOWS UNLESS OTHERWISE SHOWN ON THE DRAWINGS:

A. SURFACES CAST AGAINST EARTH. 3 INCHES	
B. FORMED SURFACES EXPOSED TO EARTH OR WEATHER	
#6 THROUGH #18 BARS	2 INCHES
#5 BARS AND SMALLER	1 ½ INCHES
C. FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER	SLABS, WALLS. 3/4" INCHES
BEAMS, COLUMNS	1 ½ INCHES
D. SLABS ON GRADE (FROM TOP OF SLAB)	1 ½ INCHES
- MAXIMUM DEVIATION FROM THESE REQUIREMENTS SHALL BE ± ¼ INCH FOR SECTIONS 10 INCHES THICK OR LESS; AND ± ½ INCH FOR SECTIONS OVER 10 INCHES THICK. SEE ACI 318-89, SECTION 7.7.1 FOR CONDITIONS NOT LISTED.
9. ALL HOOKS SHOWN ON DRAWINGS SHALL BE STANDARD HOOKS UNLESS NOTED OTHERWISE.
10. WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL RUN CONTINUOUSLY AROUND CORNERS AND BE LAPPED AT NECESSARY SPLICES, OR HOOKED AT DISCONTINUOUS ENDS. LAP LENGTHS SHALL BE AS GIVEN IN THE SPLICE AND DEVELOPMENT TABLE. LAP BEAM TOP BARS AT MID-SPAN AND BEAM BOTTOM BARS AT SUPPORTS, UNLESS OTHERWISE NOTED.
11. PROVIDE ADDITIONAL REINFORCING AT THE SIDES AND CORNERS OF ALL OPENINGS IN CONCRETE IN ACCORDANCE WITH THE TYPICAL DETAILS. MINIMUM ADDITIONAL REINFORCING SHALL BE AS FOLLOWS:

2 – #5 TOP AND BOTTOM IN SLABS
2 – #5 EACH FACE IN WALLS
2 – #5 X 4' – 0" LONG DIAGONALLY EACH CORNER OF OPENING
- EXTEND BARS A MINIMUM OF 2' – 0" BEYOND OPENING PROVIDE HOOK WHERE EXTENSION IS NOT POSSIBLE.

SPECIAL INSPECTION:

1. OWNER SHALL RETAIN SERVICES OF PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK TO PERFORM ALL SPECIAL INSPECTIONS.
2. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED BY OR UNDER THE DIRECT SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER AS DEFINED BY CHAPTER 17 CODE OF NEW YORK STATE.
3. STRUCTURAL TESTS AND INSPECTIONS DEFINED BY THE NYS CODE, CHAPTER 17 AND AS REQUIRED IN THIS SECTION SHALL BE PERFORMED BY A SPECIAL INSPECTOR HIRED BY OWNER. COPIES OF ALL REPORTS SHALL BE PROVIDED TO THE CODE ENFORCEMENT OFFICIAL AND THE REGISTERED DESIGN PROFESSIONALS (ARCHITECT AND STRUCTURAL ENGINEER).
- STEEL:

4. MATERIAL VERIFICATION:	
BOLTS.....	PERIODIC
WELD RODS.....	PERIODIC

FABRICATION:

VERIFICATION OF FABRICATION AND QUALITY CONTROL PROCEDURES PER SECTION 1704.2	
---	--

INSTALLATION:

BOLTS SHALL BE INSPECTED IN ACCORDANCE WITH AISC SPECIFICATION	
BEARING TYPE.....	PERIODIC
SLIP CRITICAL.....	CONTINUOUS

WELDING SHALL BE INSPECTED IN ACCORDANCE WITH AWS D1.1
- STEEL FRAME INSTALLATION SHALL BE PERIODICALLY INSPECTED FOR CONFORMANCE WITH THE APPROVED CONSTRUCTION DRAWINGS
- CONCRETE:

5. REINFORCING STEEL PLACEMENT:	
SLABS ON GRADE, METAL DECK.....	PERIODIC
FOOTING PIERS & FOUNDATION WALLS.....	PERIODIC
ELEVATED STRUCTURAL SLAB.....	CONTINUOUS
ANCHOR BOLT INSTALLATION.....	CONTINUOUS
USE OF DESIGN MIX.....	PERIODIC
SAMPLE OF CONCRETE.....	CONTINUOUS
CONCRETE PLACEMENT.....	CONTINUOUS
CONCRETE CURING.....	PERIODIC

SOILS:

6. SUBGRADE SOILS AND FILL SHALL BE INSPECTED IN ACCORDANCE SECTION 1704.7 AND TABLE 1704.7	
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STRUCTURAL DESIGN CRITERIA

1. CODES AND STANDARDS:

A. "NEW YORK STATE BUILDING CODE, 2020" (IBC 2018).	
B. "AMERICAN SOCIETY OF CIVIL ENGINEERS ASCE 7-16".	
- DESIGN LOADS:

1. DEAD LOADS	
FRAMING	5 PSF
DECK	3 PSF
INSULATION	1 PSF
CEILING	2 PSF
TOTAL:	11 PSF
2. LIVE LOADS	
ROOFS	20 PSF
3. SNOW LOAD (REFER SECTION 1608 OF N.Y.S.B.C.)	
GROUND SNOW LOAD	Pg = 30 PSF
ROOF SNOW LOAD	Pf = 21 PSF
4. WIND LOAD (REFERS SECTION 1609 OF N.Y.S.B.C.):	
BASIC WIND SPEED	120 MPH
EXPOSURE CATEGORY	C
5. SEISMIC LOAD (REFERS CHAPTER 11-12 OF ASCE/SEI 7-16):	
SEISMIC SITE CLASS :	D
SEISMIC OCCUPANCY CATEGORY :	IV
Ss :	0.270 g
S1 :	0.072 g
SDS: 2/3 x 1.6 x 0.239 =	0.285 g
SD1: 2/3 x 2.4 x 0.066 =	0.115 g
SEISMIC DESIGN CATEGORY :	C
6. OTHER	
COLLATERAL	7 PSF
SOLAR PANELS	6 PSF
ROOF TOP	5 PSF
7. RISK CATEGORY	IV

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DRAWING LIST:


N-100	STRUCTURAL NOTES
FO-100	FOUNDATION PLAN
FO-200	FOUNDATION SECTIONS & DETAILS. SHEET 1 OF 2
FO-201	FOUNDATION SECTIONS & DETAILS, SHEET 2 OF 2


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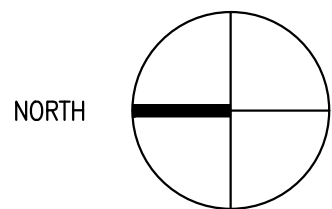
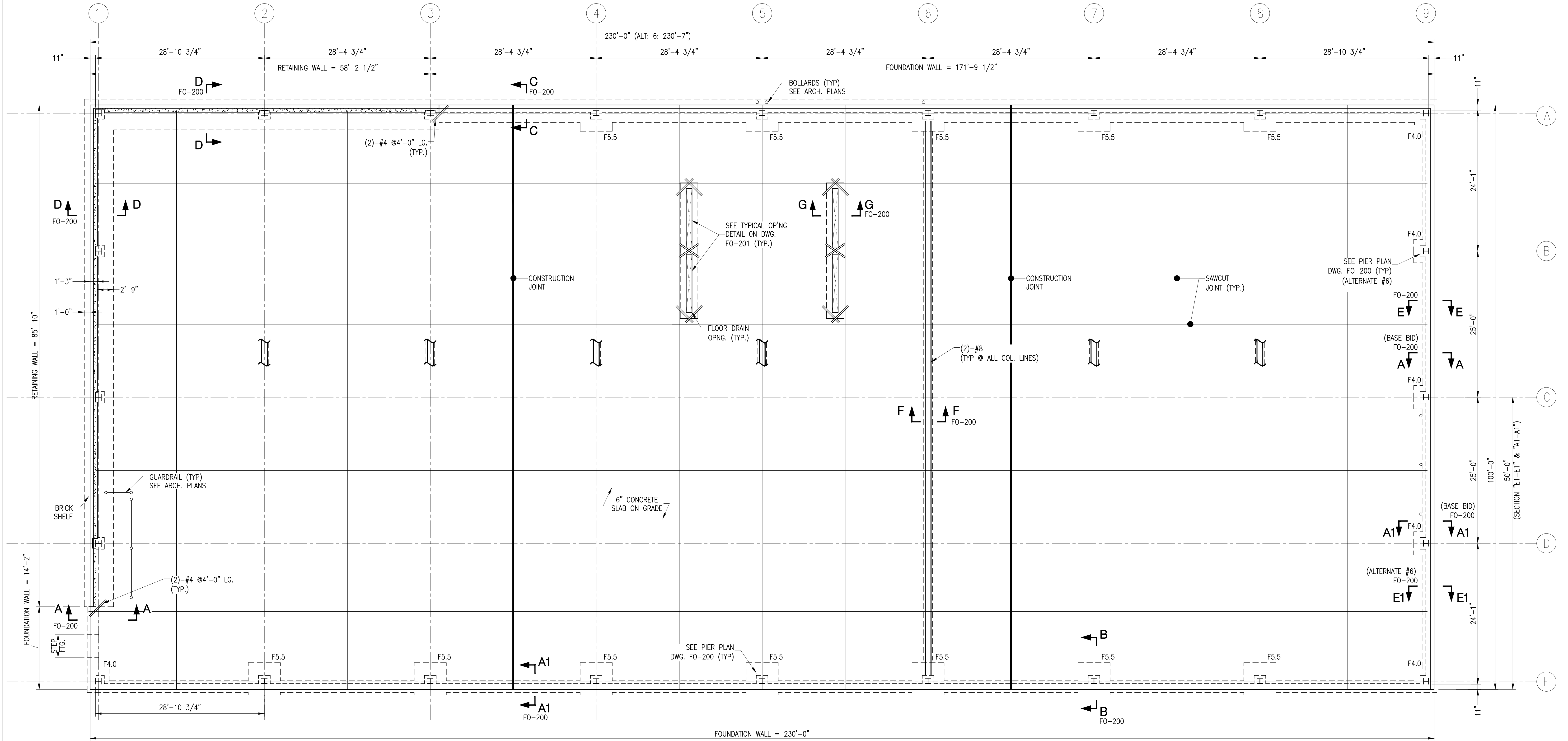
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CONTRACTOR	
NAME	PROJECT COORDINATOR
SIGNATURE	SIGNATURE
TITLE	TITLE
DATE	DATE

WESTCHESTER COUNTY, NEW YORK  
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION  
DIVISION OF ENGINEERING

NEW EQUIPMENT STORAGE BUILDING  
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
VALHALLA CAMPUS, VALHALLA, NEW YORK  
STRUCTURAL NOTES

CONTRACT NUMBER 17-521	SHEET NUMBER N-100
SHEET NO. 26 OF 53	
SCALE: AS SHOWN DATE: 11/8/2021	
DPW FILE NO. 38-47-S-708-0	REV. NO. 0





**FOUNDATION PLAN**

SCALE: 1/8" = 1'-0"

**NOTES:**

- FLOOR CONSTRUCTION SHALL BE 6" THICK CONCRETE SLAB WITH W.W.F. 4x4 - W4.0 x W4.0.
- TOP OF SLAB ELEVATION 0'-0" U.O.N. (UNLESS OTHERWISE NOTED).
- FX.X - INDICATES FOOTING TYPE. FOR SIZE AND REINFORCEMENT SEE FOOTING SCHEDULE.
- [X'-X"] INDICATES BOTTOM OF FOOTING ELEVATION BELOW TOP OF FINISH GROUND FLOOR.
- CENTERLINE OF FOOTING SHALL BE AT CENTERLINE OF COLUMN U.O.N.O.
- FOR NOTES SEE DWG. N-100.
- FOR DETAILS AND SECTIONS SEE DWG. FO-200.
- ALL SLABS TO BE OVER FOUNDATION WALL, COORDINATE TOP OF FOUNDATION WALL WITH ARCH. DWGS. SEE DETAILS ON DWG. FO-200.
- FOR TOP OF EXTERIOR CONCRETE FOUNDATION WALL SEE DWG. FO-200.
- COORDINATE COLUMN LOCATIONS WITH FABRICATOR.

**FOOTING SCHEDULE**

DESIGNATION	SIZE			REINFORCEMENT
	LENGTH	WIDTH	DEPTH	
F4.0	4'-0"	4'-0"	1'-4"	(5) #5 E.W. TOP & BOTTOM
F5.5	5'-6"	5'-6"	1'-4"	(7) #5 E.W. TOP & BOTTOM

NOTES: 1. FOOTING DESIGN BASED ON 1.5 TSF BEARING.

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1	05/13/21	WM	FD	REVISED PER NEW ARCH. PLAN	NAME	PROJECT COORDINATOR	NAME	CONTRACTOR	CONTRACTOR
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REVISION NUMBER	DATE	BY	APP'D BY	REVISION	TITLE	DATE	TITLE	DATE	

**RECORD DRAWING CERTIFICATION**

- ☐ AS BUILT - CHANGES AS NOTED  
☐ AS BUILT - NO CHANGES

**WESTCHESTER COUNTY, NEW YORK**  
**DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION**  
DIVISION OF ENGINEERING

NEW EQUIPMENT STORAGE BUILDING  
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
VALHALLA CAMPUS, VALHALLA, NEW YORK  
**FOUNDATION PLAN**

CONTRACT NUMBER  
**17-521**  
SHEET NUMBER  
**FO-100**

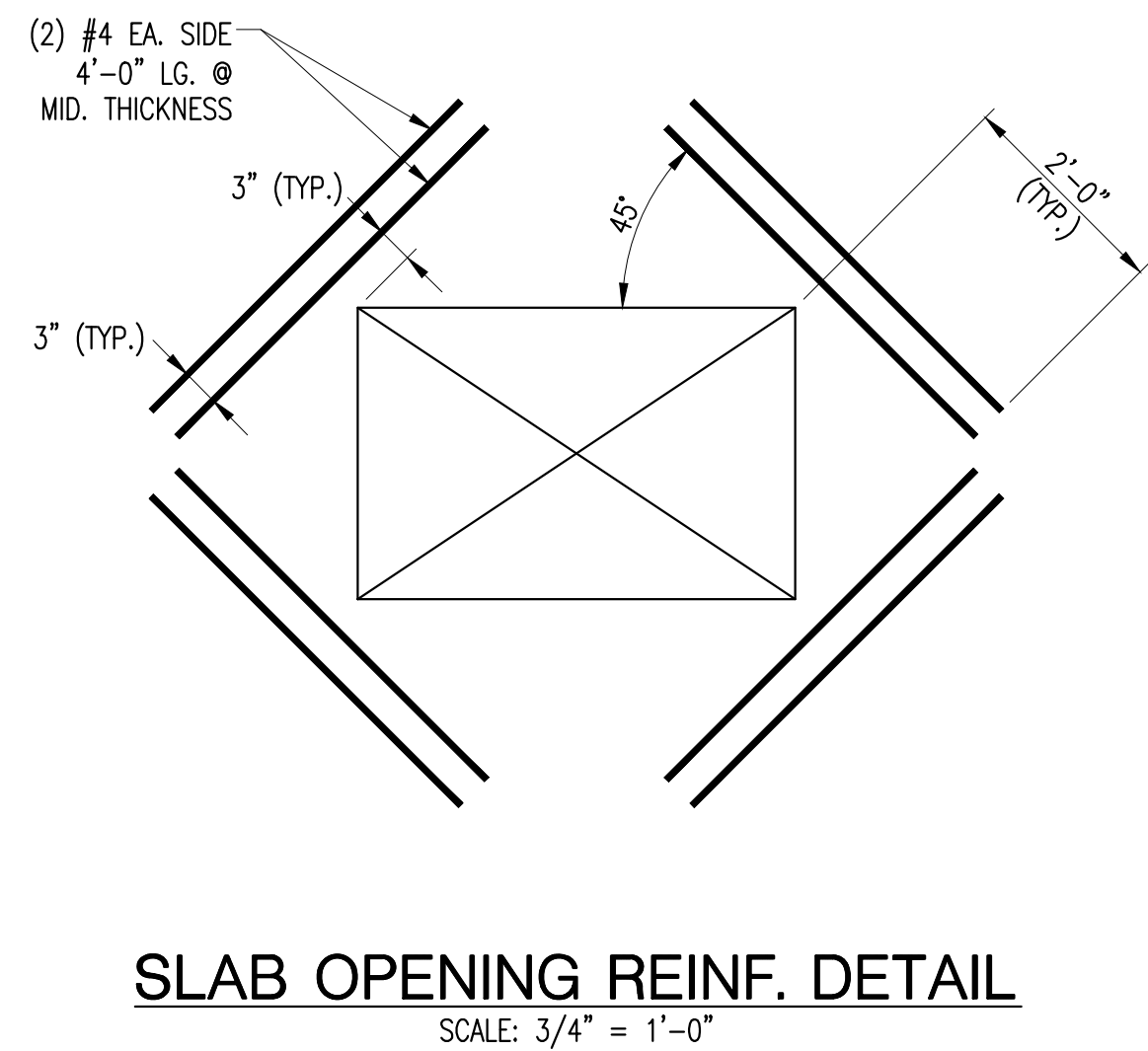
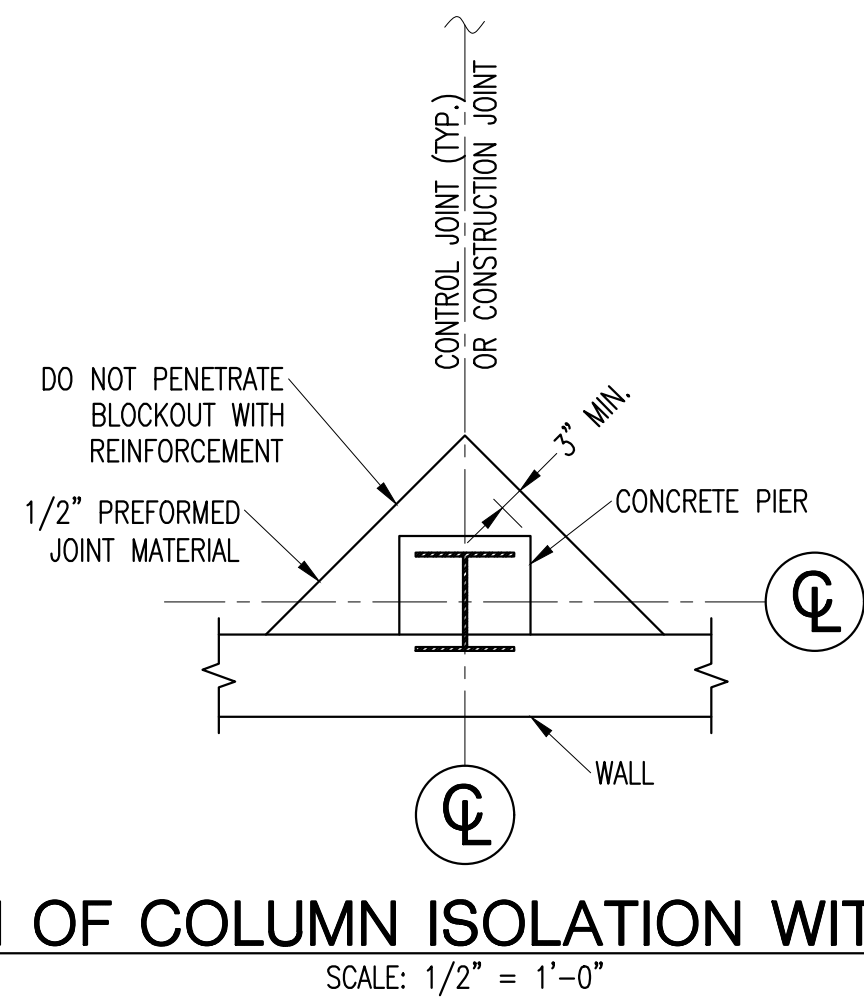
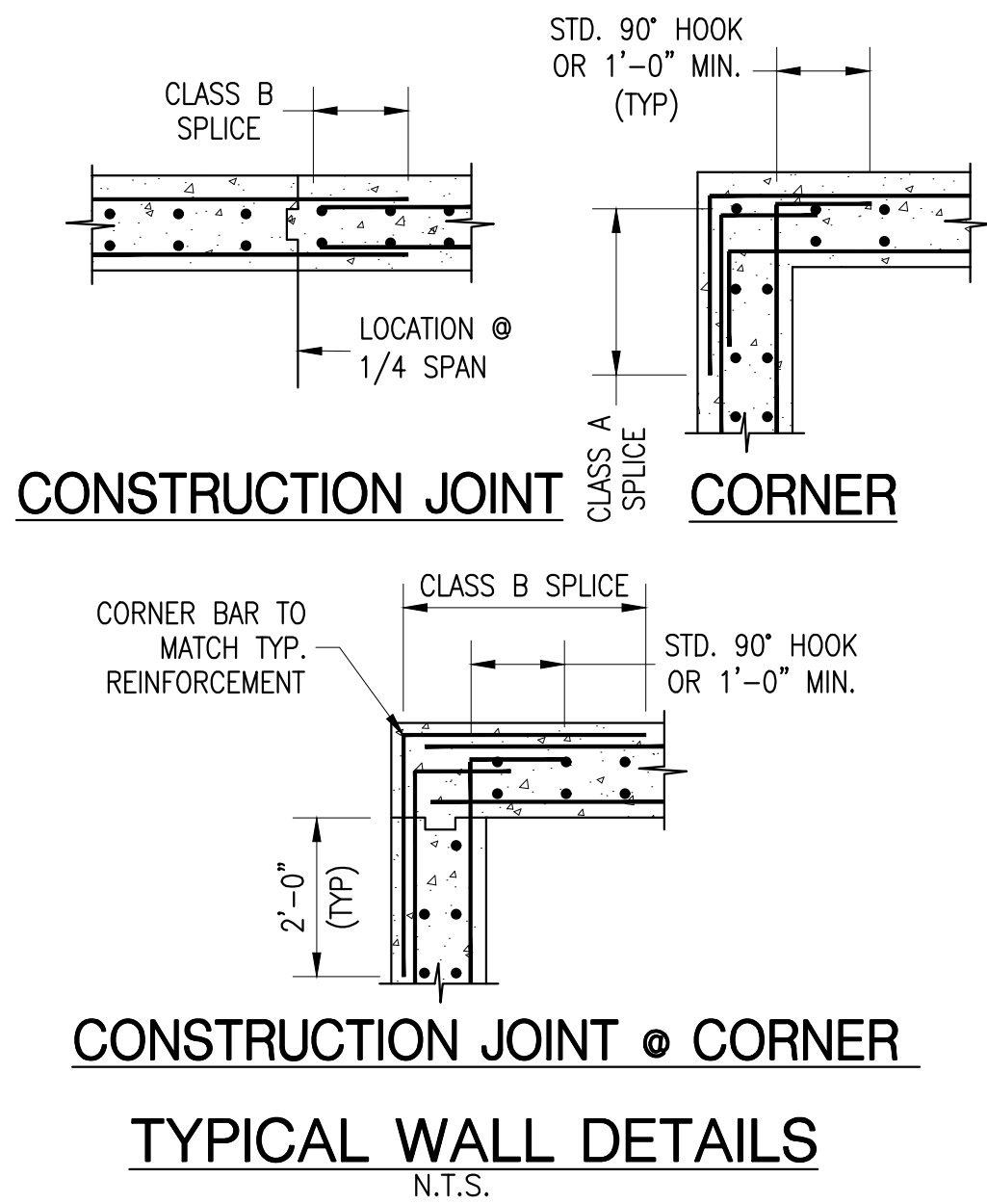
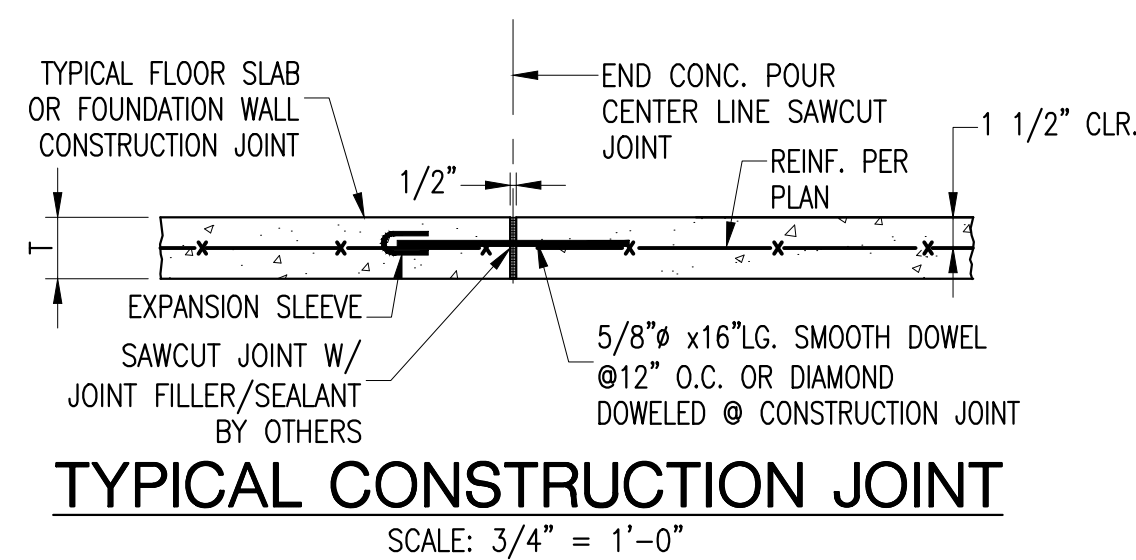
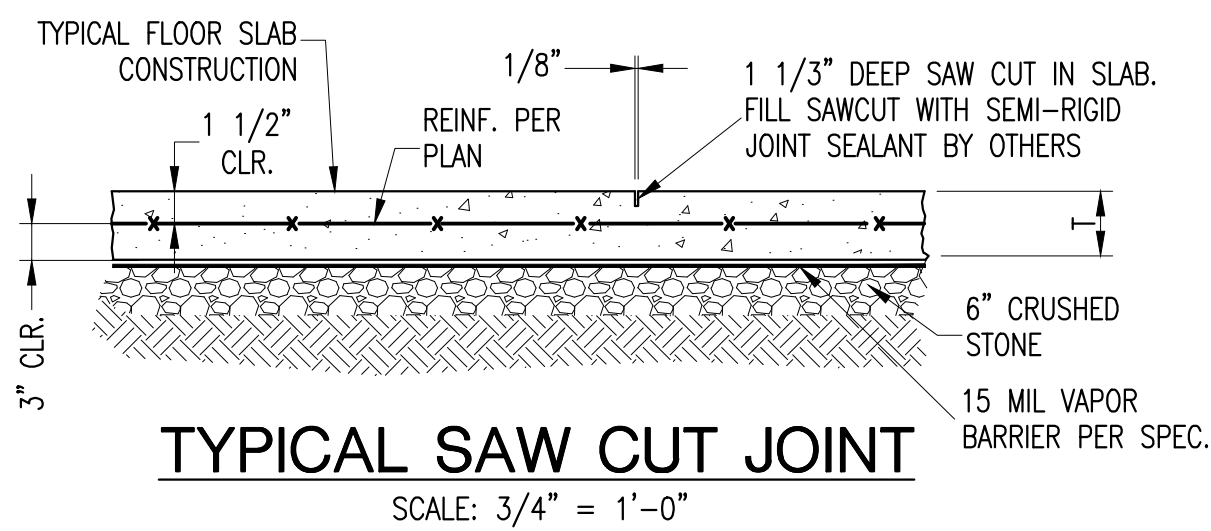
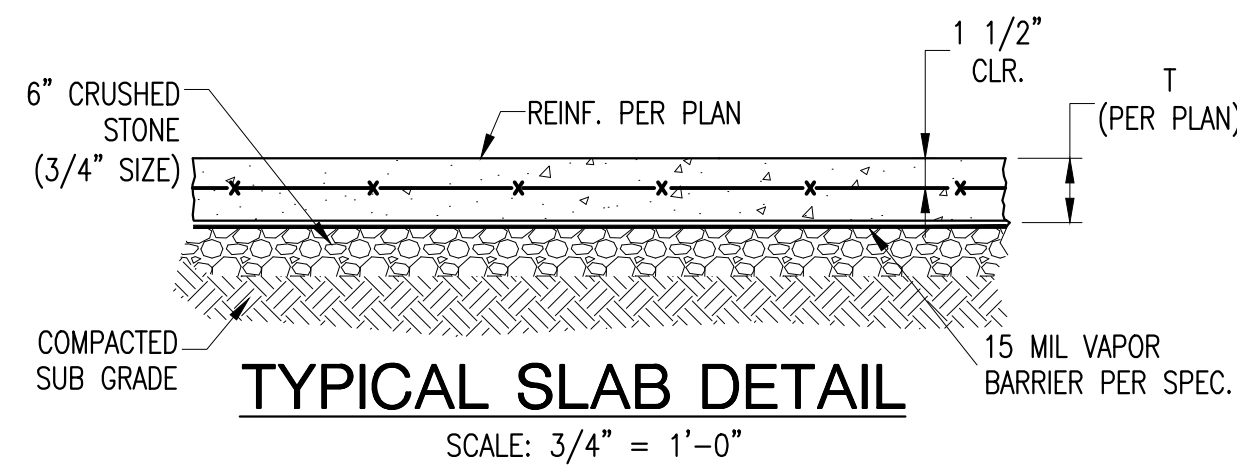
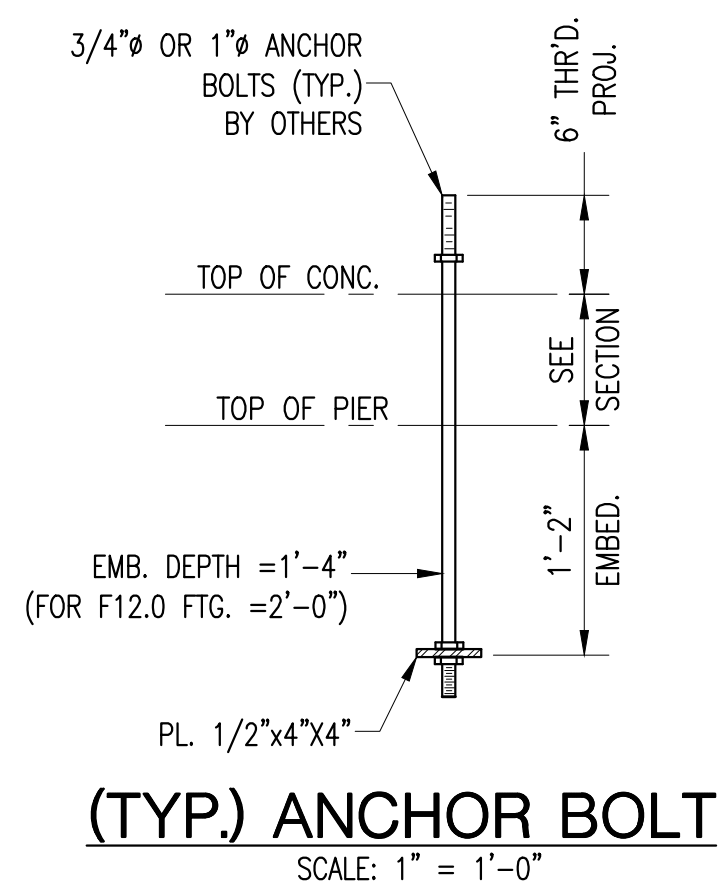
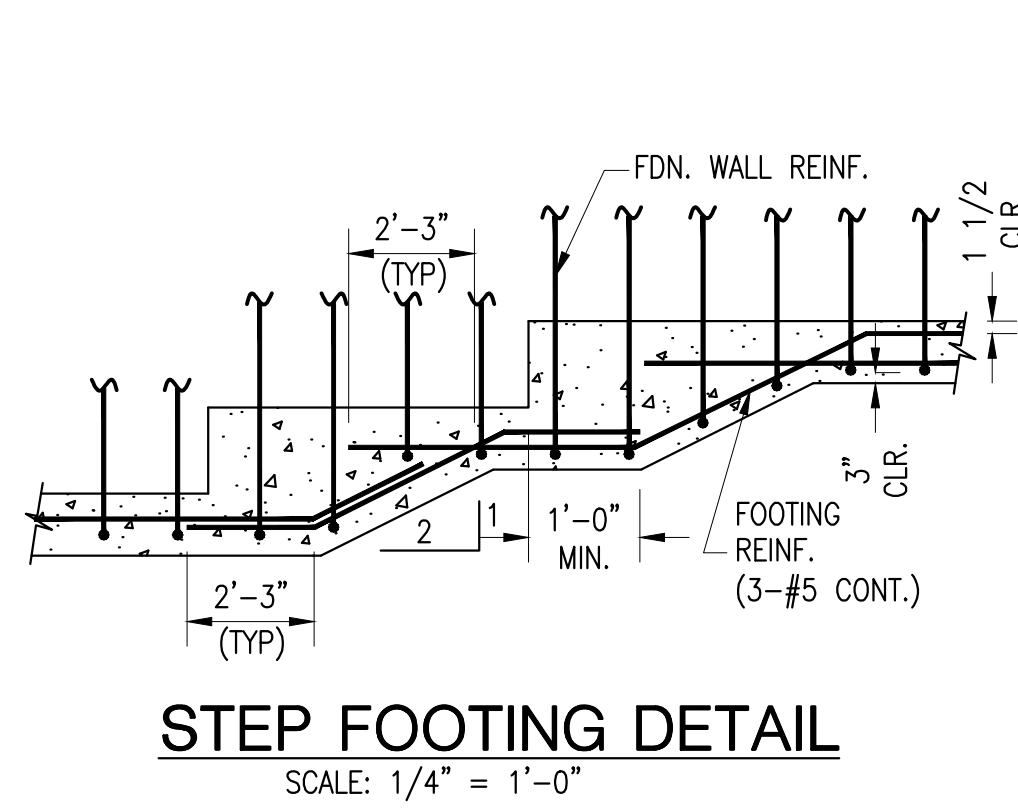
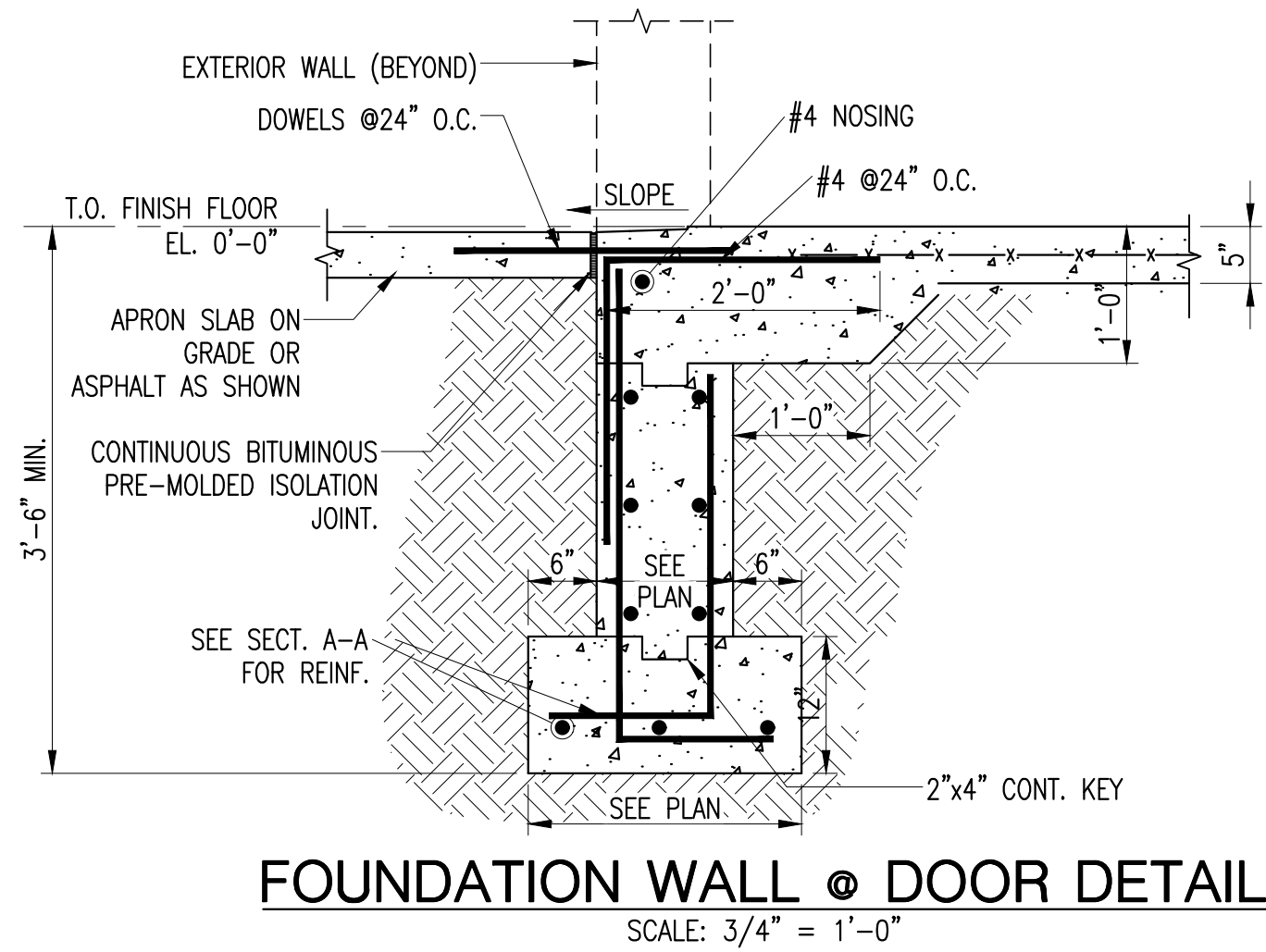
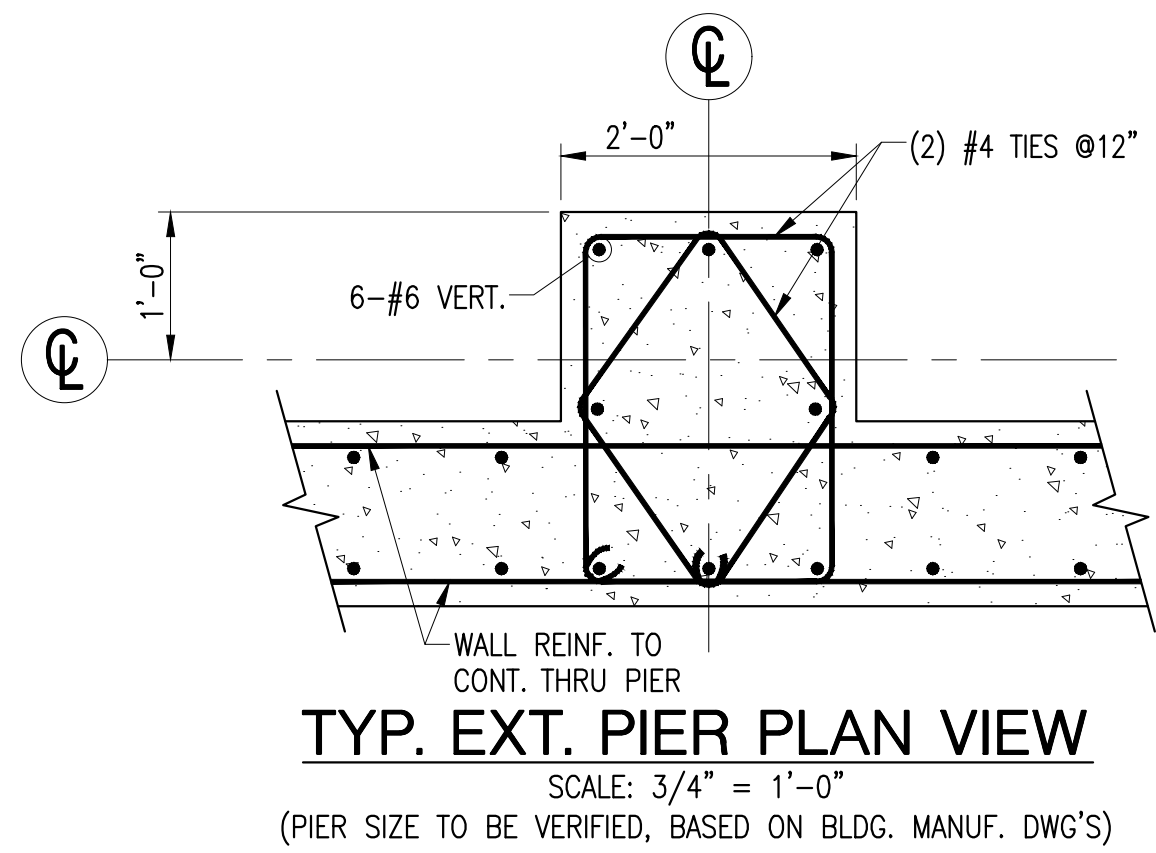
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SCALE: **AS SHOWN**  
DATE: **11/8/2021**  
DPW FILE NO.  
**38-47-S-709-0**  
REV. NO.  
**0**









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A. PRIOR TO FILING FIRE PROTECTION DRAWINGS, THE CONTRACTOR SHALL ARRANGE FOR A NEW/CURRENT FLOW TEST IN THE VICINITY OF THE BUILDING.

## DESIGN CRITERIA

HAZARD CLASSIFICATION <sup>(1)</sup>	DENSITY <sup>(2)</sup>	PROTECTION AREA PER SPRINKLER <sup>(3)</sup>
LIGHT HAZARD	0.1 GPM / 1500 SQ. FT.	225 SQ. FT. MAX
ORDINARY HAZARD GROUP 1	0.15 GPM / 1500 SQ. FT.	130 SQ. FT. MAX

**NOTES:**

- HAZARD CLASSIFICATION, DENSITY AND MAX. PROTECTION AREA SHALL BE IN ACCORDANCE WITH NFPA 13 – 2016 RECOMMENDATIONS UNLESS OTHERWISE NOTED.
- WHERE REQUIRED BY THE BUILDING DEPARTMENT OR AUTHORITY HAVING JURISDICTION FOR PERMIT, THE ENTIRE SYSTEM SHALL BE HYDRAULICALLY CALCULATED.
- THE MINIMUM PRESSURE AT EACH SPRINKLER HEAD SHALL BE 7 PSI.
- EQUIVALENT FITTING LENGTHS USED IN HYDRAULIC CALCULATIONS SHALL BE IN ACCORDANCE WITH NFPA 13 – 2016.
- DISCHARGE FROM EACH SPRINKLER SHALL NOT BE LESS THAN REQUIRED AREA COVERAGE BY THIS HEAD. AREA COVERAGE PER HEAD SHALL BE DETERMINED IN ACCORDANCE WITH NFPA 13 SECTION 8.6.2.2.1 (2016).
- HYDRAULIC CALCULATIONS SHALL BE BROUGHT BACK TO THE CONNECTION TO THE STREET MAIN.

FLOW VELOCITY IN SPRINKLER PIPING SHALL NOT EXCEED 20 FEET PER SECOND (FPS).

7.) DESIGN CRITERIA: GARAGE – ORDINARY HAZARD GROUP 1; TOILET ROOM – LIGHT HAZARD.

HAZARD CLASSIFICATION <sup>(1)</sup>	DENSITY <sup>(2)</sup>	PROTECTION AREA PER SPRINKLER <sup>(3)</sup>
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NOTES:

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- 3.) THE MINIMUM PRESSURE AT EACH SPRINKLER HEAD SHALL BE 7 PSI.
- 4.) EQUIVALENT FITTING LENGTHS USED IN HYDRAULIC CALCULATIONS SHALL BE IN ACCORDANCE WITH NFPA 13 – 2016.
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- 7.) DESIGN CRITERIA: GARAGE – ORDINARY HAZARD GROUP 1; TOILET ROOM – LIGHT HAZARD.

SYMBOL	ABBREVIATION	DESCRIPTION
	EX.	EXISTING TO REMAIN
	NEW	NEW WORK
	DEM.	EXISTING TO BE REMOVED
	—	ELBOW UP
	—	ELBOW DOWN
	—	TEE DOWN
	—	TEE UP
	—	PIPE CAP OR FLUSHING CONNECTION
	—	GATE VALVE
	—	OS&Y GATE VALVE
	—	BUTTERFLY VALVE
	—	CHECK VALVE
	—	UNION
	—	TEMPERATURE GAGE
	—	PRESSURE GAGE
	—	WATER FLOW SWITCH
	—	TAMPER SWITCH
	—	INSPECTORS TEST CONNECTION
	—	FLOW ARROW
	—	SPRINKLER GUARD
	OR	EXISTING SPRINKLER TO REMAIN
	OR	EXISTING SPRINKLER TO BE REMOVED
	—	NEW PENDENT SPRINKLER, CONCEALED OR EXPOSED AS NOTED.
	—	NEW UPRIGHT SPRINKLER
	—	SIDEWALL SPRINKLER
	—	POINT OF CONNECTION
	—	POINT OF DISCONNECTION
	—	HYDRAULIC REFERENCE NODE
	—	HYDRAULIC REFERENCE SPRINKLER
	FDC	FIRE DEPARTMENT CONNECTION
	AFF	ABOVE FINISHED FLOOR
	AHC	ABOVE HUNG CEILING
	ATC	AT CEILING
	BFP	BACKFLOW PREVENTOR
	DCDA	DOUBLE CHECK DETECTOR ASSEMBLY
	DCV	DOUBLE CHECK VALVE BFP
	DN.	DOWN
	FCA	FLOOR CONTROL ASSEMBLY
	FD	FLOOR DRAIN
	FLFD	FUNNEL FLOOR DRAIN
	GPM	GALLONS PER MINUTE
	JP	JOCKEY PUMP
	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
	(NO)	NORMALLY OPEN
	(NC)	NORMALLY CLOSED
	NTS	NOT TO SCALE
	PRV	PRESSURE REDUCING VALVE
	PSI	POUNDS PER SQUARE INCH
	RPZ	REDUCED PRESSURE ZONE BFP
	SF	SQUARE FOOT

SYMBOL	ABBREVIATION	DESCRIPTION
	TS	TAMPER SWITCH
	TYP	TYPICAL
	U.O.N.	UNLESS OTHERWISE NOTED

- THE REVISED SPRINKLER SYSTEM SHALL BE DESIGNED AND INSTALLED BY AN EXPERIENCED FIRE PROTECTION CONTRACTOR IN STRICT ACCORDANCE WITH NFPA-13, THE REQUIREMENTS OF THE LANDLORD, LANDLORD'S FIRE INSURANCE UNDERWRITER, AND ALL GOVERNMENTAL AGENCIES AND AUTHORITIES HAVING JURISDICTION OVER THE PREMESIS.
2. COORDINATE ALL WORK WITH OTHER TRADES TO MINIMIZE INTERFERENCES WITH NEW FACILITIES, TO FACILITATE TIMELY COMPLETION AND AVOID NECESSITY FOR CUTTING AND PATCHING. FURNISH TO OTHER AFFECTED TRADES ALL NECESSARY INFORMATION, WORKING DRAWINGS OR MATERIALS REQUIRED FOR INSTALLATION AND COMPLETION OF ALL WORK. ALL CONFLICTS, OBSTRUCTIONS AND/OR MODIFICATIONS TO THE SPRINKLER DESIGN LAYOUT DUE TO FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO FABRICATION AND INSTALLATION.
3. CONTRACTOR SHALL CONDUCT FLOW TEST TO ESTABLISH EXACT FLOW AND PRESSURE AVAILABLE ON THE SITE FOR PREPARATION OF HYDRAULIC CALCULATIONS.
4. ALTER PIPING AS REQUIRED TO SUIT STRUCTURAL MEMBERS, CEILING HEIGHTS, DUCTWORK, AND LIGHTS. PROVIDE AT NO EXTRA COST ALL ADDITIONAL PIPING AND FITTINGS REQUIRED TO OFFSET SYSTEM TO AVOID STRUCTURAL, ARCHITECTURAL, MECHANICAL, AND ELECTRICAL INTERFERENCES, WHETHER INDICATED OR NOT, BEFORE INSTALLING WORK.
5. WHEN INSTALLING SPRINKLER HEADS, THE CONTRACTOR SHALL PROVIDE THE SHORTEST HYDRAULIC PIPE LENGTH BETWEEN THE FINAL SPRINKLER HEAD LOCATION AND THE BRANCH LINE CONNECTION. MINIMUM 1" FOR TWO HEADS, 1-1/4" FOR THREE HEADS, 1-1/2" FOR FIVE HEADS, AND 2" FOR TEN HEADS.
6. PROVIDE TWO 2-1/2 GALLON PRESSURIZED WATER AND ONE 10 LB ABC DRY CHEMICAL EXTINGUISHERS FOR EMERGENCY USE DURING CONSTRUCTION.
7. PROVIDE DRAIN VALVES AT MAIN SHUT-OFF VALVES AND LOW POINTS.
8. PROVIDE ALL PIPE OPENINGS THROUGH PARTITIONS WITH PIPE SLEEVES. FOR PIPES PENETRATING FIRE RATED PARTITIONS, THE SPACE BETWEEN THE PIPE AND THE SLEEVE SHALL BE SEALED WITH A LISTED FIRE STOPPING ASSEMBLY OR MATERIAL.
9. ALL HOSE CONNECTION AND FIRE DEPARTMENT CONNECTION THREADS SHALL BE TESTED TO VERIFY COMPATIBILITY WITH THREADS USED BY LOCAL FIRE DEPARTMENT, IN ACCORDANCE WITH NFPA-14 (2016) SECTION 11.3.
10. THE CONTRACTOR SHALL MAKE A PROVISION FOR (10) EXTRA SPRINKLERS INCLUDING IMMEDIATE BRANCH PIPING, FITTINGS AND ARM-OVERS. THE CONTRACTOR SHALL COORDINATE WITH FINAL CONFIGURATION OF OPEN AND HUNG CEILINGS, ALL HVAC DUCTWORK AND PIPING AND STRUCTURAL ELEMENTS THROUGHOUT THE AREA OF WORK.
11. THE CONTRACTORS SHALL SUBMIT FOR REVIEW AND APPROVAL A COMPOSITE SHOP DRAWING, FULLY COORDINATED WITH ALL OTHER TRADES INDICATING ALL DUCTWORK, MECHANICAL EQUIPMENT, PIPING, ELECTRICAL EQUIPMENT, PLUMBING PIPING AND EQUIPMENT, LIGHTS, CONDUITS, DIFFUSERS, GRILLES AND FIRE ALARM DEVICES.

1. FLOOR CONTROL VALVE ASSEMBLY: SHALL BE BASED ON VITACUIC FIRELOCK COMMERCIAL ZONE RISER MODULE SERIES 747M WITH DRAIN CONNECTION AND SIGHT GLASS. PROVIDE 4" VITACUIC FIRELOCK BUTTERFLY VALVE AND CHECK VALVE OR EQUAL BEFORE RISER MODULE.
2. FIRE DEPARTMENT CONNECTION: SHALL BE BASED ON POTTER ROEMER 5753 OR EQUAL AT BUILDING FACADE. SIAMESE SHALL BE PLACED BETWEEN 18 INCHES AND 36 INCHES ABOVE THE SIDEWALK. FIRE DEPARTMENT CONNECTION SHALL HAVE TWO (2) 3" INTERNALLY THREADED SWIVEL FITTINGS WITH THREADS CONFORMING TO AHJ STANDARDS WITH 4" OUTLET. PROVIDE AUTOMATIC BALL DRIP AT FDC FACE PLATE.
3. SPRINKLERS: REFER TO DRAWINGS FOR SPRINKLER HEAD SCHEDULE.



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REVISION NUMBER	DATE	MADE BY	APP'D BY

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☐ AS BUILT - NO CHANGES

## PROJECT COORDINATOR

NAME \_\_\_\_\_  
SIGNATURE \_\_\_\_\_  
TITLE \_\_\_\_\_ DATE \_\_\_\_\_

NAME \_\_\_\_\_  
SIGNATURE \_\_\_\_\_  
TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONTRACT NUMBER 17-521	SHEET NUMBER FP-001
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NEW EQUIPMENT STORAGE BUILDING  
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
VALHALLA CAMPUS, VALHALLA, NEW YORK

SCALE: AS SHOWN  
DATE: 11/16/2021

DPW FILE NO.

REV.  
NO.

## FIRE PROTECTION SYMBOLS, ABBREVIATIONS, & GENERAL NOTE



KEEP PIPING TIGHT TO STEEL.  
COORDINATE WITH STEEL AND ALL  
OTHER TRADES.

CHECK VALVE WITH AUTOMATIC BALL  
DRIp. DRAIN TO GRASSY AREA IN  
APPROXIMATE LOCATION SHOWN.

FDC IN ACCORDANCE WITH LOCAL FIRE  
DEPARTMENT THREADS. ROUTE 4" TO  
SPRINKLER CONTROL ASSEMBLY. FINAL  
LOCATION TO BE COORDINATED WITH FD.

SIDEWALL SPRINKLER HEAD  
UNDER GARAGE DOOR.  
COORDINATE FINAL LOCATION OF  
SPRINKLER AND PIPING WITH  
GARAGE DOOR. TYPICAL.

HYDRAULICALLY CALCULATED  
AREA - ORDINARY HAZARD  
GROUP 1. 0.15 GPM / 1950 SF

SPRINKLER BRANCH PIPING  
AND UPRIGHT HEADS  
PARALLEL TO ROOF SLOPE.  
TYPICAL FOR EACH BRANCH.

COORDINATE WITH ELECTRICAL  
EQUIPMENT CLEARANCE  
REQUIREMENTS. KEEP PIPING  
3'-0" FROM THE FRONT OF  
ELECTRICAL EQUIPMENT AND  
PROVIDE 12" WIDE DRIP PAN  
WITH 6" HIGH BORDERS UNDER  
LENGTHS OF PIPING WITHIN  
3'-0" REQUIREMENT. TYPICAL.

ELECTRICAL EQUIPMENT ALONG  
THE WALL. COORDINATE  
ACTUALLY LOCATION WITH  
SHOP DRAWINGS. TYPICAL.

4" UNDERGROUND FIRE SERVICE  
FROM MAIN IN WALKER ROAD  
TO 5' OUTSIDE BUILDING BY  
SITE CONTRACTOR. REFER TO  
SITE UTILITIES PLAN FOR  
CONTINUATION.

4" FIRE SERVICE UP THROUGH  
FLOOR WITH HOUSE CONTROL  
VALVE BY PLUMBING  
CONTRACTOR. FIRE PROTECTION  
CONTRACTOR SHALL FURNISH  
AND INSTALL TAMPER SWITCHES.

4" DCDA ON FIRE SERVICE BY  
PLUMBING CONTRACTOR.  
DRAIN THROUGH WALL.

ALL WORK DOWNSTREAM OF BFP  
SHALL BE BY FIRE PROTECTION  
CONTRACTOR. ALL WORK  
UPSTREAM OF BFP SHALL BE  
BY PLUMBING CONTRACTOR

4" SPRINKLER CONTROL  
ASSEMBLY AT 7'-6" AFF.  
ROUTE DRAIN TO EXTERIOR.

4" SPRINKLER MAIN TIGHT TO  
BOTTOM OF STEEL. COORDINATE  
WITH STRUCTURAL MEMBERS.

PENDENT SPRINKLER  
HEAD IN TOILET  
ROOM CEILING.

COORDINATE WITH ELECTRICAL  
EQUIPMENT CLEARANCE REQUIREMENTS.  
KEEP PIPING 3'-0" FROM THE FRONT OF  
ELECTRICAL EQUIPMENT AND PROVIDE  
12" WIDE DRIP PAN WITH 6" HIGH  
BORDERS UNDER LENGTHS OF PIPING  
WITHIN 3'-0" REQUIREMENT. TYPICAL.



2

## FIRE PROTECTION NEW WORK PLAN

SCALE: 1/8" = 1'-0"

NOTES:

1. FINAL SPRINKLER LAYOUT TO BE COORDINATED WITH ALL STRUCTURAL MEMBERS.
2. PROVIDE PROTECTIVE CAGES FOR ALL UPRIGHT SPRINKLER HEADS.
3. PAINT ALL SPRINKLER PIPING VALVES AND FITTINGS RED AND LABEL AS PER SPECIFICATIONS.

4" SPRINKLER PIPING TO  
SPRINKLER SYSTEM.  
REFER TO FLOOR PLAN

7'-6"

4" FROM FDC.

4" FLOW ASSEMBLY WITH TAMPER SWITCH, WATER FLOW  
SWITCH & DRAIN ROUTED TO OUTSIDE. RE: FP-701.

FIRE PROTECTION CONTRACTOR SHALL PROVIDE TAMPER  
SWITCH ON ALL OS&Y VALVES ON FIRE SERVICE

4" FIRE SERVICE DCDA BY  
PLUMBING CONTRACTOR

4" FIRE SERVICE HOUSE CONTROL  
VALVE WITH TAMPER SWITCH  
ROUTE DRAIN TO EXTERIOR TERMINATE  
18" ABOVE FINISHED GRADE. GRADE

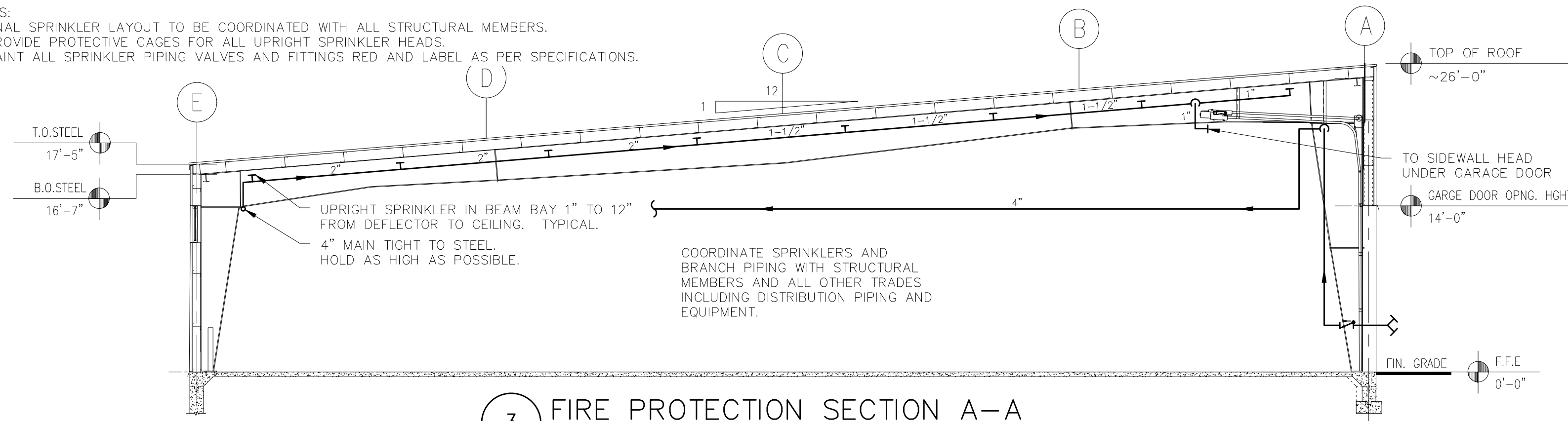
4" UNDERGROUND FIRE SERVICE FROM MAIN IN  
WALKER ROAD TO 5' OUTSIDE BUILDING BY SITE  
CONTRACTOR. REFER TO SITE UTILITIES PLAN

ALL WORK DOWNSTREAM  
SHALL BE BY THE FIRE  
PROTECTION CONTRACTOR.

1

## FIRE PROTECTION RISER DIAGRAM

SCALE: NONE



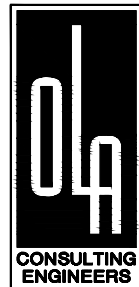
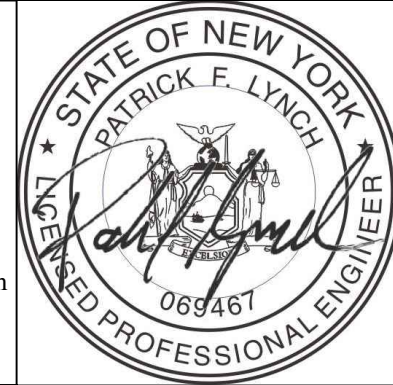
3

## FIRE PROTECTION SECTION A-A

SCALE: 1/8" = 1'-0"

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CONTRACTOR		PROJECT COORDINATOR	
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SIGNATURE	SIGNATURE	TITLE	TITLE
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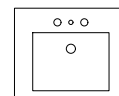

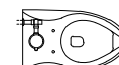











WESTCHESTER COUNTY, NEW YORK DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION DIVISION OF ENGINEERING	
NEW EQUIPMENT STORAGE BUILDING RICHARD A. FLYNN, SR. FIRE TRAINING CENTER VALHALLA CAMPUS, VALHALLA, NEW YORK FIRE PROTECTION NEW WORK PLAN	

CONTRACT NUMBER	SHEET NUMBER
17-521	FP-201
SHEET NO. 31 OF 53	
SCALE: AS SHOWN DATE: 11/16/2021	
DPW FILE NO.	REV. NO.
38-47-FP-713-0	0







PLUMBING SCHEDULE								
TAG	SYMBOLS		FIXTURES	PLUMBING CONNECTIONS				DESCRIPTION
	PLAN	ELEVATION		WASTE	VENT	COLD WATER	HOT WATER	
P-1			LAVATORY	2"	1½"	¾"	¾"	KOHLER SOHO WALL-MOUNTED BATHROOM LAVATORY K-2084-L. FAUCET: ZURN Z6950-XL-S AND SHALL BE HARDWIRED - SOAP DISPENSER: Z6950-SD. REFER TO SPECIFICATIONS FOR ALL REQUIRED OPTIONS.
P-2			WATER CLOSET	4"	2"	1¼"	-	AMERICAN STANDARD MADERA FLOWISE TOILET MODEL 3043.001 WITH SELECTRONIC FLUSH VALVE MODEL 606B.121, 1.28 GPF. PROVIDE HARD WIRE AC TRANSFORMER. REFER TO SPECIFICATIONS FOR ALL REQUIRED OPTIONS.
NFWH			NON-FREEZE WALL HYDRANT	-	-	¾"	-	SMITH #5609QT - CAST BRASS, THREADED, NON_FREEZE, HEAVY-DUTY HYDRANT WITH NIKALOY BOX AND LOCKING COVER, BRASS OPERATING PARTS, 3/4" HPT HOSE OUTLET, 3/4" IPS OUTSIDE, ELBOW ADAPTER, "I" HANDLE KEY, AND INTEGRAL VACUUM BREAKER. PIPING SERVING NFWH TO BE ROUTED DOWN ON INTERIOR SIDE OF OUTER WALL INSULATION.
HB			HOSE BIB	-	-	¾"	-	IN FINISHED AREAS, WASHDOWN FAUCET SHALL BE POLISHED CHROME-PLATED WALL FAUCET WITH WALL FLANGE, ½" INLET, ½" HOSE THREAD OUTLET AND REMOVABLE LOOSE KEY T-HANDLE. CHICAGO #293-6 WITH #E27 VACUUM BREAKER OR ACCEPTABLE EQUIVALENT.
TD			TRENCH DRAIN	-	-	-	-	ZURN ZFV812-1/4-BG-DB DRAIN #2002 - 12" WDE REVEAL FIBER REINFORCED VINYLESTER CONTINUOUS 10'-0" TRENCH DRAIN SYSTEM, CLASS D (H=20) GALVANIZED DUCTILE IRON BAR GRATE, 4" NO-HUB OUTLET, AND DOME STRAINER. COORDINATE OUTLET LOCATION IN FIELD.
CODP			CLEANOUT DECKPLATE	-	-	-	-	FLOOR CLEANOUT WITH ADJUSTABLE HEAD, ANCHOR FLANGE, CUT-OFF SECTIONS AND ROUND TOP: ZURN #Z1400 OR APPROVED EQUAL. PROVIDE EXTRA HEAVY DUTY NON-TILT CAST IRON TOP.
TG-1			TRAP GUARD	-	-	-	-	GREEN DRAIN™ INLINE FLOOR DRAIN TRAP SEAL WITH UV RESISTANT ABS PLASTIC FRAME, SILICONE RUBBER SEALING FLAPPER, AND FOUR FLECIBLE SEALING RIBS. TESTED AND CERTIFIED TO THE ASSE 1072 STANDARD AND LISTED WITH IAPMO AND ICC. (PROVIDE AT ALL FLOOR DRAINS)

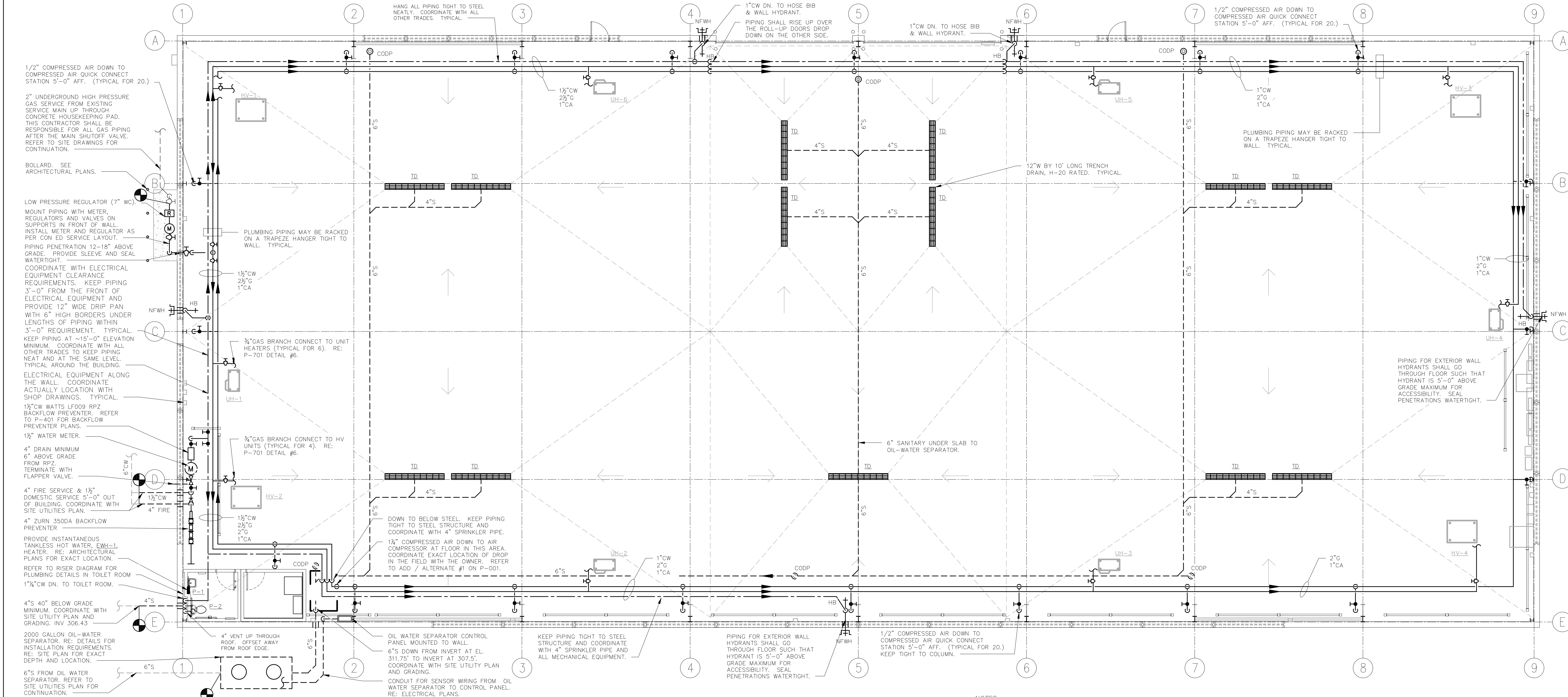
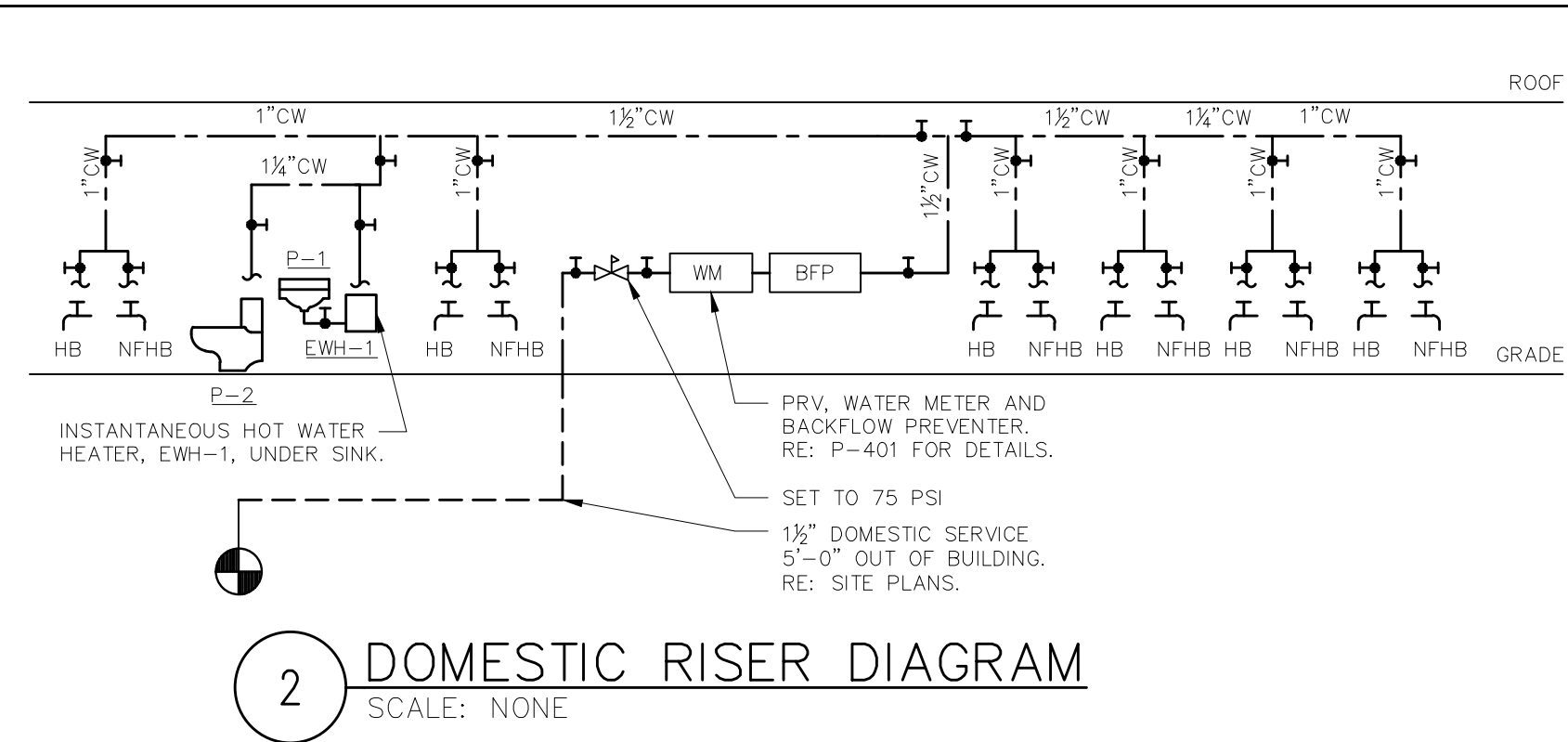
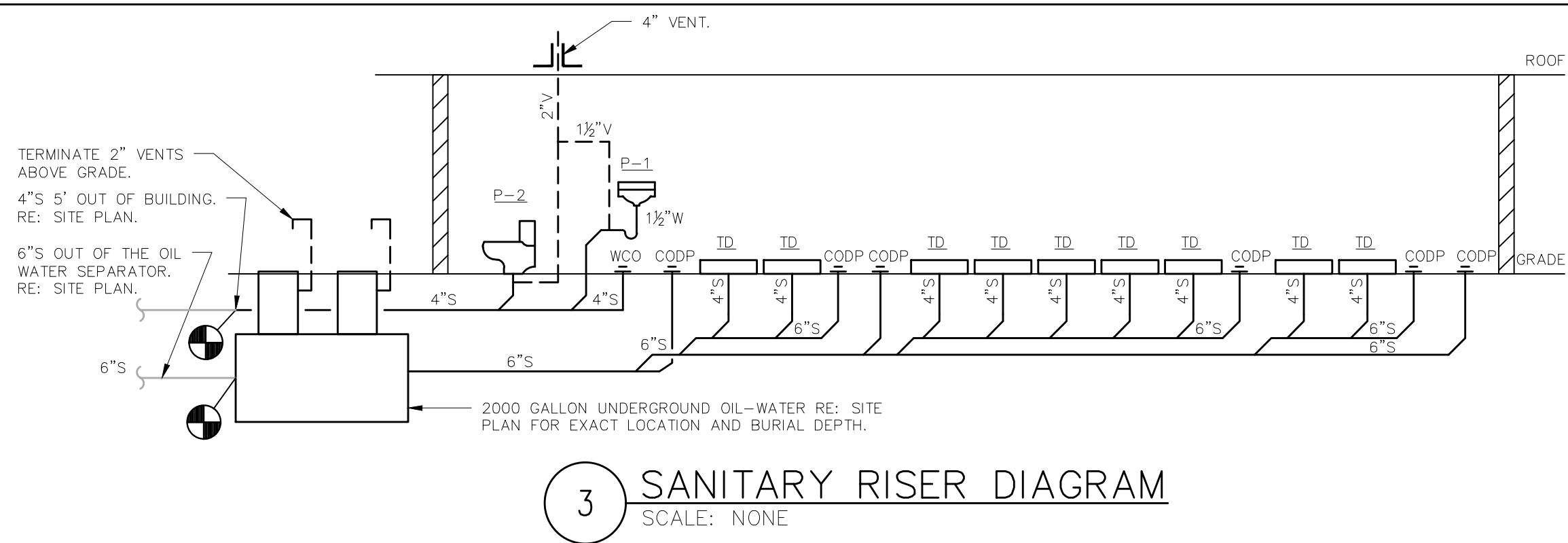
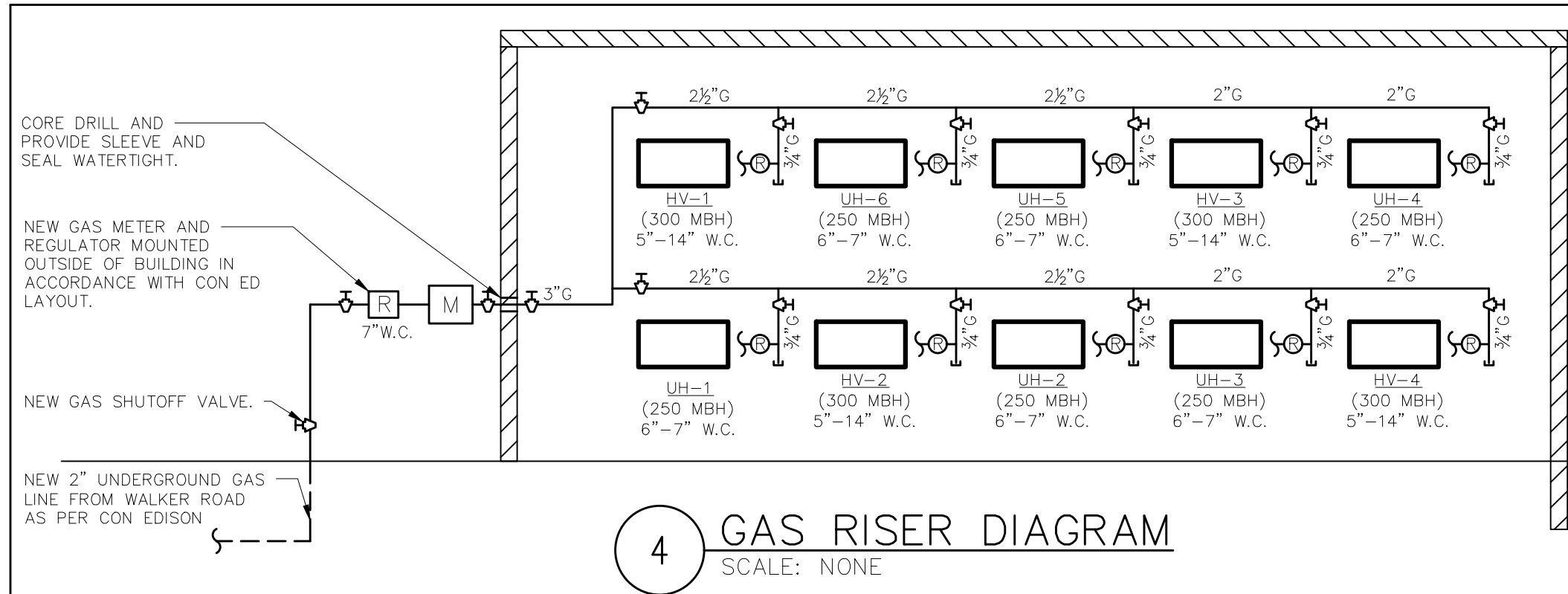
NOTES:  
1.) REFER TO SPECIFICATIONS FOR MOUNTING HEIGHTS.  
2.) REFER TO ARCHITECTURAL FLOOR PLANS FOR EXACT LOCATION.

[illegible]

GENERAL NOTES	
1.	THE CONTRACT DRAWINGS INDICATE THE EXTENT AND GENERAL ARRANGEMENTS OF THE PLUMBING SYSTEMS. IF ANY DEPARTURES FROM THE DRAWINGS ARE DEEMED NECESSARY BY THE PLUMBING CONTRACTOR, DETAILS OF SUCH DEPARTURES AND THE REASONS THEREFORE SHALL BE SUBMITTED TO THE OWNER AND ENGINEER FOR APPROVAL. NO SUCH DEPARTURES SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER AND ENGINEER. EQUIPMENT AND PIPING ARRANGEMENTS SHALL PROVIDE ADEQUATE AND ACCEPTABLE CLEARANCES FOR ENTRY, SERVICING, AND MAINTENANCE. ANY CHANGES TO PIPING AND EQUIPMENT LOCATIONS NECESSARY TO AVOID INTERFERENCE WITH OTHER TRADES SHALL BE MADE AT NO EXTRA COST.
2.	THE PLUMBING WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE PREVAILING NEW YORK STATE PLUMBING AND BUILDING CODES, AND ALL LOCAL REGULATIONS THAT MAY APPLY. IN CASE OF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND A GOVERNING CODE OR ORDINANCE, THE MORE STRINGENT STANDARD SHALL APPLY.
3.	THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR PAYING RELATED FEES.
4.	PRIOR TO FABRICATION, THIS CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AND CONDITIONS ON JOB SITE, AND COORDINATE THIS WORK WITH THE WORK OF ALL OTHER TRADES.
5.	PROVIDE ALL PLUMBING FIXTURES, PIPING, VALVES AND ACCESSORY ITEMS AS SPECIFIED AND AS REQUIRED FOR A COMPLETE INSTALLATION. ROUGHING DIMENSIONS OF FIXTURES MUST BE COORDINATED WITH THE GENERAL CONTRACTOR.
6.	PITCH ALL WASTE, SANITARY, AND STORM DRAIN PIPING AT MAXIMUM SLOPE POSSIBLE, BUT NOT LESS THAN 1/8" PER FOOT.
7.	NO PIPING SHALL RUN EXPOSED IN TOILET ROOM.
8.	PROVIDE DIELECTRIC FITTINGS OR COUPLINGS FOR DISSIMILAR METALS.
9.	PROVIDE SHUTOFF VALVES AT ALL FIXTURES AND EQUIPMENT ON COLD WATER, HOT WATER, AND GAS SUPPLY PIPES.
10.	ALL WORK SHALL BE PROPERLY TESTED, BALANCED, AND CLEANED AND DISINFECTED. PROVIDE A ONE YEAR WARRANTY FROM DATE OF FINAL INSPECTION ON ALL PARTS AND LABOR.
11.	PROVIDE ALL PIPE OPENINGS THROUGH PARTITIONS WITH PIPE SLEEVES. FOR PIPES PENETRATING FIRE RATED PARTITIONS, THE SPACE BETWEEN THE PIPE AND THE SLEEVE SHALL BE SEALED WITH FIRE STOPPING MATERIAL. PENETRATIONS FOR PIPING SHALL BE MADE BY CORE DRILLING WHENEVER POSSIBLE. SLEEVE FOR SERVICE PIPE SHALL BE TWO (2) TIMES THE DIAMETER OF THE SERVICE PIPE.
12.	THE PLUMBING CONTRACTOR SHALL PROVIDE ALL CUTTING, PATCHING, CORE DRILLING, PAINTING, ACCESS PANELS, AND FINAL RESTORATION REQUIRED TO FACILITATE THE INSTALLATION OF PLUMBING PIPING, INCLUDING ABOVE CEILINGS AND IN SHAFTS THAT WILL NOT BE REPLACED OR OPENED UNDER ANY OTHER SCOPE OF WORK RELATED TO THIS PROJECT. CONTRACTOR TO REMOVE AND REPLACE CEILINGS, AND OPEN AND PATCH SHAFTS AND WALLS, AS REQUIRED TO EXECUTE THE PLUMBING WORK.
13.	ALL MOTOR STARTERS AND DISCONNECT SWITCHES FOR PLUMBING EQUIPMENT SHALL BE FURNISHED BY THE PLUMBING CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED. DISCONNECT SWITCHES FURNISHED BY THE PLUMBING CONTRACTOR FOR PLUMBING EQUIPMENT SHALL BE HEAVY DUTY TYPE.
14.	THIS CONTRACTOR IS RESPONSIBLE FOR ALL PLUMBING FIXTURES AND DISTRIBUTION SYSTEMS, INCLUDING ALL ROUGH-INS AND FINAL CONNECTIONS.
15.	THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY VENTILATION AND EXHAUST AIR WHEN WELDING OR SOLDERING OPERATIONS ARE PERFORMED, AS REQUIRED BY OSHA.
16.	PROVIDE PVC PROTECTIVE COVER FOR ALL PIPING INSULATION BELOW 10'-0" AFF.
17.	THE CONTRACTORS SHALL SUBMIT FOR REVIEW AND APPROVAL A COMPOSITE SHOP DRAWING, FULLY COORDINATED WITH ALL OTHER TRADES INDICATING ALL DUCTWORK, MECHANICAL EQUIPMENT, PIPING, ELECTRICAL EQUIPMENT, PLUMBING PIPING AND EQUIPMENT, LIGHTS, CONDUITS, DIFFUSERS, GRILLES AND FIRE ALARM DEVICES.
EQUIPMENT NOTES	
1.	<u>PROTECTIVE SHIELDING GUARDS:</u> WHEREVER PIPING IS EXPOSED BELOW SINKS AND LAVATORIES, PROVIDE MANUFACTURED PLASTIC ENCLOSURES BY TRUEBORG FOR COVERING PLUMBING FIXTURE HOT AND COLD WATER SUPPLIES AND TRAP AND DRAIN PIPING. COMPLY WITH AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS.
2.	<u>WATER HAMMER ARRESTORS:</u> ZURN INDUSTRIES SHOKTROL SERIES, STAINLESS STEEL CONSTRUCTION, BELLOW TYPE, SIZED IN ACCORDANCE WITH PDI WH-201, PRE-CHARGED SUITABLE FOR OPERATION IN TEMPERATURE RANGE 34 TO 250 DEGREES F AND MAXIMUM 150 PSI WORKING PRESSURE.
3.	<u>POINT OF USE ELECTRICAL TANKLESS HOT WATER HEATER (EWH-1):</u> SHALL BE EEMAX "SINGLE POINT" MODEL SP-3512, 120V/1ø/60HZ, 3.5kW, 29 AMPS, U.L. LISTED, TO HEAT 0.5 GPM @ A TEMPERATURE RISE OF 48F. UNIT SHALL HAVE ABS-UL RATED COVER. ELEMENT SHALL BE REPLACEABLE CARTRIDGE INSERT. UNIT SHALL HAVE A REPLACEABLE FILTER IN THE INLET CONNECTOR AND A FLOW REGULATOR IN THE OUTLET CONNECTOR. ELEMENT SHALL BE IRON FREE, NICKEL CHROME MATERIAL. HEATER SHALL BE FITTED WITH 3/8" COMPRESSION NUTS AND SLEEVES. HEATER SHALL BE INSTALLED WITH WATER CONNECTIONS ON TOP ONLY. DISCONNECT SWITCH SHALL BE FURNISHED BY THE PLUMBING CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
4.	<u>OIL-WATER SEPARATOR:</u> BASED ON HIGHLAND TANK MODEL HTC-2000 SERIES-G DOUBLE WALL OIL/WATER SEPARATOR WITH INTEGRAL SAND INTERCEPTOR COMPARTMENT, CORELLA COALESCEER PLATE SYSTEM AND HIGH GUARD PROTECTION SYSTEM. UNIT SHALL HAVE A TOTAL VOLUME OF 2000 GAL AND A MAXIMUM FLOW RATE OF 200 GAL/MIN. A HIGHLAND TANK ALARM PANEL SHALL BE PROVIDED IN THE BUILDING CAPABLE OF HIGH OIL (VISUAL ALARM), HIGH-HIGH OIL (AUDIBLE AND VISUAL ALARM), AND LEAK DETECTION (AUDIBLE AND VISUAL ALARM). UNIT REQUIRES A 120V/1ø/60HZ POWER CONNECTION WITH ~1 AMP. REFER TO DETAIL ON P-701 INSTALLATION AND SPECIFICATIONS FOR FULL INFORMATION.

[illegible]





- NOTES:
1. ALL ABOVE CONCRETE SLAB PIPING WILL BE FULLY EXPOSED IN THE SPACE AND NOT CONCEALED IN WALLS OR CEILING. ALL PIPING SHALL BE HUNG NEATLY AND AT THE SAME ELEVATION WITH MULTIPLE LINES GROUPED TOGETHER.
  2. PROVIDE PVC PROTECTIVE COVER FOR ALL PIPING INSULATION BELOW 10'-0" AFF.
  3. PAINT ALL GAS PIPING, VALVES AND FITTINGS YELLOW AND LABEL PER SPECIFICATIONS.
  4. PAINT ALL COMPRESSED AIR PIPE, VALVES AND FITTINGS BLUE AND LABEL WITH WHITE LETTERS AS PER SPECIFICATIONS.

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RECORD DRAWING CERTIFICATION			
<input type="checkbox"/> AS BUILT – CHANGES AS NOTED <input type="checkbox"/> AS BUILT – NO CHANGES			
CONTRACTOR		PROJECT COORDINATOR	
NAME	NAME	SIGNATURE	SIGNATURE
SIGNATURE	SIGNATURE	DATE	DATE
TITLE	TITLE	DATE	DATE

**WESTCHESTER COUNTY, NEW YORK**  
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION  
DIVISION OF ENGINEERING  
NEW EQUIPMENT STORAGE BUILDING  
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
VALHALLA CAMPUS, VALHALLA, NEW YORK  
PLUMBING NEW WORK PLAN

CONTRACT NUMBER 17-521	SHEET NUMBER P-201
SHEET NO. 34 OF 53	
SCALE: AS SHOWN DATE: 11/16/2021	
DPW FILE NO. 38-47-P-716-0	REV. NO. 0



GENERAL NOTES:

1. ADEQUATE HEAT AND LIGHT SHALL BE PROVIDED IN LOCATIONS WHERE BACKFLOW PREVENTERS ARE TO BE INSTALLED.
2. THE CONTRACTOR SHALL USE ONLY AMERICAN MADE, UL/FM APPROVED VALVES.
3. NO WORK SHALL PROCEED WITHOUT THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH TOWN OF MT. PLEASANT APPROVAL.
4. BACKFLOW PREVENTER ARRANGEMENT SHALL NOT BE ALTERED WITHOUT PRIOR APPROVAL BY WESTCHESTER COUNTY DEPARTMENT OF HEALTH.
5. BACKFLOW PREVENTION SHALL BE PROTECTED FROM THE HIGHEST FLOOD LEVEL.
6. BY-PASSES AROUND BACKFLOW PREVENTER ASSEMBLY SHALL NOT BE PERMITTED.
7. BACKFLOW PREVENTER DEVICE SHALL BE TESTED INITIALLY AND ANNUALLY BY A CERTIFIED AND LICENSED TESTER. AT THE TIME OF INITIAL TESTING PART A AND B OF DOH 1013 FORM MUST BE COMPLETED, TEST RESULTS (FORM DOH 1013) SHALL BE FORWARDED TO WESTCHESTER COUNTY DEPARTMENT OF HEALTH, OWNER AND ENGINEER.
8. THE BACKFLOW PREVENTER SHALL BE REBUILT EVERY FIVE YEARS.
9. ALL PLUMBING WORK SHALL BE PERFORMED BY A LICENSED PLUMBER AND ACCORDING TO DEPARTMENT OF PUBLIC WORKS REGULATIONS.
10. CONTRACTOR SHALL DISINFECT AND PRESSURE TEST BACKFLOW PREVENTER ASSEMBLY BEFORE PLACING IN SERVICE. DISINFECTION SHALL BE IN ACCORDANCE WITH AWWA STANDARD C651-05 WITH THE EXCEPTION OF SECTION 4.4.2.
11. CONTRACTOR SHALL ADEQUATELY SUPPORT ALL PIPING AND DEVICES.

EQUIPMENT NOTES:

1. THE 1½" DOMESTIC WATER BACKFLOW PREVENTER ASSEMBLY SHALL BE WATTS MODEL LF009M2QT 1½" REDUCED PRESSURE ZONE BACKFLOW PREVENTER. ASSEMBLY SHALL BE LEAD FREE SUITABLE FOR PRESSURES UP TO 175 PSI AND TEMPERATURES UP TO 180°F. THE ASSEMBLY SHALL INCLUDE TWO RESILIENT SEATED ISOLATION VALVES, FOUR RESILIENT SEATED TEST COCKS AND AN AIR GAP DRAIN FITTING.
2. THE 4" FIRE SERVICE BACKFLOW PREVENTER ASSEMBLY SHALL BE ZURN MODEL 350DA 4" DOUBLE CHECK DETECTOR ASSEMBLY BACKFLOW PREVENTER WITH OSY SHUTOFF VALVES. ASSEMBLY SHALL BE LEAD FREE SUITABLE FOR PRESSURES UP TO 175 PSI AND TEMPERATURES UP TO 110°F (CONSTANT) AND 140°F (INTERMITTENT). ASSEMBLY SHALL HAVE FDA EPOXY COATED CAST IRON BODY, BRONZE SEALS, STAINLESS STEEL TRIM, BRONZE RELIEF VALVE AND BRONZE BODY TEST COCKS. DEVICE SHALL HAVE (2) INTEGRAL UL/FM OUTSIDE STEM AND YOKE RESILIENT SEATED GATE VALVES.
3. PRESSURE REDUCING VALVE (PRV): WATTS LFN223BS WITH ADJUSTABLE PRESSURE RANGE.
4. BACKWATER VALVE: WATTS BV-200 IN-LINE BACKWATER VALVE.
5. THE 1½" DOMESTIC WATER METER WITH INTEGRAL STRAINER SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF THE LOCAL WATER UTILITY. FINAL WATER METER AND SIZE, MODEL, AND DIMENSIONS SHALL BE DETERMINED & APPROVED BY THE LOCAL WATER UTILITY. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR COORDINATION AND INSTALLATION AND ALL RELATED WATER DEPARTMENT FEES.

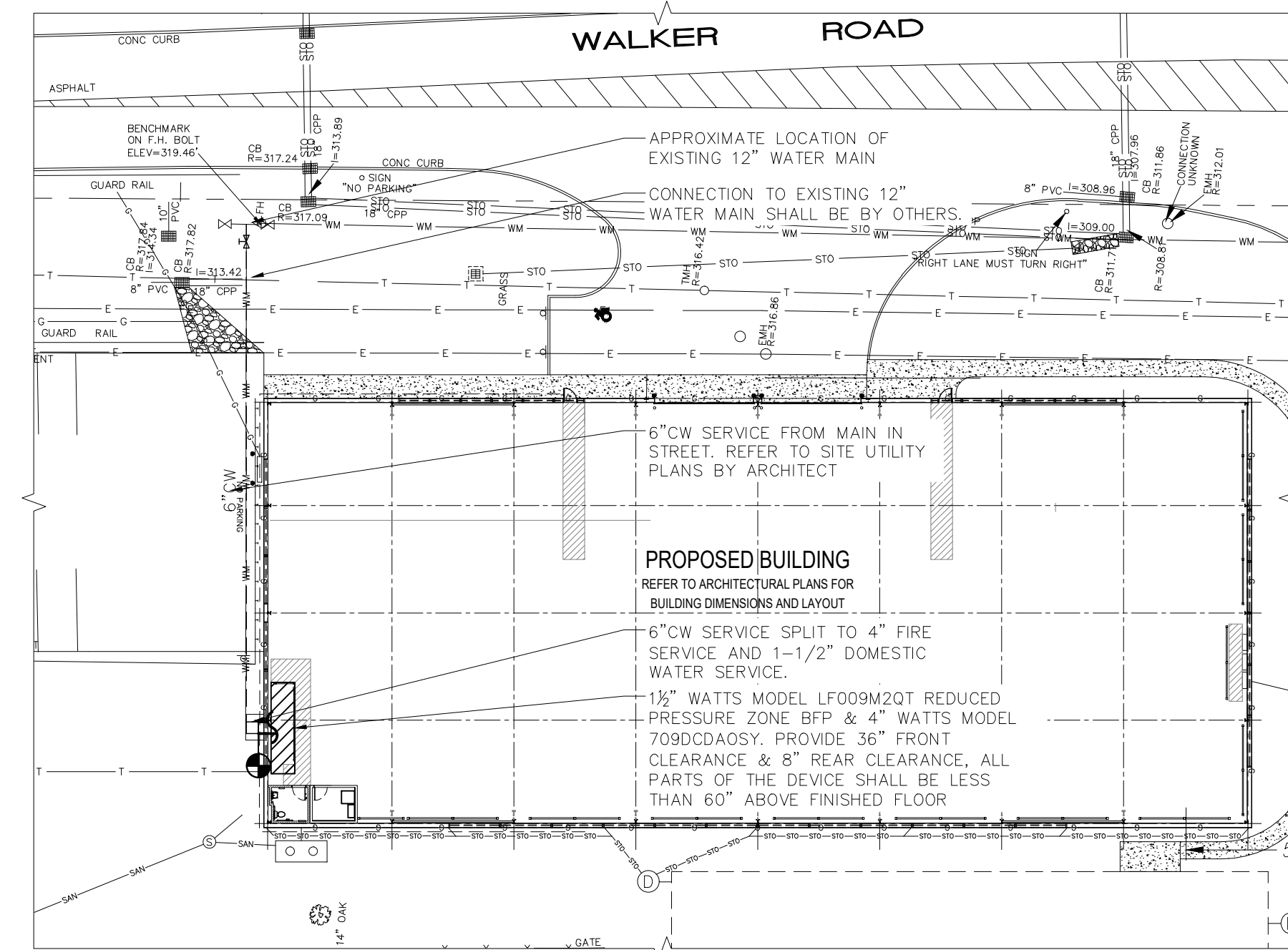
INSTALLATION NOTES:

- A. NO STRAINER IS TO BE USED ON A FIRE LINE WITHOUT INSURANCE UNDERWRITER APPROVAL.
- B. ASSEMBLIES SHOULD BE SPECIFIED AND INSTALLED WITH MANUFACTURER SUPPLIED VALVES.
- C. WATER LINES SHOULD BE THOROUGHLY FLUSHED BEFORE INSTALLATION OF DEVICE TO PREVENT DEBRIS FOULING THE DEVICE CHECK VALVES.
- D. DEVICES MUST BE MOUNTED HORIZONTALLY UNLESS APPROVED FOR VERTICAL INSTALLATION.
- E. ASSEMBLIES SHOULD NOT BE INSTALLED IN AREAS CONTAINING CORROSIVE OR TOXIC GASES WHICH COULD RENDER THE DEVICE INOPERABLE.

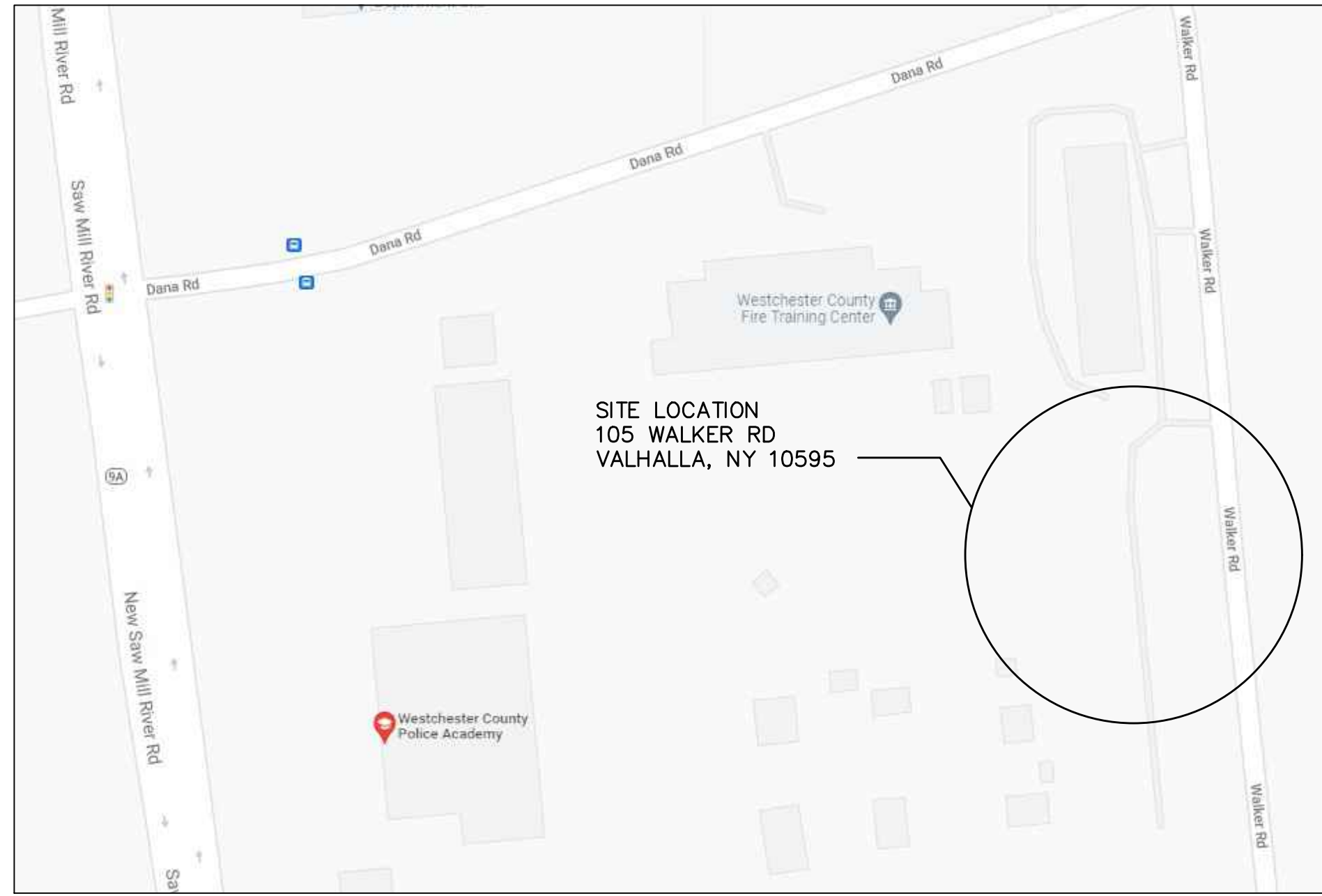
NOTE: INSTALLATION SHALL BE IN ACCORDANCE WITH WESTCHESTER COUNTY DEPARTMENT OF HEALTH REQUIREMENTS.

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A DIRECT VIOLATION OF SECTION 7209 (2) OF THE NEW YORK STATE EDUCATION LAW

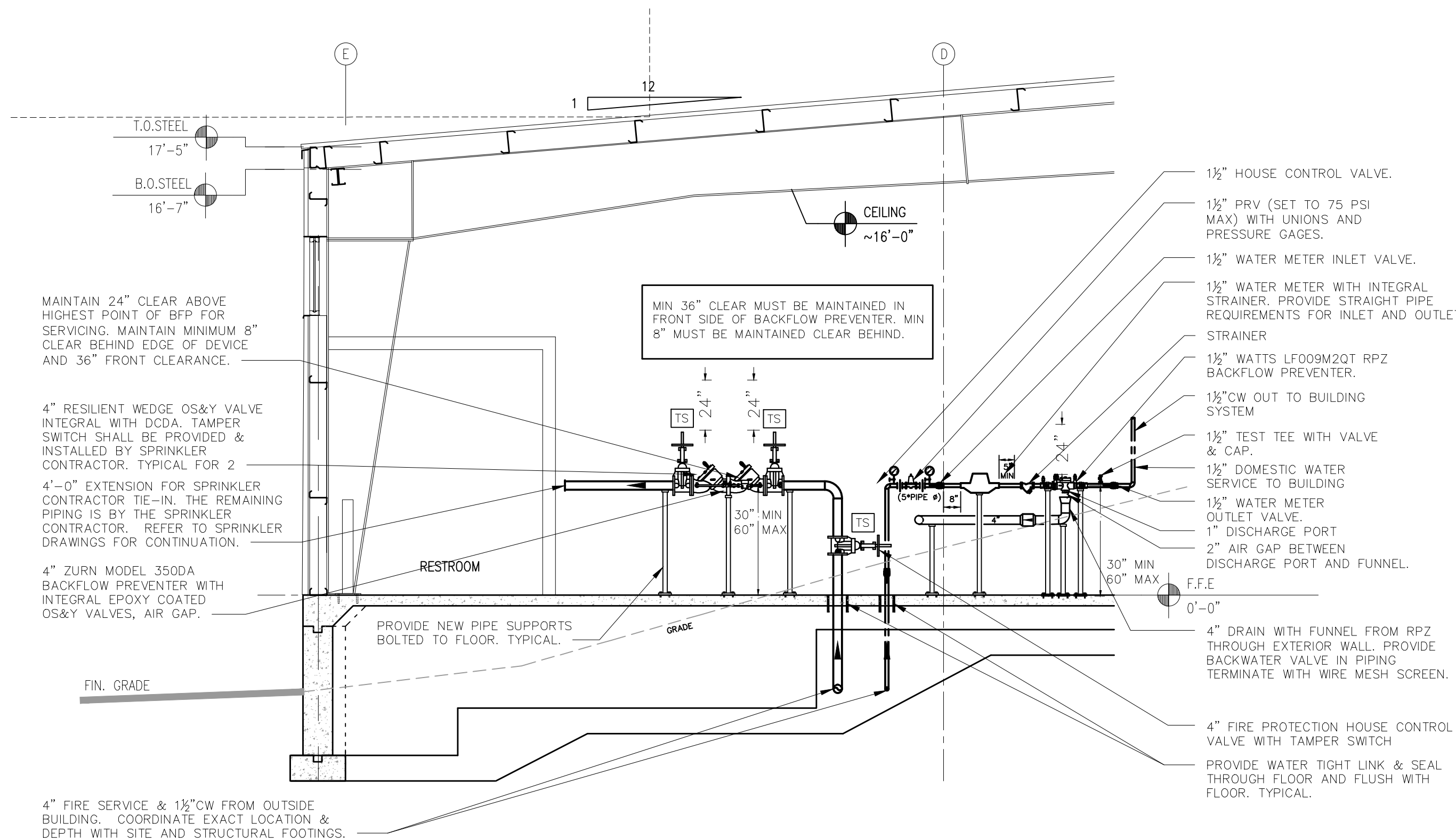
ONLY COPIES FROM THE ORIGINAL OF THIS DRAWING THAT ARE MARKED WITH THE ORIGINAL SEAL AND SIGNATURE OF THE ENGINEER SHALL BE CONSIDERED AS TRUE VALID COPIES.



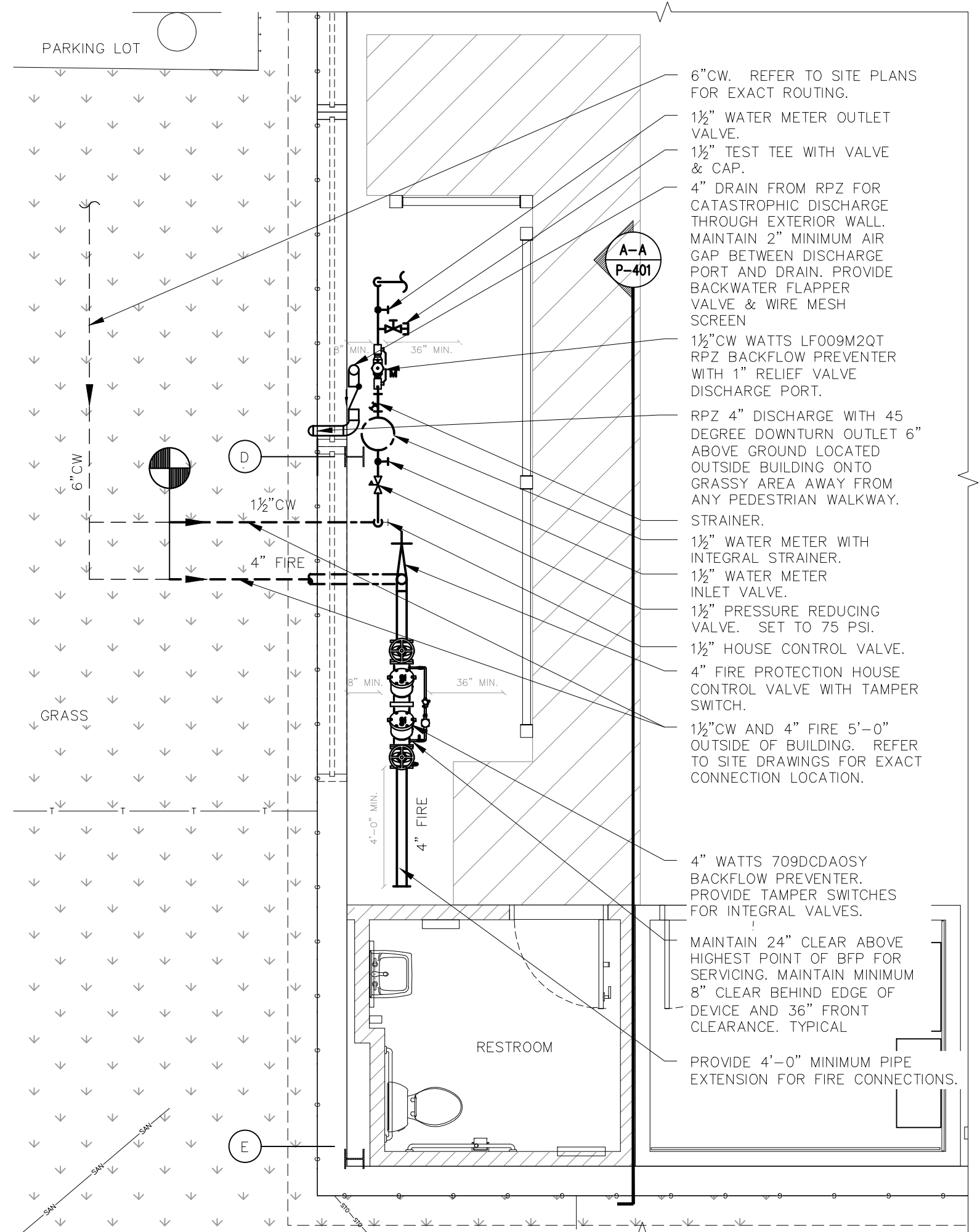
4 SITE PLAN  
SCALE: 1/32" = 1'-0"  
NORTH



2 SITE LOCATION MAP  
SCALE: NTS  
NORTH



3 PLUMBING ELEVATION A-A  
SCALE: 1/4" = 1'-0"



1 PLUMBING NEW WORK PART PLAN  
SCALE: 1/4" = 1'-0"  
NORTH

SYMBOLS AND ABBREVIATIONS

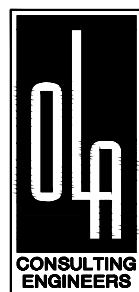
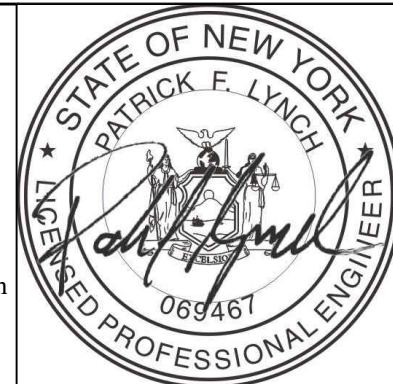
SYMBOL	ABBREVIATION	DESCRIPTION
— — — — —	CW	COLD WATER
—	AFF	ABOVE FINISHED FLOOR
—	BFP	BACK FLOW PREVENTER
—	DCV	DOUBLE CHECK VALVE
—	DN.	ELBOW DOWN
—	MAX.	MAXIMUM
—	MIN.	MINIMUM
—	PC	PLUMBING CONTRACTOR
—	RPZ	REDUCED PRESSURE ZONE
—	TYP	TYPICAL
▶	—	DIRECTION OF FLOW

BUILDING INFORMATION

ADDRESS: 105 WALKER ROAD, VALHALLA, NY 10595  
COUNTY: WESTCHESTER COUNTY  
SITE ELEVATION: THE SITE IS OUTSIDE OF THE 100 YEAR FLOOD PLAIN.

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York, NY 10018  
646.849.4110  
olace.com  
OLA P/N: NDCA0012

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION			
<input type="checkbox"/> AS BUILT — CHANGES AS NOTED			
<input type="checkbox"/> AS BUILT — NO CHANGES			
CONTRACTOR		PROJECT COORDINATOR	
NAME	NAME	NAME	NAME
SIGNATURE	SIGNATURE	SIGNATURE	SIGNATURE
TITLE	TITLE	TITLE	TITLE

WESTCHESTER COUNTY, NEW YORK  
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION  
DIVISION OF ENGINEERING  
NEW EQUIPMENT STORAGE BUILDING  
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
VALHALLA CAMPUS, VALHALLA, NEW YORK  
PLUMBING BACKFLOW PREVENTER PLAN

CONTRACT NUMBER	SHEET NUMBER
17-521	P-401
SHEET NO. 35 OF 53	
SCALE: AS SHOWN	
DATE: 11/16/2021	
DPW FILE NO.	REV. NO.
38-47-P-717-0	0



967603

REVISIONS

REVISION

DATE

BY

DESCRIPTION

1

5/23/03

M. BALDWIN

REVISED TRENCH WIDTH FOR 4" THRU 12" MAINS IN TABLE

2

4/24/06

M. BALDWIN

ADDED REQUIREMENTS OF GAS MAINS FOR STEEL DISTRIBUTION MAIN

3

3/13/06

M. BALDWIN

REVISED TRENCH WIDTH OF 1" AND GREATER SIZE MAINS IN TABLE 1

4

04/29/13

M. BALDWIN

REVISED TRENCH WIDTHS IN ITS SHEET

04/24/13

MT

TRENCH WIDTH SEE TABLE 1

GRADE

4'-6" TYPICAL

STEEL MAIN OR SERVICE (DISTRIBUTION)

TRENCH WIDTH SEE TABLE 1 & NOTE 6

GRADE

4'-6" TYPICAL

PLASTIC MAIN OR SERVICE (DISTRIBUTION)

TABLE 1

SIZE OF MAIN SERVICE	TRENCH WIDTH	TRENCH DEPTH (MAIN)	TRENCH DEPTH (SERVICE)
1"	6'-0"	3'-6"	2'-6"
1 1/2"	6'-0"	3'-6"	2'-6"
2"	6'-0"	3'-6"	2'-6"
2 1/2"	6'-0"	3'-6"	2'-6"
3"	6'-0"	3'-6"	2'-6"
4"	6'-0"	3'-6"	2'-6"
5"	6'-0"	3'-6"	2'-6"
6"	6'-0"	3'-6"	2'-6"
8"	6'-0"	3'-6"	2'-6"
10"	6'-0"	3'-6"	2'-6"
12"	6'-0"	3'-6"	2'-6"
14"	6'-0"	3'-6"	2'-6"
16"	6'-0"	3'-6"	2'-6"
18"	6'-0"	3'-6"	2'-6"
20"	6'-0"	3'-6"	2'-6"
24"	6'-0"	3'-6"	2'-6"
30"	6'-0"	3'-6"	2'-6"

TABLE 2

ITEM NO.	DESCRIPTION	SPEC. OR STD. NO.	CLASS & STOCK NO.
1	5" SAND CLEAN FILL	EO-8000	-
2	SUITABLE BACKFILL	EO-1181	-
3	SAFETY	EO-1181	-
4	WARNING BARRIERS	EO-1181	-
5	STEEL PROTECTIVE PLATES	EO-1181	-

NOTE:

1. DISTRIBUTION MAINS SHOULD BE INSTALLED WITH A MINIMUM 3'-0" COVER SO AS TO ALLOW A MINIMUM COVER OF 2'-0" ON THE SERVICE PIPING.

2. FOR DISTRIBUTION MAINS OR SERVICES, STEEL PROTECTIVE PLATES ARE REQUIRED WHEN THE COVER IS LESS THAN 2'-0". (SEE SPECS. G-8000, G-8100, AND DWG. EO-6799-C).

3. FOR TRANSMISSION MAINS, STEEL PROTECTIVE PLATES ARE REQUIRED FOR ALL NEW INSTALLATIONS REGARDLESS OF COVER AND IF FEASIBLE, WHENEVER AN EXISTING TRANSMISSION MAIN IS EXPOSED. (SEE SPECS. G-8001, G-1180, AND DWG. EO-6799-D).

4. ENSURE PROPER CLEARANCES ARE MAINTAINED BETWEEN GAS FACILITIES AND OTHER FACILITIES OR STRUCTURES. (SEE G-8201 AND DWG. EO-5070-C).

5. WHEN SHEETING IS USED, THE "TRENCH WIDTH" DIMENSION IN TABLE 1 SHALL BE MEASURED FROM THE INSIDE OF THE SHEETING.

6. WHEN INSTALLING COILED PLASTIC PIPE, THE TRENCH WIDTH MAY BE LESS THAN SHOWN ON TABLE 1.

7. FOR STEEL MAINS AND SERVICES, INSTALL SANDBAGS AT 10' INTERVALS.

8. ALL REPLACEMENT DIRECT BURIED COPPER TUBING AND PLASTIC TUBING SERVICES IN 1" OR 1 1/2" O.D. SIZES SHALL HAVE A PROTECTIVE SLEEVE INSTALLED. (SEE G-8100).

9. SEE G-8200 FOR MINIMUM SIZES OF NEW DIRECT BURIED PLASTIC, STEEL, AND COPPER SERVICES OF VARIOUS PRESSURES.

REFERENCE SPECS. & DWGS:

G-8000

G-8001

G-8002

G-8003

G-8004

G-8005

G-8006

G-8007

G-8008

G-8009

G-8010

G-8011

G-8012

G-8013

G-8014

G-8015

G-8016

G-8017

G-8018

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DESIGNATION	EX-1,2,3,4 SF-1,2,3,4	TX-1	PF-1,2
MANUFACTURER	GREENHECK	GREENHECK	BIG ASS SOLUTIONS
MODEL	SBE-3H30	SP-A90	BASIC 6
WEIGHT (LBS)	112	12	231
FAN TYPE	PROPELLER	CEILING MOUNTED	CEILING FAN
DRIVE TYPE	BELT	DIRECT	DIRECT
CFM	9,000	75	66
BHP	1.14	-	-
HP	1.5	16 WATTS	1.5
RPM	965	900	61
SP (IN H <sub>2</sub> O)	0.25	.25	0.5
VOLTS/ø/Hz	480/3/60	120/1/60	480/3/60
STARTER TYPE	VFD	TIME DELAY SWITCH	VFD

NOTES:

1. ALL MOTORS 1 HP OR GREATER SHALL BE PREMIUM EFFICIENCY.
2. ALL MOTORS FURNISHED WITH VARIABLE FREQUENCY DRIVES SHALL BE INVERTER DUTY RATED & APPROVED FOR VARIABLE SPEED AND TORQUE APPLICATIONS.
3. FURNISH RUBBER IN SHEAR OR SPRING VIBRATION ISOLATORS AS PER THE SPECIFICATION.
4. FURNISH WALL MOUNTED SPEED CONTROLLER OR THERMOSTAT AS INDICATED ON PLAN.
5. FURNISH MOTOR AND BELT GUARDS FOR ALL EXTERNAL MOTOR DRIVES.
6. MOTOR STARTER AND DISCONNECT SWITCH FOR EACH FAN SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
7. MANUAL MOTOR STARTERS FOR FANS SHALL BE SQUARE D, TYPE T OR M, WITH PUSH-BUTTON START/STOP, PILOT LIGHT, & AUXILIARY CONTACTS, SUITABLE FOR SURFACE MOUNTING.
8. TX-1: PROVIDE MODEL WC-4 HOODED WALL CAP WITH BUILT IN BIRDSCREEN & BAROMETRIC BACKDRAFT DAMPER WHERE INDICATED ON PLAN.
9. PROVIDE BAROMETRIC DAMPER WITH WIRE MESH SCREEN AT INLET FOR EXHAUST FANS AND OUTLET FOR SUPPLY FANS.
10. CONTROLS SHALL BE COMPATIBLE WITH THE BUILDING ANDOVER SYSTEM & NETWORKED INTO THE COUNTY WIDE ANDOVER SYSTEM. COORDINATE WITH CONTROLS CONTRACTOR.

HEATING & VENTILATION UNIT SCHEDULE		
DESIGNATION	HV-1	HV-2,3,4
MANUFACTURER	REZNOR	REZNOR
MODEL	SDH-300	SDH-300
WEIGHT OF UNIT (LBS)	629	629
DESIGN DATA:		
SUPPLY AIR (CFM)	4,200	4,200
OUTDOOR AIR MINIMUM (CFM)	1,100	0
OUTDOOR AIR MAXIMUM (CFM)	4,200	4,200
RETURN AIR MINIMUM (CFM)	0	0
RETURN AIR MAXIMUM (CFM)	3,100	4,200
SUMMER OA TEMP (°F) DB/WB	86/72	86/72
SUMMER RA TEMP (°F) DB/WB	80	80
WINTER OA TEMP (°F)	10	10
WINTER RA TEMP (°F)	60	60
GAS-FIRED FURNACE:		
E.A.T./L.A.T. (°F)	10/63	10/63
GAS INPUT/OUTPUT (MBH)	300/243	300/243
CONTROL STAGES	8	8
FILTERS:		
MAIN FILTER	MERV 8	MERV 8
QUANTITY/SIZE	3 / 16x16 3 / 16x20	3 / 16x16 3 / 16x20
SUPPLY FAN:		
DESIGN AIRFLOW (CFM)	4,200	4,200
BHP/HP	2.0/3.0	2.0/3.0
RPM	991	991
ESP/TSP (IN H <sub>2</sub> O)	-/0.75	-/0.75
VOLTS/ø/Hz	460/3/60	460/3/60
STARTER TYPE	HOA	HOA
ELECTRICAL DATA - SINGLE POINT POWER CONNECTION:		
VOLTS/ø/Hz	460/3/60	460/3/60
FLA/MCA (AMPS)	7.6/9.5	7.6/9.5

NOTES:

STANDARD COMPONENTS:

1. 81% EFFICIENCY SEPARATED COMBUSTION SYSTEM.
2. CIRCUIT BREAKER PROTECTED TRANSFORMER FOR 24V CONTROLS.
3. INTEGRATED CIRCUIT BOARD WITH DIAGNOSTIC INDICATOR LIGHTS
4. MULTI-TRY DIRECT SPARK IGNITION WITH 100% LOCKOUT
5. HIGH TEMP LIMIT CONTROL
6. RUBBER-IN-SHEER VIBRATION ISOLATION
7. REVERSE AIRFLOW LIMIT SWITCH
8. AIRFLOW PRESSURE SWITCH TO VERIFY CIRCULATING BLOWER OPERATION
9. SOCKETED, HIGH QUALITY SWITCHING RELAYS TO FACILITATE SERVICE
10. ALL SERVICE AND VENT CONNECTIONS FROM A SINGLE SIDE
11. ENGINEERED HEAT EXCHANGER CONDENSATE MANAGEMENT


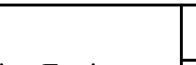
REQUIRED OPTIONS:

1. HORIZONTAL CONCENTRIC ADAPTER BOX (C66)
2. 409 STAINLESS STEEL HEAT EXCHANGERS WITH EXTENDED 10 YEAR WARRANTY
3. BURNER CONTROLS WITH 4:1 GAS MODULATION
4. UNIT MOUNTED LOCAL DISCONNECT SWITCH - FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
5. FIRESTAT
6. DISCHARGE AIR TEMPERATURE LOW LIMIT
7. OVER / UNDER VOLTAGE OR PHASE LOSS PROTECTION
8. HIGH AMBIENT LIMIT (BURNER CUTOFF)
9. GAS PRESSURE SWITCHES.
10. DOWNTURN NOZZLES STYLE CD 25-65" WITH DOUBLE DIRECTIONAL LOUVERS.
11. CONTROL OPTION AG58 - EXTERNAL CONTROLS WITH 8:1 GAS MODULATION. CONTROLS SHALL BE COMPATIBLE WITH THE BUILDING ANDOVER SYSTEM & NETWORKED INTO THE COUNTY WIDE ANDOVER SYSTEM. COORDINATE WITH CONTROLS CONTRACTOR.
12. BACNET DDC COMMUNICATION CARD.

## EQUIPMENT NOTES

1. MOTORIZED DAMPERS: SHALL BE KUSKIN MODEL CD40, 4" DEEP EXTRUDED ALUMINUM AIRFOIL DAMPER. DAMPER SHALL HAVE OPPOSED BLADES, MOTOR AND LINKAGE. DAMPERS SHALL BE 120V/1 $\phi$ /60Hz, 3 AMPS MAX. FURNISH DISCONNECT SWITCH.
2. LISTED SPECIAL GAS VENTING: FOR ALL GAS FIRED DIRECT VENTING CONDENSING & NON-CONDENSING APPLIANCES SHALL BE HEATFAB "SAF-T VENT CI PLUS". DOUBLE WALL CONSTRUCTION, 1" FIBERGLASS INSULATION, AL-29-4C STAINLESS STEEL. SPECIAL VENT UL 1738 FOR POSITIVE, NEUTRAL, AND NEGATIVE DRAFT UP TO 15"WC. PRODUCT IS RATED FOR ZERO CLEARANCE TO COMBUSTIBLES. PROVIDE STRAIGHT SECTIONS, ELBOWS, OFFSETS, CONNECTION ADAPTERS, WALL SLEEVES, AND SCREENED TERMINATIONS.
3. OUTSIDE AIR INTAKE: FOR ALL GAS FIRED DIRECT VENTING CONDENSING & NON-CONDENSING APPLIANCES SHALL BE SINGLE-WALL SPIRAL GALVANIZED STEEL BY SHEET METAL CONNECTORS, INC. ALL DUCTWORK IS 4-PLY SPIRAL LOCKSEAM MEETING ASTM A-653. ALL DUCT CONNECTIONS SHALL BE MADE WITH A DOUBLE LEGGED EPDM GASKET CREATING AN AIR-TIGHT CONNECTION MEETING ASTM A-653. SINGLE-WALL DUCT GAUGE SHALL BE SELECTED FOR POSITIVE, NEUTRAL, AND NEGATIVE DRAFT UP TO 15"WC WITH A MINIMUM GAUGE OF 24. PRODUCT IS RATED FOR ZERO CLEARANCE TO COMBUSTIBLES. PROVIDE STRAIGHT SECTIONS, ELBOWS, OFFSETS, CONNECTION ADAPTERS, WALL SLEEVES, AND SCREENED TERMINATIONS.
4. GAS-FIRED UNIT HEATERS (UH-1,2,3,4,5,6): SHALL BE MODINE MODEL PTS250, 250 MBH INPUT, 205 MBH OUTPUT. UNITS SHALL BE DIRECT-VENT SEPARATED COMBUSTION TYPE WITH 6"Ø FLUE OUTLET, 6"Ø AIR INLET, AND 3/4"Ø EXTERNAL GAS CONNECTION. FAN SHALL BE 1/3 HP, 1075 RPM. ELECTRICAL REQUIREMENTS: 120V/1 $\phi$ /60Hz, 4.6 FAN AMPS (FAN ONLY), 8.1 TOTAL AMPS (UNIT TOTAL). PROVIDE STARTER/LOCAL DISCONNECT, AND 10 YEAR WARRANTY ON HEAT EXCHANGER. FURNISH WITH SINGLE-STAGE, DIRECT SPARK IGNITION CONTROLS, WITH 100% SHUT-OFF AND CONTINUOUS RETRY. PROVIDE HORIZONTAL CONCENTRIC VENT KIT WITH EACH UNIT.
5. ELECTRIC WALL HEATER (EH-1): SHALL BE MARKEL MODEL F 3453 T SURFACE MOUNTED, 3,000 WATTS INPUT, 208/1/60, 14.4 AMPS, 10,239 BTUS. ROUGH IN DIMENSIONS 23"x15"x4.125"D. UNITS CORROSION RESISTANT STEEL ELEMENT, BRAZED STEEL FINS. COORDINATE COLOR WITH ARCHITECT. FURNISH AND INSTALL THE FOLLOWING FIELD-INSTALLED OPTIONS: THERMOSTAT & DISCONNECT SWITCH.
6. CO & NO<sub>2</sub> DETECTION SYSTEM: SHALL BE SIERRA MONITOR CORPORATION. PROVIDE SENTRY 5000-1T CONTROLLER (SEE PLANS FOR LOCATION). PROVIDE ALL COMPONENTS AND WIRING FOR A COMPLETE INSTALLATION AND OPERABLE SYSTEM. ALL SPACE TRANSMITTERS SHALL BE MOUNTED 5'-0" AFF IN A PROTECTED LOCATION. PROVIDE EXTERNAL BATTERY BACKUP. PROVIDE SIGNAGE "CO & NO<sub>2</sub> DETECTION" ON CONTROL PANEL.
  - CO TRANSMITTERS SHALL BE 5100-04-IT-S1-01-00-0-0-C
  - NO<sub>2</sub> TRANSMITTERS SHALL BE 5100-12-IT-S1-01-00-0-0-C
7. VEHICLE EXHAUST SYSTEM (VEF-1, VEF-2, VEF-3, VEF-4): SHALL BE BASED ON PLYMOVENT. EACH SYSTEM SHALL CONSIST OF (1) STATIONARY SPRING ACTUATED HOSE REELS #SER-1050 MOUNTED SUCH THAT BOTTOM OF HOSE REEL IS AT 13' AFF. EACH HOSE REEL SHALL HAVE 33'L 6"Ø HOSE #SNF-2 CAPABLE OF 600' CONTINUOUS & 1250' INTERMITTENT VEHICLE EXHAUST. 400°F TEMPERATURE RESISTANCE ON ALL COMPONENTS. PROVIDE TAILPIPE ADAPTERS AS LISTED IN THE SPECIFICATIONS. EACH FAN SHALL BE FUA-3000 2HP RATED FOR 720 CFM AT 8"WC SP, 460/3/60, 80LBS. PROVIDE PLYMOVENT ES-90 CONTROL BOX EACH FAN. PROVIDE AN NTX NEMA 4X WALL MOUNT TRANSMITTER FOR EACH SYSTEM WITH 433 MHz RCR24SS RECEIVER MOUNTED TO EACH HOSE REEL. REFER TO VEHICLE EXHAUST SPECIFICATIONS SECTION 238416 FOR FULL EQUIPMENT REQUIREMENTS.
8. VEHICLE EXHAUST DUCTWORK: US DUCT CLAMPABLE DUCTING. GALVANIZED DUCT WITH WELDED ENDS, WELDED ANGLE RINGS, OR LOOSE ANGLE RINGS WITH LIPPED ENDS. REFER TO VEHICLE EXHAUST SPECIFICATIONS SECTION 238416 FOR FULL DUCTWORK REQUIREMENTS.

MINI SPLIT DX SYSTEMS																					
OUTDOOR AIR COOLED CONDENSING UNITS													INDOOR CEILING HIGH WALL								
ID	MODEL #	NOMINAL (Tons)	COOLING Capacity (BTUH)	HEATING Outside (F°)	Capacity (BTUH)	ELECTRICAL (V/Ph/Hz)	MCA (A)	MOP (A)	WxHxD (in)	WEIGHT (lbs)	EFFICIENCY		ID	MODEL #	NOMINAL (Tons)	AIRFLOW (CFM)	ELECTRICAL (V/Ph/Hz)	MCA (A)	WxHxD (in)	WEIGHT (lbs)	NOTES
											EER	SEER									
ACC-1	38MPRAQ12AA3	1	5800-19000	5°	13,800	208/1/60	15	20	33X14X27	108	13.5	32	AC-1	40MPHAQ12XA3	1	168/252/306/357	208/1/60	0.3	35.2x11.7x9.8	38	1,2,3,4,5,6
NOTES: 1. EQUIPMENT SELECTION BASED ON CARRIER. 2. PROVIDE THE FOLLOWING OPTIONS FOR EACH UNIT: WIRED 7-DAY PROGRAMMABLE THERMOSTAT CONDENSATE PUMP 24V INTERFACE KIT 3. FIELD SUPPLIED LOCAL DISCONNECT SWITCH AT EACH INDOOR UNIT SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR & INSTALLED BY THE ELECTRICAL CONTRACTOR. 4. FIELD SUPPLIED WEATHER PROOF LOCAL DISCONNECT SWITCH AT EACH OUTDOOR UNIT SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR & INSTALLED BY THE ELECTRICAL CONTRACTOR. 5. SINGLE POINT EXTERNAL POWER CONNECTION FOR EACH INDOOR / OUTDOOR SET OF UNITS SHALL BE AT THE OUTDOOR UNIT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE WIRING FROM THE OUTDOOR UNIT TO THE INDOOR UNIT. 6. THE AUTOMATIC TEMPERATURE CONTROLS CONTRACTOR SHALL PROVIDE CONTROL WIRING BETWEEN THE OUTDOOR UNIT AND THE INDOOR UNIT.																					

<div>DCAK · MSA</div> <div>ARCHITECTURE AND ENGINEERING</div> <div>53 HUDSON AVENUE</div> <div>NYACK, NEW YORK 10960</div> <div>www.DCAK-MSA.com</div> <div>Email: info@DCAK-MSA.com</div> <div>Tel 845-353-1300    Fax 845-353-1614</div>	<div>RCM Technologies USA, Inc.</div> <div>Consulting Engineers</div> <div>99 Bauer Drive</div> <div>Suite 101</div> <div>Oakland, NJ 07436</div> <div>TEL:(201) 249-8700</div> <div>EMAIL:bruce.goldman@rcmt.com</div>			OLA Consulting Engineers										RECORD DRAWING CERTIFICATION		WESTCHESTER COUNTY, NEW YORK		CONTRACT NUMBER	SHEET NUMBER	
				50 Broadway, Hawthorne,										<input type="checkbox"/> AS BUILT – CHANGES AS NOTED		DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION		17-521	M-601	
				New York 10532										<input type="checkbox"/> AS BUILT – NO CHANGES		DIVISION OF ENGINEERING				
				914.747.2800										CONTRACTOR		PROJECT COORDINATOR		SHEET NO. 39 OF 53		
				8 West 38th Street, New										NAME _____		NAME _____		NEW EQUIPMENT STORAGE BUILDING		
				York, NY 10018										SIGNATURE _____		SIGNATURE _____		RICHARD A. FLYNN, SR. FIRE TRAINING CENTER		SCALE: AS SHOWN
				646.849.4110										TITLE _____ DATE _____		TITLE _____ DATE _____		VALHALLA CAMPUS, VALHALLA, NEW YORK		DATE: 11/16/2021
olace.com														MECHANICAL SCHEDULES		DPW FILE NO.	REV. NO.			
OLA P/N: NDCA0012																38-47-M-721-0	0			
				REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION												











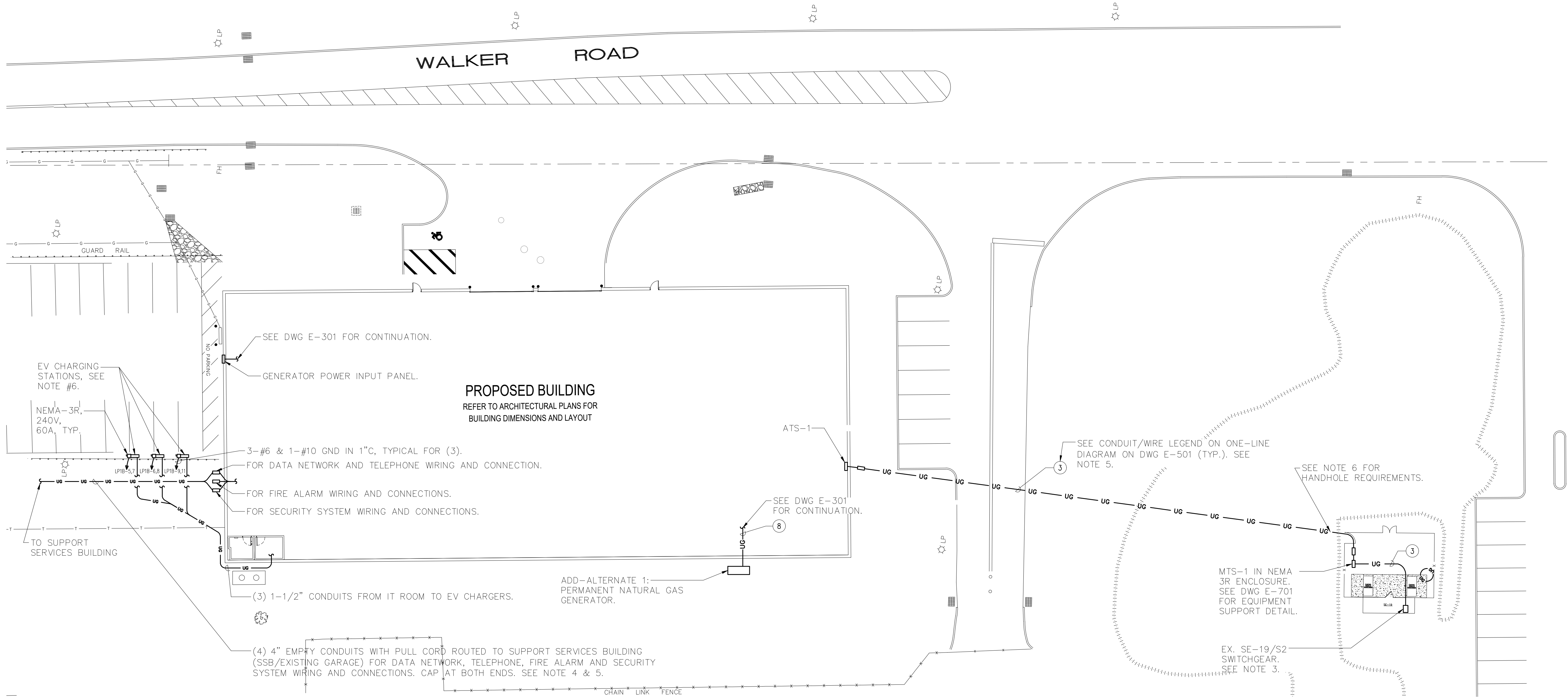




SYMBOLS AND ABBREVIATIONS						DEFINITION OF TERMS					
SYMBOL	ABBREVIATION	DESCRIPTION	SYMBOL	ABBREVIATION	DESCRIPTION	SYMBOL	ABBREVIATION	DESCRIPTION		<p>7. "INSTALL OR INSTALLATION" MEANS THE ACT OF PHYSICALLY PLACING, APPLYING, SETTING, ERECTING, ANCHORING, SECURING, ETC., CONSTRUCTION MATERIALS, EQUIPMENT, FURNISHINGS, APPLIANCES, AND SIMILAR ITEMS SPECIFIED AND FURNISHED AT THE JOB SITE. INSTALLATION OF SPECIFIED ITEMS MUST BE COMPLETE IN ALL RESPECTS.</p> <p>8. "PROVIDE" MEANS TO FURNISH AND INSTALL CONSTRUCTION MATERIAL, EQUIPMENT, ETC. AS DEFINED ABOVE.</p> <p>9. THE FOLLOWING ARE DEFINITIONS OF SHOP DRAWING STAMP ACTIONS:</p> <p>A. "NO EXCEPTIONS TAKEN" MEANS THAT THE SHOP DRAWING IS CORRECT AS TO PERFORMANCE, CAPACITY, ETC. AND SUBSTANTIAL CONFORMANCE TO THE CONTRACT DRAWINGS AND SPECIFICATIONS. FABRICATION AND/OR PURCHASE MAY COMMENCE.</p> <p>B. "MAKE CORRECTIONS NOTED" MEANS THAT THE SHOP DRAWING IS CORRECT AS TO PERFORMANCE, CAPACITY, ETC. AND SUBSTANTIAL CONFORMANCE TO THE CONTRACT DRAWINGS AND/OR SPECIFICATIONS, SUBJECT TO AND IN COMPLIANCE WITH THE ANNOTATIONS AND/OR CORRECTIONS INDICATED ON THE SHOP DRAWING. FABRICATION AND/OR PURCHASE MAY COMMENCE.</p> <p>C. "AMEND AND RESUBMIT" MEANS THAT THE COMMENTS AND/OR CORRECTION ARE SO EXTENSIVE AND IMPORTANT THAT THE REVIEWER WANTS TO SEE HOW THE COMMENTS AND/OR CORRECTIONS ARE RESOLVED PRIOR TO RELEASE FOR FABRICATION AND/OR PURCHASE. FABRICATIONS AND/OR PURCHASE MAY <u>NOT</u> COMMENCE.</p> <p>D. "REJECTED" MEANS THAT THE SHOP DRAWING DOES NOT COMPLY OR CONFORM TO THE CONTRACT DRAWINGS AND/OR SPECIFICATIONS. FABRICATION AND/OR PURCHASE MAY <u>NOT</u> COMMENCE.</p>	
	—	CONDUIT AND WIRING		—	FIRE ALARM STROBE 15/75 CD		KW	KILO—WATT			
	—	CONDUIT & WIRING TO BE REMOVED UON		—	FIRE ALARM STROBE 110 CD		MAX	MAXIMUM			
	—	BURIED CONDUIT		—	SMOKE DETECTOR. SH — SMOKE HATCH; SC — PLENUM RATED ABOVE CEILING		MCB	MAIN CIRCUIT BREAKER			
	—	OVERHEAD CONDUCTORS					MIN	MINIMUM			
	—	HOMERUN TO PANEL, ARROWS INDICATE # 1P		—	HEAT DETECTOR		MLO	MAIN LUG ONLY			
	—	MULTI—POLE HOMERUN		—	CARBON MONOXIDE DETECTOR		MTS	MANUAL TRANSFER SWITCH			
	—	ELECTRICAL EQUIPMENT AS INDICATED		—	FIRE ALARM TAMPER SWITCH		NIC	NOT IN CONTRACT			
	—	ELECTRICAL EQUIPMENT TO BE REMOVED UON		—	FIRE ALARM WATER FLOW SWITCH		NTS	NOT TO SCALE			
	—	ELECTRIC METER		—	FIRE ALARM WARDEN STATION		P	POLE			
	—	JUNCTION BOX		—	FIRE ALARM ANNUNCIATOR PANEL		PV	PHOTOVOLTAIC			
	—	FUSED DISCONNECT SWITCH		CM	FIRE ALARM CONTROL MODULE		PNL	PANEL			
	—	UNFUSED DISCONNECT SWITCH		MM	FIRE ALARM MONITORING MODULE		PVC	POLY VINYL CHLORIDE			
	—	COMBINATION MOTOR STARTER/FUSED DISC.		FACP	FIRE ALARM CONTROL PANEL		REL.	REMOVE AND RELOCATE			
	—	MOTOR STARTER		BPS	BOOSTER POWER SUPPLY		RGS	RIGID GALVANIZED STEEL			
	—	MOTOR, NUMBER INDICATES HORSE POWER		R	FIRE ALARM RELAY		SCH	SCHEDULE			
	—	BATTERY PACK EMERGENCY LIGHT FIXTURE		EOL	END OF LINE RESISTOR		SPD	SURGE PROTECTION DEVICE			
	—	MOTOR RATED TOGGLE SWITCH		—	CARD READER		SW	SWITCH(ES)			
	—	DUPLEX RECEPTACLE		A	AMPERE(S)		TELCO	TELEPHONE COMPANY			
	—	DOUBLE DUPLEX RECEPTACLE		AC	AIR CONDITIONER		TYP	TYPICAL			
	—	SPECIAL RECEPTACLE		ACC	AIR CONDITIONER CONDENSER		UG	UNDERGROUND			
	—	TELEPHONE OUTLET		AFF	ABOVE FINISHED FLOOR		UON	UNLESS OTHERWISE NOTED			
	—	DATA OUTLET (x — INDICATES # OF JACKS, 2 JACKS PER LOCATION, UON)		AF	AMPERAGE OF FUSE		UV	UNIT VENTILATOR			
				AGL	ABOVE GRADE LEVEL		WP	WEATHERPROOF			
	—	COMBINATION TELEPHONE/DATA OUTLET		AHU	AIR HANDLING UNIT		VIF	VERIFY IN FIELD			
	EOL	END OF LINE RESISTOR		AL	ALUMINIUM		V	VOLT(S)			
	—	CLOCK		ARC	ARC FAULT INTERRUPTER		WG	WIRE GUARD			
	—	PUSHBUTTON		AS	AMPERAGE OF SWITCH		WH	WATER HEATER			
	EPO	EMERGENCY POWER OFF SWITCH		ATS	AUTOMATIC TRANSFER SWITCH	<b>NOTES:</b> 1. ALL SYMBOLS AND ABBREVIATIONS MAY NOT BE APPLICABLE FOR THIS PROJECT. 2. SEE LIGHTING FIXTURE SCHEDULE FOR LIGHT FIXTURE SYMBOLS.					
	CB	CIRCUIT BREAKER		AWG	AMERICAN WIRE GAUGE						
	—	ENCLOSED CIRCUIT BREAKER		BCW	BARE COPPER WIRE	<b>TYPICAL BRANCH CIRCUIT WIRING LEGEND</b> 					
	—	FUSED SWITCH		BLDG	BUILDING						
	GEN	GENERATOR		BMS	BUILDING MANAGEMENT SYSTEM	<b>NOTES:</b> 1. EACH 120V AND 277V CIRCUIT SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR. SHARED NEUTRAL HOMERUNS ARE NOT PERMITTED.  2. CONDUCTORS SHALL BE INCREASED FOR VOLTAGE DROP AND DERATING AS PER APPLICABLE ELECTRICAL CODE. FOR CIRCUITS THAT ARE BETWEEN 100' AND 150' IN LENGTH, PHASE AND NEUTRAL CONDUCTORS SHALL BE #10 AWG. FOR CIRCUITS THAT ARE BETWEEN 150' AND 225' IN LENGTH, PHASE AND NEUTRAL CONDUCTORS SHALL BE #8 AWG. FOR LENGTHS GREATER THAN 225' IN LENGTH, VERIFY CONDUCTOR SIZES WITH ENGINEER.  3. MC CABLE MY BE USED IF CONCEALED IN WALL OR CEILING.					
	—	GENERATOR RECEPTACLE		C	CONDUIT						
	GND	GROUND AS PER LOCAL CODE		CD	CANDELA	<b>DEFINITION OF TERMS</b> 1. WHEREVER IN THE CONTRACT DOCUMENTS THE WORD "CLIENT" IS USED, IT MUST BE UNDERSTOOD THAT "WESTCHESTER COUNTY FIRE TRAINING CENTER" IS INTENDED.  2. WHEREVER IN THE CONTRACT DOCUMENTS THE WORD "ARCHITECT" IS USED, IT MUST BE UNDERSTOOD THAT "DCAK MSA" IS INTENDED.  3. WHEREVER IN THE CONTRACT DOCUMENTS THE WORD "ENGINEER" IS USED, IT MUST BE UNDERSTOOD THAT "OLA CONSULTING ENGINEERS" IS INTENDED.  4. WHEREVER IN THE CONTRACT DOCUMENTS THE WORDS "ELECTRICAL UTILITY" OR "POWER COMPANY" ARE USED, IT MUST BE UNDERSTOOD THAT "CON EDISON" IS INTENDED.  5. "WORK" MUST BE DEEMED TO CONSIST OF ALL LABOR AND OPERATIONS, TRANSPORTATION, HOISTING, MATERIALS, TOOLS, EQUIPMENT, SERVICES, INSPECTIONS, INVESTIGATIONS, COORDINATION AND SUPERVISION REQUIRED AND / OR REASONABLY NECESSARY TO PRODUCE THE CONSTRUCTION REQUIRED BY THE CONTRACT DOCUMENTS.  6. "FURNISH" MEANS THE DESIGN, FABRICATION, PURCHASE AND DELIVERY TO THE JOB SITE.					
	—	GROUND BAR		CKT	CIRCUIT						
	—	GROUND ROD		CLG	CEILING						
	—	TRANSFER SWITCH		COL	COLUMN						
	XFMR	TRANSFORMER		CU	COPPER						
	CT	CURRENT TRANSFORMER		DEM.	DEMOLISH AND REMOVE						
	—	UTILITY POLE		DISC	DISCONNECT						
	WM	WATER MAIN		DWG	DRAWING						
	—	CEILING MOUNTED OCCUPANCY SENSOR		EF	EXHAUST FAN						
	—	BOILER BREAK GLASS STATION		EM	EMERGENCY						
	NC	NORMALLY CLOSED CONTACTS		EMT	ELECTRICAL METALLIC TUBING						
	NO	NORMALLY OPEN CONTACTS		EXIST	EXISTING						
	MD	MOTORIZED DAMPER		EX.	EXISTING TO REMAIN						
	SD OR CFSD	SMOKE DAMPER		F	FLOOR						
	UH	UNIT HEATER		GEN	GENERATOR						
	—	FIRE ALARM MANUAL PULL STATION		GFI	GROUND FAULT INTERRUPTER						
	—	FIRE ALARM COMBINATION AUDIO/VISUAL DEVICE (15/75 CD — STROBE)		HP	HORSEPOWER						
				HVAC	HEATING VENTILATION AIR CONDITIONING						
	—	FIRE ALARM COMBINATION AUDIO/VISUAL DEVICE (110 CD — STROBE)		IG	ISOLATED GROUND						
				KVA	KILO—VOLT—AMPERE						

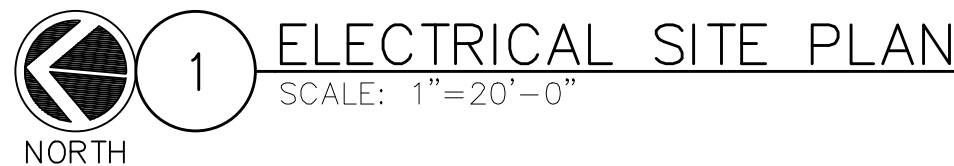
<div>DCAK · MSA</div> <div>ARCHITECTURE AND ENGINEERING</div> <div>53 HUDSON AVENUE</div> <div>NYACK, NEW YORK 10960</div> <div>www.DCAK-MSA.com</div> <div>Email: info@DCAK-MSA.com</div> <div>Tel 845-353-1300 Fax 845-353-1614</div>	<div>RCM Technologies USA, Inc.</div> <div>Consulting Engineers</div> <div>99 Bauer Drive</div> <div>Suite 101</div> <div>Oakland, NJ 07436</div> <div>TEL:(201) 249-8700</div> <div>EMAIL:bruce.goldman@rcmt.com</div>	<div>STATE OF NEW YORK</div> <div>PAATRICK F. LYNCH</div> <div>069461</div> <div>REGISTERED PROFESSIONAL ENGINEER</div>	<div>OLA Consulting Engineers</div> <div>50 Broadway, Hawthorne,</div> <div>New York 10532</div> <div>914.747.2800</div> <div>8 West 38th Street, New</div> <div>York, NY 10018</div> <div>646.849.4110</div> <div>olace.com</div> <div>OLA P/N: NDCA0012</div>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										</
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NOTES:

- SEE ONE-LINE DIAGRAM ON DWG E-501.
- FOR ADDITIONAL GENERATOR DETAILS, SEE DWG E-701.
- INTERRUPTION OF EXISTING ELECTRIC SERVICE: DO NOT INTERRUPT ELECTRIC SERVICE TO FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY ELECTRIC SERVICE. NOTIFY ARCHITECT, ENGINEER, AND OWNER NO FEWER THAN 20 DAYS IN ADVANCE OF PROPOSED INTERRUPTION OF ELECTRIC SERVICE. INDICATE METHOD OF PROVIDING TEMPORARY ELECTRIC SERVICE. DO NOT PROCEED WITH INTERRUPTION OF ELECTRIC SERVICE WITHOUT OWNER'S WRITTEN PERMISSION. COMPLY WITH NFPA 70E.
- ALL DATA AND COMMUNICATION WIRE PULLS AND CONNECTIONS SHALL BE BY OTHERS.
- INSTALL ALL UNDERGROUND CONDUITS IN CONCRETE ENCASED DUCT BANK WHERE CROSSING ROADWAY OR SUBJECT TO VEHICULAR TRAFFIC.
- VEHICLE CHARGING STATIONS SHALL BE PROVIDED BY THE COUNTY. THE CONTRACTOR SHALL BE RESPONSIBLE TO PICK UP THE CHARGERS FROM THE COUNTY AND BRING THEM TO THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE CHARGERS AND MAKE OPERATIONAL.

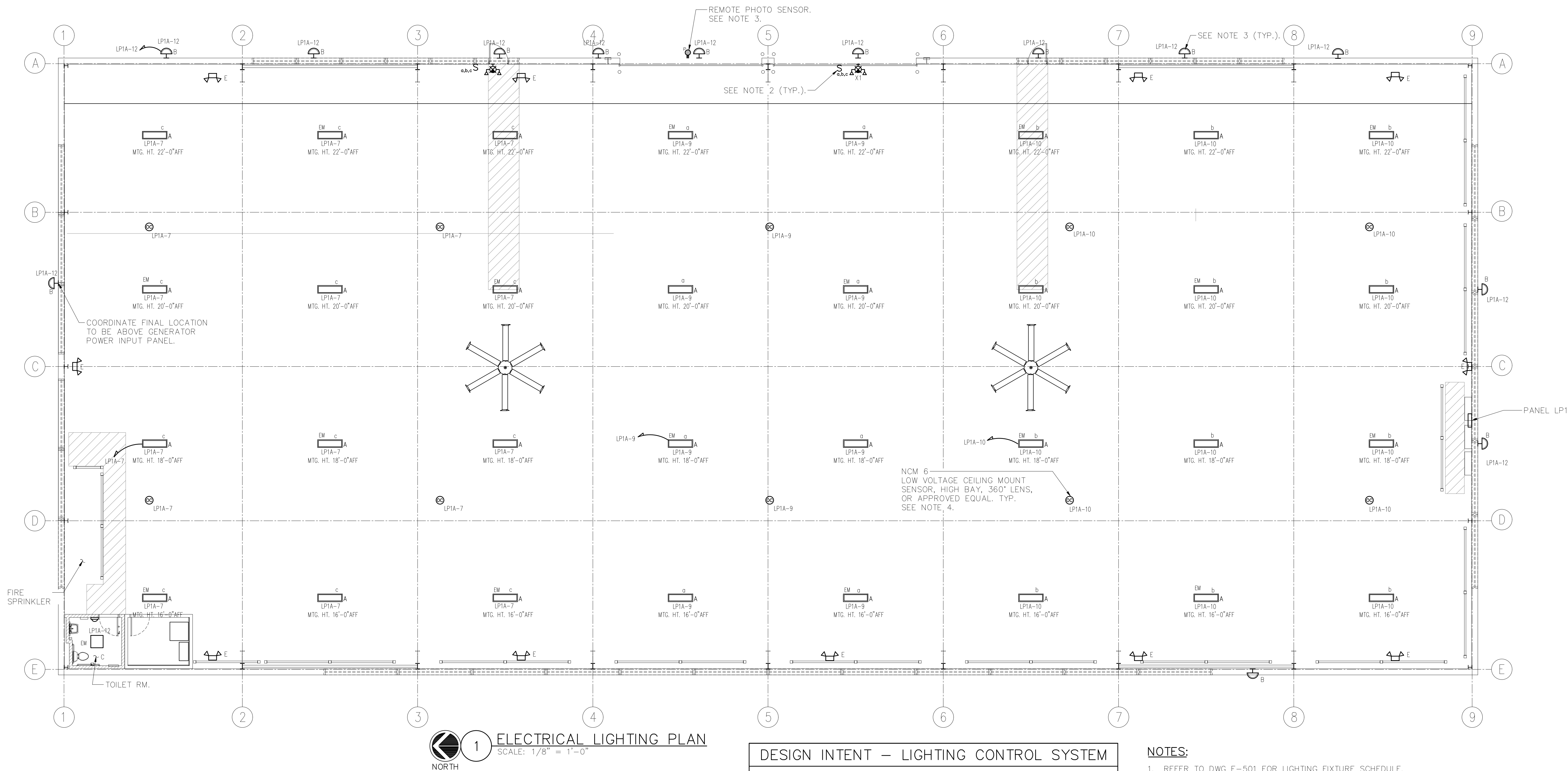


TRENCHING NOTES:

- CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES THAT ARE NOT PART OF N.Y. STATE "CODE 753" PRIOR TO DIGGING.
- ALL EXCAVATION IN THE AREA OF THE EXISTING UNDERGROUND EQUIPMENT, PIPES AND CONDUITS SHALL BE PERFORMED BY HAND.
- ANY AREA/PLANTS OR LANDSCAPING OR PAVEMENTS DISTURBED DURING THE EXCAVATION SHALL BE RESTORED OR REPLACED TO MATCH EXISTING CONDITIONS BY THE CONTRACTOR AT NO COST TO THE OWNER.
- ANY EXISTING BURIED CONDUITS, DRAINAGE, SPRINKLER PIPING, ETC. THAT IS DISTURBED AND/OR DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.
- THE PLANS SHOW SOME KNOWN SUBSURFACE STRUCTURES, ABOVE GROUND STRUCTURES AND/OR UTILITIES BELIEVED TO EXIST IN THE WORKING AREA, EXACT LOCATION OF WHICH MAY VARY FROM THE LOCATIONS INDICATED. IN PARTICULAR, THE CONTRACTOR IS WARNED THAT THE EXACT OR EVEN APPROXIMATE LOCATION OF SUCH PIPELINES, SUBSURFACE STRUCTURES AND/OR UTILITIES IN THE AREA MAY OR MAY NOT BE SHOWN; AND IT SHALL BE HIS RESPONSIBILITY TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK. 48 HOURS BEFORE YOU DIG, DRILL OR BLAST, CALL 1-800-962-7962 (NY STATE).

<b>DCAK · MSA</b> ARCHITECTURE AND ENGINEERING 53 HUDSON AVENUE NYACK, NEW YORK 10960 www.DCAK-MSA.com Email: info@DCAK-MSA.com Tel 845-353-1300 Fax 845-353-1614		RCM Technologies USA, Inc. Consulting Engineers 99 Bauer Drive Suite 101 Oakland, NJ 07436 TEL:(201) 249-8700 EMAIL:bruce.goldman@rcmt.com		 OLA Consulting Engineers 50 Broadway, Hawthorne, New York 10532 914.747.2800 8 West 38th Street, New York, NY 10018 646.849.4110 olace.com OLA P/N: NDCA0012	REVISION NUMBER DATE MADE BY APP'D BY	RECORD DRAWING CERTIFICATION <input type="checkbox"/> AS BUILT – CHANGES AS NOTED <input type="checkbox"/> AS BUILT – NO CHANGES CONTRACTOR NAME SIGNATURE TITLE DATE PROJECT COORDINATOR NAME SIGNATURE TITLE DATE	WESTCHESTER COUNTY, NEW YORK DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION DIVISION OF ENGINEERING NEW EQUIPMENT STORAGE BUILDING RICHARD A. FLYNN, SR. FIRE TRAINING CENTER VALHALLA CAMPUS, VALHALLA, NEW YORK ELECTRICAL SITE PLAN	CONTRACT NUMBER 17-521 SHEET NUMBER E-101 SHEET NO.44 OF 53 SCALE: AS SHOWN DATE: 11/16/2021 DPW FILE NO. 38-47-E-726-0 REV. NO. 0
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### DESIGN INTENT – LIGHTING CONTROL SYSTEM

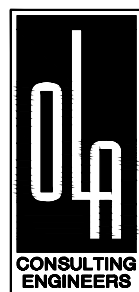
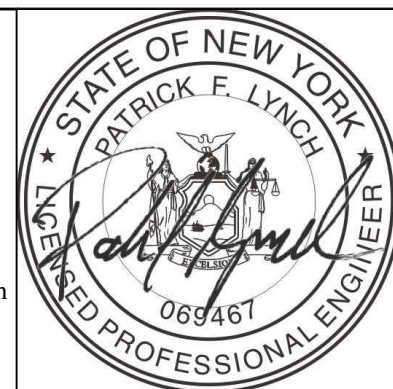
1. LIGHTING CONTROL SYSTEM IS BASED ON N-LIGHT BY ACUITY CONTROLS (ANDREW GROSS (212) 462-0088 x5210) OR APPROVED EQUAL.
2. LIGHTING CONTROL COMPONENTS SHOWN ARE FOR GENERAL DESIGN INTENT. ALL COMPONENTS AND WIRING ARE NOT SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY COMPONENTS, WIRING (LINE AND LOW VOLTAGE) AND PROGRAMMING FOR A FULLY OPERATIONAL SYSTEM.
3. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE LIGHTING CONTROLS WITH LIGHT FIXTURES.
4. ALL LIGHT FIXTURE AND LIGHTING CONTROL SUBMITTALS SHALL BE SUBMITTED AT THE SAME TIME FOR APPROVAL.

### NOTES:

1. REFER TO DWG E-501 FOR LIGHTING FIXTURE SCHEDULE.
2. LOW VOLTAGE LIGHTING CONTROL SWITCH ON WALL. nLIGHT nPODM 4 CHANNEL ON/OFF, OR APPROVED EQUAL. CHANNEL 1 SHALL TURN ON/OFF ALL LIGHTS IN THE BUILDING, CHANNELS 2, 3, & 4 SHALL TURN ON/OFF ZONES a, b, c INDIVIDUALLY.
3. EXTERIOR LIGHTING FIXTURES SHALL BE CONTROLLED VIA REMOTE PHOTOCELL AND TIMER.
4. ALL INTERIOR 'A' FIXTURES SHALL TURN ON WITH ACTIVATION OF ANY ONE SENSOR, AND REMAIN ON FOR THE PROGRAMMED DURATION OR AS LONG AS MOTION IS DETECTED. CONFIRM PROGRAMMED DURATION WITH COUNTY.
5. ALL 'A' FIXTURES SHALL BE MOUNTED AT MINIMUM OF 15' AFF, AT LOW ROOF SIDE, THEN FOLLOW SLOPE OF ROOF. COORDINATE MOUNTING REQUIREMENTS AND FINAL HEIGHTS WITH ARCHITECT AND OTHER TRADES.
6. COORDINATE EXACT FIXTURE LOCATIONS PER ARCHITECTS CEILING PLAN.

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OLA P/N: NDCA0012

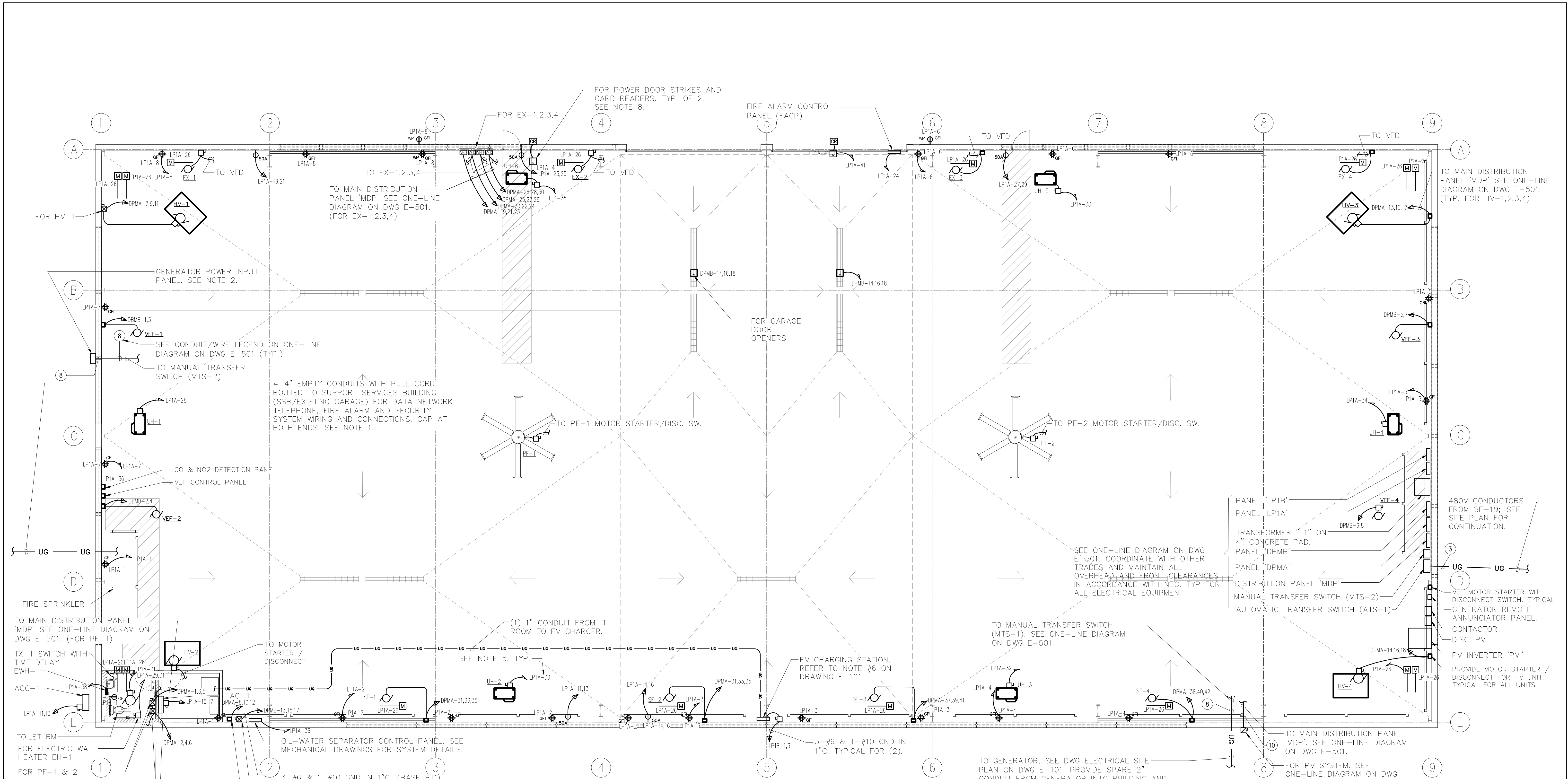
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CONTRACTOR		PROJECT COORDINATOR	
NAME	NAME	SIGNATURE	SIGNATURE
SIGNATURE	SIGNATURE	DATE	DATE
TITLE	TITLE	DATE	DATE

**WESTCHESTER COUNTY, NEW YORK**  
**DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION**  
DIVISION OF ENGINEERING  
NEW EQUIPMENT STORAGE BUILDING  
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
VALHALLA CAMPUS, VALHALLA, NEW YORK  
ELECTRICAL LIGHTING PLAN

CONTRACT NUMBER	SHEET NUMBER
17-521	E-201
SHEET NO. 45 OF 53	
SCALE: AS SHOWN DATE: 11/16/2021	
DPW FILE NO.	REV. NO.
38-47-E-727-0	0



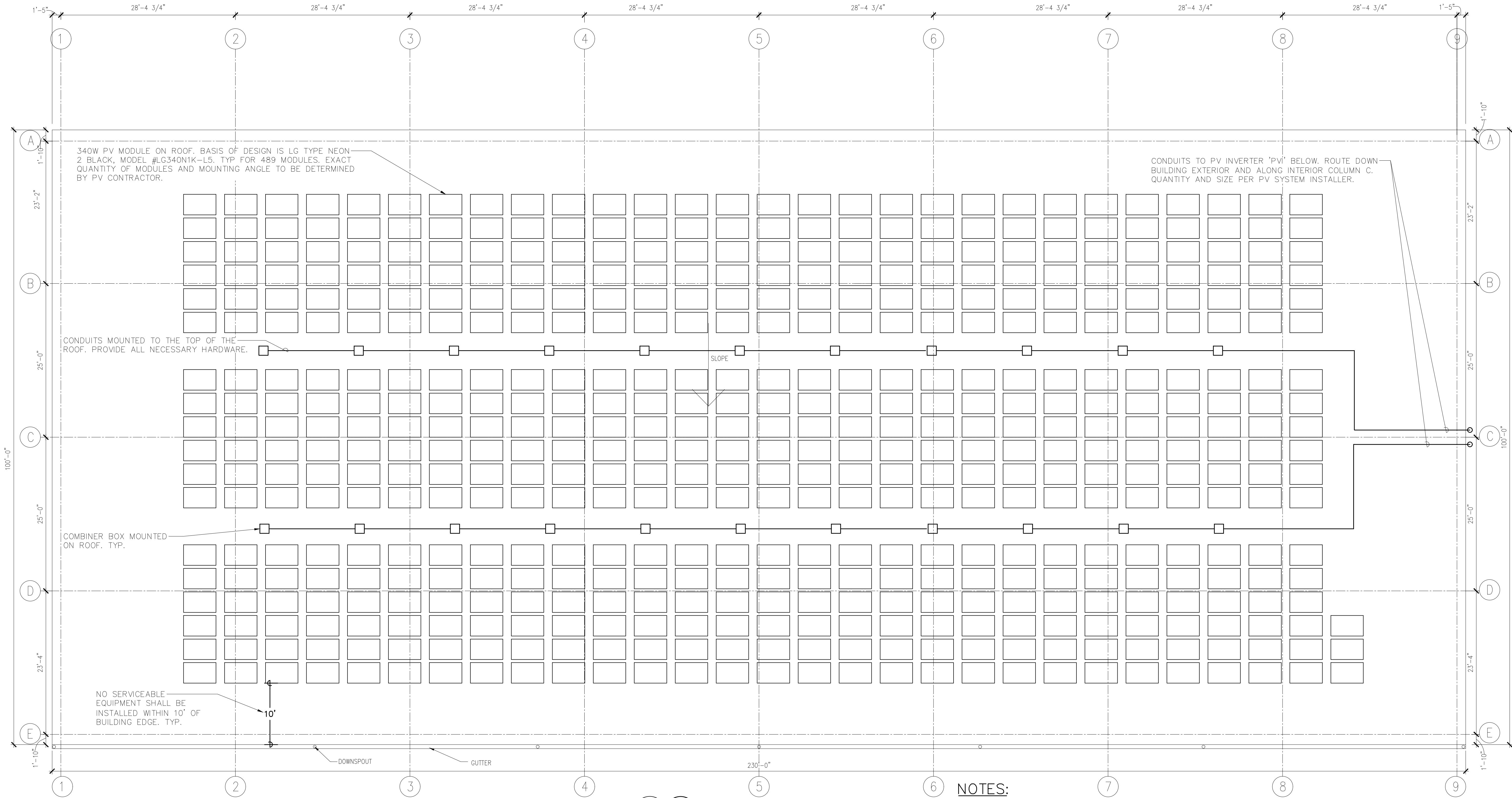


- NOTES:**
- ALL DATA AND COMMUNICATION WIRE PULLS AND CONNECTIONS SHALL BE BY OTHERS. ALL SITE WORK BY OTHERS. COORDINATE ROUTING AND PENETRATIONS INTO EXISTING SUPPORT SERVICES BUILDING WITH OWNER AND GENERAL CONTRACTOR IN FIELD. SEE CIVIL DRAWINGS FOR ADDITIONAL DETAILS.
  - POWER INPUT PANEL FOR PORTABLE GENERATOR CONNECTION SHALL BE LEX PowerGATE 400A, 480V POWER INPUT PANEL MODEL NUMBER PIP400-C5M-3F-BOY.
  - SEE ELECTRICAL ONE-LINE DIAGRAM ON DWG E-501.
  - ELECTRICAL SERVICE & PV SYSTEM CONDUIT PENETRATIONS INTO BUILDING SHALL BE MADE THROUGH FOUNDATION WALL AND SHALL NOT PENETRATE METAL BUILDING WALL.
  - CIRCUIT DESIGNATION LP1 REFERS TO PANEL LP1A OR LP1B BASED ON CIRCUIT NUMBER. LP1A IS CIRCUITS 1 THRU 42, AND LP1B IS CIRCUITS 43 THRU 84.
  - REFER TO MECHANICAL PLANS FOR MOTORIZED DAMPER SEQUENCE OF OPERATIONS AND WIRING REQUIREMENTS.
  - ALL CONDUITS & WIRING SHALL BE RUN VERTICALLY AT COLUMNS OR WALL SECTIONS WITHOUT WINDOWS.
  - CARD READERS AND SECURITY ITEMS AND EQUIPMENT SHALL BE COUNTY SECURITY CONTRACTOR UTI.
  - ADD ALTERNATE #3: ELECTRICAL CONTRACTOR SHALL INCLUDE THE PURCHASE OF THE INGERSOLL RAND COMPRESSOR MODEL #UP6-15cTAS-150.

**ELECTRICAL POWER & COMMUNICATION PLAN**  
SCALE: 1/8" = 1'-0"  
NORTH

<div>DCAK · MSA</div> <div>ARCHITECTURE AND ENGINEERING</div> <div>53 HUDSON AVENUE</div> <div>NYACK, NEW YORK 10960</div> <div>www.DCAK-MSA.com</div> <div>Email: info@DCAK-MSA.com</div> <div>Tel 845-353-1300 Fax 845-353-1614</div>	<div>RCM Technologies USA, Inc.</div> <div>Consulting Engineers</div> <div>99 Bauer Drive</div> <div>Suite 101</div> <div>Oakland, NJ 07436</div> <div>TEL:(201) 249-8700</div> <div>EMAIL:bruce.goldman@rcmt.com</div>	<div><div>STATE OF NEW YORK</div><div>PATRICK F. LYNCH</div><div></div><div>NEW YORK PROFESSIONAL ENGINEER</div></div>	<div><div>OLA</div><div>CONSULTING ENGINEERS</div></div> <div>OLA Consulting Engineers</div> <div>50 Broadway, Hawthorne,</div> <div>New York 10532</div> <div>914.747.2800</div> <div>8 West 38th Street, New</div> <div>York, NY 10018</div> <div>646.849.4110</div> <div>olace.com</div> <div>OLA P/N: NDCA0012</div>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				</
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SYSTEM CRITERIA:

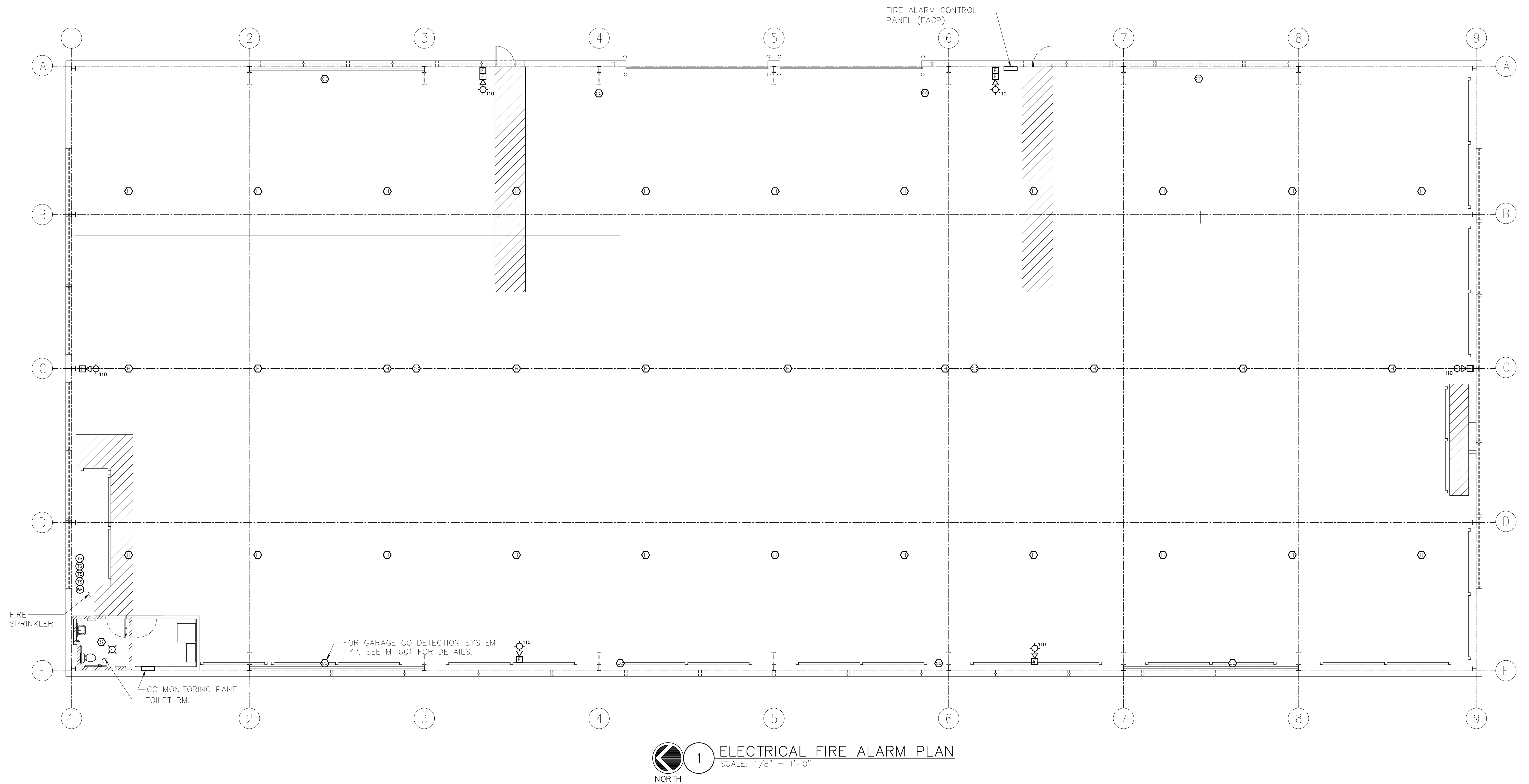
BASE DESIGN:  
THE PHOTOVOLTAIC SYSTEM SHALL BE A 166.3KW (340W x 489-PANELS) MINIMUM SYSTEM WITH PLUS OR MINUS THREE PERCENT (±3%) TOLERANCE. THE PHOTOVOLTAIC SYSTEM SHALL HAVE A MINIMUM ESTIMATED ANNUAL PRODUCTION OF 189,700KWH IN ACCORDANCE WITH THE REQUIREMENTS OF NYSEKDA'S AGREEMENT, REFER TO SPECIFICATION FOR MORE INFORMATION.

**1** ELECTRICAL ROOF PLAN  
SCALE: 1/8" = 1'-0"

NOTES:

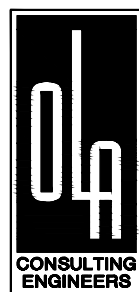
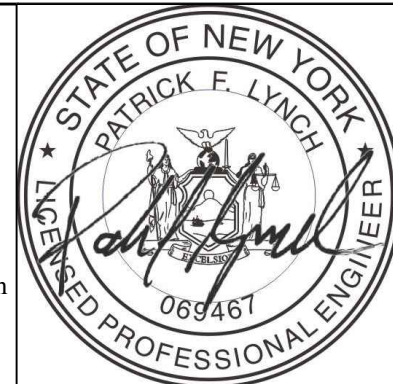
- 1.) COMBINER BOX AND EQUIPMENT LOCATIONS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR SHALL PROVIDE FINAL QUANTITIES AND LOCATIONS WITHIN FINAL DESIGN SUBMITTAL.
- 2.) AS NOTED, ALL CONDUIT AND WIRING SHALL BE ROUTED AS SHOWN TO MINIMIZE IMPACT ON ROOF ACCESSIBILITY. FINAL CONDUIT ROUTING SHOP DRAWING SHALL BE SUBMITTED AND APPROVED PRIOR TO CONSTRUCTION.
- 3.) ALL EXTERIOR CONDUITS, FITTINGS, BOXES AND ASSOCIATED MOUNTING HARDWARE SHALL BE PAINTED TO MATCH THE SURFACE TO WHICH THEY ARE MOUNTED.





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OLA P/N: NDCA0012

REVISION NUMBER	DATE	MADE BY	APP'D BY	REVISION

RECORD DRAWING CERTIFICATION			
<input type="checkbox"/> AS BUILT — CHANGES AS NOTED			
<input type="checkbox"/> AS BUILT — NO CHANGES			
CONTRACTOR		PROJECT COORDINATOR	
NAME	NAME	NAME	NAME
SIGNATURE	SIGNATURE	SIGNATURE	SIGNATURE
TITLE	TITLE	TITLE	TITLE
DATE	DATE	DATE	DATE

WESTCHESTER COUNTY, NEW YORK  
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION  
DIVISION OF ENGINEERING  
NEW EQUIPMENT STORAGE BUILDING  
RICHARD A. FLYNN, SR. FIRE TRAINING CENTER  
VALHALLA CAMPUS, VALHALLA, NEW YORK  
FIRE ALARM PLAN

CONTRACT NUMBER 17-521	SHEET NUMBER E-401
SHEET NO. 48	OF 53
SCALE: AS SHOWN DATE: 11/16/2021	REV. NO. 0
DPW FILE NO. 38-47-E-730-0	





- ① EXISTING CONDUIT AND WIRE
- ② NOT USED
- ③ 4-#500MCM & 1-#3 GND IN 4" C. & 1-4" SPARE CONDUIT WITH PULLSTRING.
- ④ 4-#4/0 & 1-#4 GND IN 2-1/2" C.
- ⑤ 4-#8 & 1-#10 GND IN 3/4" C.
- ⑥ 3-#1 & 1-#6 GND IN 1-1/2" C.
- ⑦ 4-#250MCM & 1-#2 GND IN 2-1/2" C.
- ⑧ 4-#1/0 & 1-#6 GND IN 2" C.
- ⑨ 4-#12 & 1-#12 GND IN 3/4" C.
- ⑩ 3" C. FOR FUTURE PV CONNECTION.

NOTES:


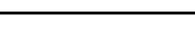
1. PROVIDE CIRCUIT BREAKER IN EXISTING SPARE CUBICAL. EXISTING SWITCHGEAR IS SQUARE D POWER-ZONE III PZ SWITCHGEAR. PROVIDE 400A TRIP UNIT IN CIRCUIT BREAKER FRAME TYPE DS-II, SIZED AS REQUIRED TO FIT IN EXISTING SWITCHGEAR. CONTACT SQUARE D FIELD SERVICES ENGINEER PETE DAVIS AT 631-255-6629.
2. POWER INPUT PANEL FOR PORTABLE GENERATOR CONNECTION SHALL BE LEX PowerGATE 400A, 480V POWER INPUT PANEL MODEL NUMBER PIP400-CSM-3F-BOY.
3. ALL CIRCUIT BREAKERS ARE 3 POLE U.O.N.

1 ELECTRICAL ONE-LINE DIAGRAM  
NOT TO SCALE





1. THIS IS NOT A POINT-TO-POINT WIRING DIAGRAM. PRIOR TO STARTING ANY WORK, A WORKING POINT-TO-POINT WIRING DIAGRAM SHALL BE OBTAINED FROM FIRE ALARM SYSTEM VENDOR AND PERFORM ALL WORK IN ACCORDANCE WITH THAT DIAGRAM.
2. ELECTRICAL CONTRACTOR SHALL INCLUDE IN THE BASE BID ALL 120V CIRCUITS THAT ARE REQUIRED TO SUPPORT THE OPERATION OF THE FIRE ALARM SYSTEM. COORDINATE REQUIREMENTS WITH THE FIRE ALARM VENDOR.
3. QUANTITY OF STROBE BOOSTER POWER SUPPLY PANELS AND ASSOCIATED 120V CIRCUITS SHALL BE COORDINATED WITH SELECTED FIRE ALARM SYSTEM MANUFACTURER AND/OR FIRE ALARM VENDOR.
4. PROVIDE ALL NECESSARY WIRING, MODULES, COMPONENTS, EXTENDER CABINET, AND PROGRAMMING REQUIRED TO CONNECT NEW DEVICES TO EXISTING SYSTEM.
5. PROVIDE ALL NECESSARY HARDWARE AND PROGRAMMING TO PROVIDE THE CLIENT WITH 20% SPARE CAPACITY ON ALL INITIATING AND INDICATING CIRCUITS.
6. PROVIDE AS PART OF THE BASE CONTRACT ALL LABOR AND MATERIALS TO INSTALL FIFTEEN (15) ADDITIONAL FIRE ALARM DEVICES DURING CONSTRUCTION. THE FIFTEEN (15) FIRE ALARM DEVICES CAN BE BUT NOT LIMITED TO SMOKE DETECTOR, HEAT DETECTOR, DOOR HOLDER, DUCT DETECTOR, FAN SHUTDOWN, TAMPER SWITCHES, FLOW SWITCHES, ETC. INCLUDE ALL LABOR AND MATERIALS INCLUDING WIRE, BOXES, CONDUIT, TERMINATIONS, HARDWARE, SOFTWARE, PROGRAMMING AND TESTING.
7. ALL VISUAL ALARM DEVICES SHALL BE ADA COMPLIANT.
8. MAKE CONNECTIONS TO SIDES OR BOTTOM OF FACP ONLY.
9. ELECTRICAL CONTRACTOR TO PROVIDE A RELAY FOR EACH SMOKE DAMPER/COMBINATION FIRE SMOKE DAMPER. RELAYS ARE NOT SHOWN ON PLANS FOR CLARITY.
10. PROVIDE REMOTE LED INDICATORS FOR ALL CONCEALED FIRE ALARM DEVICES SUCH AS DUCT SMOKE DETECTORS, ABOVE CEILING SMOKE DETECTORS, ELEVATOR SHAFT DETECTORS, MONITORING AND CONTROL MODULES, ETC. LED INDICATORS FOR DEVICES MOUNTED ABOVE DROP CEILINGS SHALL BE MOUNTED BELOW ASSOCIATED DEVICES. LABEL INDICATORS TO INDICATE DEVICE SERVED.
11. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE THE ENGINEER WITH AN ACCURATE AS-BUILT FIRE ALARM DRAWING, SHOWING INSTALLED DEVICE LOCATIONS AND A COMPLETE INTERCONNECTION WIRING DIAGRAM OF THE SYSTEM. THE DRAWINGS SHALL BE PROVIDED IN AUTOCAD FORMAT AND HARD COPIES. AS-BUILT DRAWINGS MUST BE PROVIDED TO THE ENGINEER BEFORE PROJECT CAN BE CLOSEOUT.
12. CONTRACTOR TO PROVIDE SMOKE DETECTOR(S) IN ALL LOCATIONS CONTAINING FIRE ALARM CONTROL PANELS, DATA GATHERING PANELS, BOOSTER POWER SUPPLIES, OR ANY OTHER FIRE ALARM SYSTEM PANEL, WHETHER SHOWN ON PLANS OR NOT.

<b>DCAK · MSA</b> ARCHITECTURE AND ENGINEERING 53 HUDSON AVENUE NYACK, NEW YORK 10960 www.DCAK-MSA.com Email: info@DCAK-MSA.com Tel 845-353-1300 Fax 845-353-1614	RCM Technologies USA, Inc. Consulting Engineers 99 Bauer Drive Suite 101 Oakland, NJ 07436 TEL: (201) 249-8700 EMAIL: bruce.goldman@rcmt.com	  OLA Consulting Engineers 50 Broadway, Hawthorne, New York 10532 914.747.2800 8 West 38th Street, New York, NY 10018 646.849.4110 ola@ola.com OLA P/N: NDCA0012					RECORD DRAWING CERTIFICATION <input type="checkbox"/> AS BUILT – CHANGES AS NOTED <input type="checkbox"/> AS BUILT – NO CHANGES		WESTCHESTER COUNTY, NEW YORK DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION DIVISION OF ENGINEERING		CONTRACT NUMBER 17-521	SHEET NUMBER E-502
							CONTRACTOR NAME _____ SIGNATURE _____ TITLE _____ DATE _____		PROJECT COORDINATOR NAME _____ SIGNATURE _____ TITLE _____ DATE _____		NEW EQUIPMENT STORAGE BUILDING RICHARD A. FLYNN, SR. FIRE TRAINING CENTER VALHALLA CAMPUS, VALHALLA, NEW YORK FIRE ALARM RISER DIAGRAM	
REVISION NUMBER    DATE    MADE BY    APP'D BY    REVISION			REVISION NUMBER    DATE    MADE BY    APP'D BY    REVISION		REVISION NUMBER    DATE    MADE BY    APP'D BY    REVISION		REVISION NUMBER    DATE    MADE BY    APP'D BY    REVISION		REVISION NUMBER    DATE    MADE BY    APP'D BY    REVISION		DPW FILE NO. 38-47-E-732-0	REV. NO. 0



LIGHTING FIXTURE SCHEDULE							
FIXTURE DESIGNATION	MANUFACTURER	CATALOG NUMBER	LAMPS	VOLTS	INPUT WATTS	MOUNTING	REMARKS
A	RAB LIGHTING	ARBAY2-160N EM=E2	LED 22000LM 4000K	120	160	PENDANT	1'x2' HIGH-BAY LED LIGHTING FIXTURE. PROVIDE INTEGRAL BATTERY BALLAST WHERE DENOTED 'EM'
B	RAB LIGHTING	SLIM37N/BL	LED	120	37	SURFACE	LED WALLPACKS OUTDOOR LIGHTING FIXTURE.
C	RAB LIGHTING	EZPANHE2'X2'23W/E2	LED	120	24.2	RECESSED	2'X2' RECESSED FIXTURE WITH INTEGRAL BATTERY BALLAST. FIXTURE TYPE BY ARCHITECT.
E	EATON SURE-LITES	SELD-D-W 60-SD-HAZ	LED (300 LUMEN)	120	5	SURFACE	TWO HEADS EMERGENCY LIGHTING
X1	EATON SURE-LITES	APC7RSQ	LED	120	3.7	SURFACE	EXIT LIGHTING WITH TWO HEADS EMERGENCY LIGHTING

- NOTES:**
1. VERIFY ALL FIXTURE CATALOG NUMBERS FOR INTENDED APPLICATIONS WITH REQUIRED ACCESSORIES.
  2. ALL BALLASTS IN FIXTURES LOCATED OUTDOORS SHALL BE ZERO DEGREE RATED STARTING TEMPERATURE. REFER TO DRAWINGS FOR LOCATION OF FIXTURES.
  3. LIGHT FIXTURES INDICATED AS EMERGENCY (EM) ON DRAWINGS SHALL CONTAIN AN EMERGENCY BATTERY BACK-UP BALLAST INTERNAL TO FIXTURE WITH A VISUAL INDICATING CHARGE LAMP AND TEST SWITCH. EACH BATTERY PACK SHALL BE CONNECTED SO THAT THE FIXTURE CAN BE SWITCHED UNDER NORMAL CONDITIONS AND IN THE EVENT OF A POWER OUTAGE, THE BATTERY PACK AND LAMPS SHALL AUTOMATICALLY ILLUMINATE FOR 90 MINUTES WITH A 1200 LUMEN OUTPUT (TOTAL FROM FIXTURE). MINIMUM.
  4. ALL EXIT AND EMERGENCY FIXTURES SHALL BE FED FROM UNSWITCHED LEG OF ASSOCIATED LOCAL LIGHTING CIRCUITS.
  5. IN THE EVENT THE CONTRACTOR CHOOSES TO SUBSTITUTE LIGHT FIXTURES FOR THOSE THAT ARE SPECIFIED ON THE LIGHT FIXTURE SCHEDULE, THE CONTRACTOR SHALL SUBMIT POINT-TO-POINT PHOTOMETRIC CALCULATIONS FOR ALL AREAS WHERE THE SUBSTITUTED FIXTURES ARE INDICATED TO BE INSTALLED ON THE DRAWINGS. THESE CALCULATIONS SHALL BE SUBMITTED ALONG WITH THE LIGHT FIXTURE SHOP DRAWINGS.

LP1A PANEL SCHEDULE							
MAIN RATING: 250A		MAIN CB: 250A		KAIC RATING: 44KAIC			
VOLTAGE: 208Y/120V		PHASE: 3		WIRE: 4		MOUNTING: SURFACE	
CIRC. NO.	LOAD DESCRIPTION	BKR. AMPS	NO. OF POLES	NO. OF POLES	BKR. AMPS	LOAD DESCRIPTION	CIRC. NO.
1	RECEPTACLE	20	1	1	20	RECEPTACLE	2
3	RECEPTACLE	20	1	1	20	RECEPTACLE	4
5	RECEPTACLE	20	1	1	20	RECEPTACLE	6
7	LIGHTING	20	1	1	20	LIGHTING	8
9	LIGHTING	20	1	1	20	LIGHTING	10
11	ACC-1	20	2	1	20	LIGHTING	12
13				1	20	SPARE	14
15	AC-1	15	2	1	20	SPARE	16
17				1	20	GENERATOR	18
19	SPARE	20	1	1	20	GENERATOR	20
21	SPARE	20	1	1	20	GENERATOR	22
23	SPARE	20	1	1	20	FIRE ALARM CONTROL PANEL (FACP)	24
25	SPARE	20	1	1	20	MOTORIZED DAMPERS	26
27	TX-1	20	1	1	20	UH-1	28
29	EH-1	20	2	1	20	UH-2	30
31				1	20	UH-3	32
33	UH-5	20	1	1	20	UH-4	34
35	UH-6	20	1	1	20	OWS CONTROL PANEL & CO DETECTION PANEL	36
37	SPARE	20	1	1	40	EWH-1	38
39	SPARE	20	1	1	20	SPARE	40
41	POWER DOOR STRIKES & CARD READERS	20	1	1	20	FACP	42

FEED THROUGH LUGS TO LP1B	
LK - PROVIDE LOCKING TABS ON C.B.; GF - GFI TYPE C.B.; AF - ARC FAULT TYPE C.B.; ST - SHUNT TRIP C.B.	
NOTES: -	

DPMA PANEL SCHEDULE							
MAIN RATING: <u>225A</u>		MAIN CB: <u>225A</u>		KAIC RATING: <u>22KAIC</u>			
VOLTAGE: <u>480Y/277V</u>		PHASE: <u>3</u>		WIRE: <u>4</u>		MOUNTING: <u>SURFACE</u>	
CIRC. NO.	LOAD DESCRIPTION	BKR. AMPS	NO. OF POLES	NO. OF POLES	BKR. AMPS	LOAD DESCRIPTION	CIRC. NO.
1	PF-1	15	3	3	15	PF-2	2
3							4
5							6
7	HV-1	20	3	3	20	HV-2	8
9							10
11							12
13	HV-3	20	3	3	20	HV-4	14
15							16
17							18
19	EX-1	20	3	3	20	EX-2	20
21							22
23							24
25	EX-3	20	3	3	20	EX-4	26
27							28
29							30
31	SF-1	20	3	3	20	SF-2	32
33							34
35							36
37	SF-3	20	3	3	20	SF-4	38
39							40
41							42

FEED THROUGH LUGS TO DPMB	
LK - PROVIDE LOCKING TABS ON C.B.; GF - GFI TYPE C.B.; AF - ARC FAULT TYPE C.B.; ST - SHUNT TRIP C.B.	
NOTES: -	

LP1B PANEL SCHEDULE							
MAIN RATING: <u>250A</u>				MAIN CB: <u>MLO</u>		KAIC RATING: <u>44KAIC</u>	
VOLTAGE: <u>208Y/120V</u>				PHASE: <u>3</u>		WIRE: <u>4</u> MOUNTING: <u>SURFACE</u>	
CIRC. NO.	LOAD DESCRIPTION	BKR. AMPS	NO. OF POLES	NO. OF POLES	BKR. AMPS	LOAD DESCRIPTION	CIRC. NO.
1	208V VEHICLE CHARGING RECEPTACLE	40	2	2	40	208V VEHICLE CHARGING RECEPTACLE	2
3							4
5							6
7	208V VEHICLE CHARGING RECEPTACLE	40	2	2	50	SPARE	8
9							10
11							12
13	208V VEHICLE CHARGING RECEPTACLE	40	2	2	50	SPARE	14
15							16
17							18
19	SPARE	20	1	2	50	SPARE	20
21							22
23							24
25	SPARE	20	1	1	20	SPACE	26
27							28
29							30
31	SPARE	20	1	1	20	SPACE	32
33							34
35							36
37	SPARE	20	1	1	20	SPACE	38
39							40
41							42

LK - PROVIDE LOCKING TABS ON C.B.; GF - GFI TYPE C.B.; AF - ARC FAULT TYPE C.B.; ST - SHUNT TRIP C.B.	
NOTES: -	

DPMB PANEL SCHEDULE							
MAIN RATING: <u>225A</u>				MAIN CB: <u>MLO</u>		KAIC RATING: <u>22KAIC</u>	
VOLTAGE: <u>480Y/277V</u>				PHASE: <u>3</u>		WIRE: <u>4</u> MOUNTING: <u>SURFACE</u>	
CIRC. NO.	LOAD DESCRIPTION	BKR. AMPS	NO. OF POLES	NO. OF POLES	BKR. AMPS	LOAD DESCRIPTION	CIRC. NO.
1	VEHICLE EXHAUST FAN 1	20	2	2	20	VEHICLE EXHAUST FAN 2	2
3							4
5	VEHICLE EXHAUST FAN 3	20	2	2	20	VEHICLE EXHAUST FAN 4	6
7							8
9	SPARE	20	2	2	20	SPARE	10
11							12
13	AIR COMPRESSOR	50	3	3	20	GARAGE DOOR OPENERS	14
15							16
17							18
19	SPARE	20	3	3	20	SPARE	20
21							22
23							24
25	SPARE	20	3	3	20	SPARE	26
27							28
29							30
31	SPARE	20	3	3	20	SPARE	32
33							34
35							36
37	SPARE	20	3	3	20	SPARE	38
39							40
41							42
LUG: PROVIDE LOCKING TIGHTENING TORQUE: 25-35 FT-LBS. C.B. 10-15 LBS. FAN LUG TYPE: C.B.							

LK - PROVIDE LOCKING TABS ON C.B.; GF - GFI TYPE C.B.; AF - ARC FAULT TYPE C.B.; ST - SHUNT TRIP C.B.	
NOTES: -	

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1.) DESIGN TYPICAL FOR MOUNTING SINGLE PIECES OF WALL MOUNTED POWER EQUIPMENT (AUTOMATIC TRANSFER SWITCHES, DISCONNECT SWITCHES, PANELBOARDS, ETC.).



1. CONCRETE SHALL BE 3000 P.S.I. @ 28 DAYS, OR AS SPECIFIED.
2. PROVIDE REINFORCING RODS ON TOP OF DUCTS WHEN CROSSING OR PLACED IN ROADWAYS.
3. MINIMUM COVER TO TOP OF ENVELOP SHALL BE 24".
4. NON-FERROUS TIE WIRES TO BE IMBEDDED IN DUCT BED CONCRETE.
5. PROVIDE MINIMUM 6" SPACE BETWEEN POWER AND SIGNAL DUCTS. INCREASE SIZE AS REQUIRED.

6 DUCT BANK DETAIL

SCALE: NONE



## 5 TYPICAL CONDUIT SUPPORT ON VERTICAL GIRT

SCALE: 1" = 1'-0"



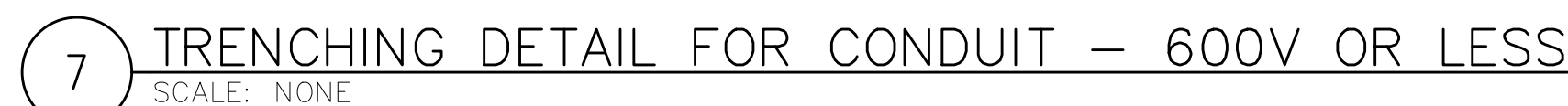
SCALE: NONE



SCALE: NONE

- ① 4-#12 AWG. START CIRCUIT FROM AUTOMATIC TRANSFER SWITCH TO GENERATOR CONTROL PANEL.
- ② TWISTED SHIELDED PAIR - BELDEN #9841. COMMUNICATIONS CIRCUIT FROM GENERATOR CONTROL PANEL TO REMOTE ANNUNCIATOR.
- ③ 2-#12 AWG. POWER FROM GENERATOR SET BATTERY TO REMOTE ANNUNCIATOR.
- ④ POWER CONDUIT FOR BRANCH CIRCUITS TO GENERATOR SET. SEE CIRCUIT INFORMATION FOR ITEM 5 BELOW.
- ⑤ (1) DEDICATED 20A CKT FROM LOAD CENTER 'LP1'

1. WRING ON THIS DETAIL SHOWN FOR INFORMATIONAL PURPOSES ONLY. COORDINATE EXACT SIZE, QUANTITY AND TYPE OF WIRING WITH MANUFACTURER'S SUGGESTION FOR EQUIPMENT PURCHASED.
2. CONDUITS SHALL BE 1" U.O.N.
3. SEE ONE-LINE DIAGRAM FOR POWER OUTPUT FEEDERS INFORMATION.
4. SEE DWG E3.1 FOR EQUIPMENT LOCATIONS.



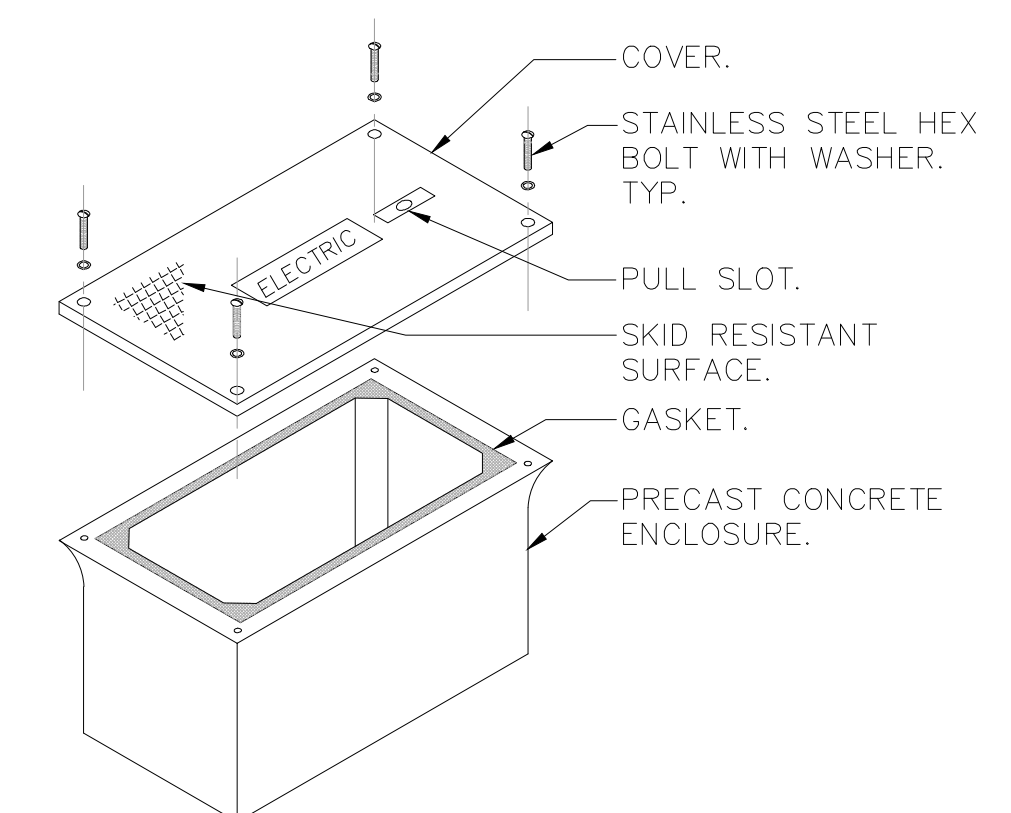
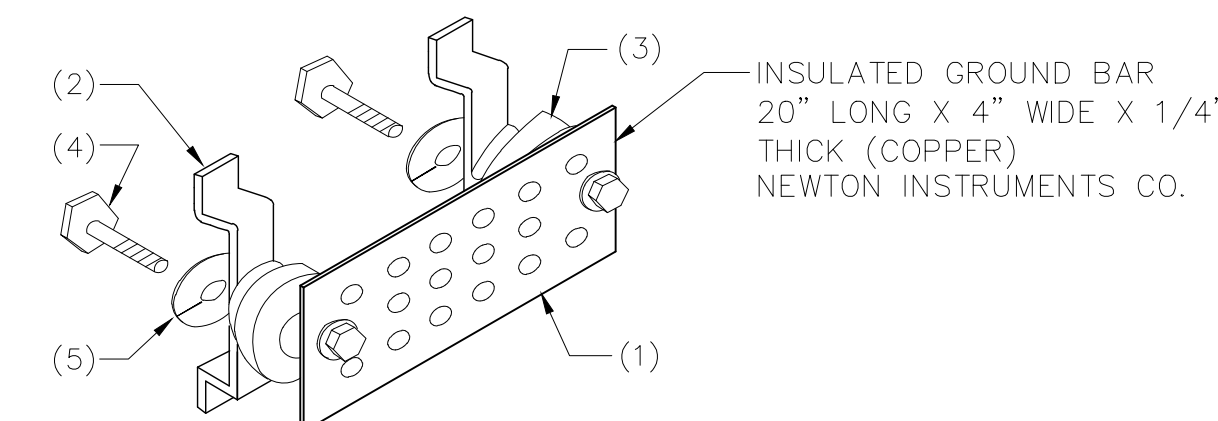
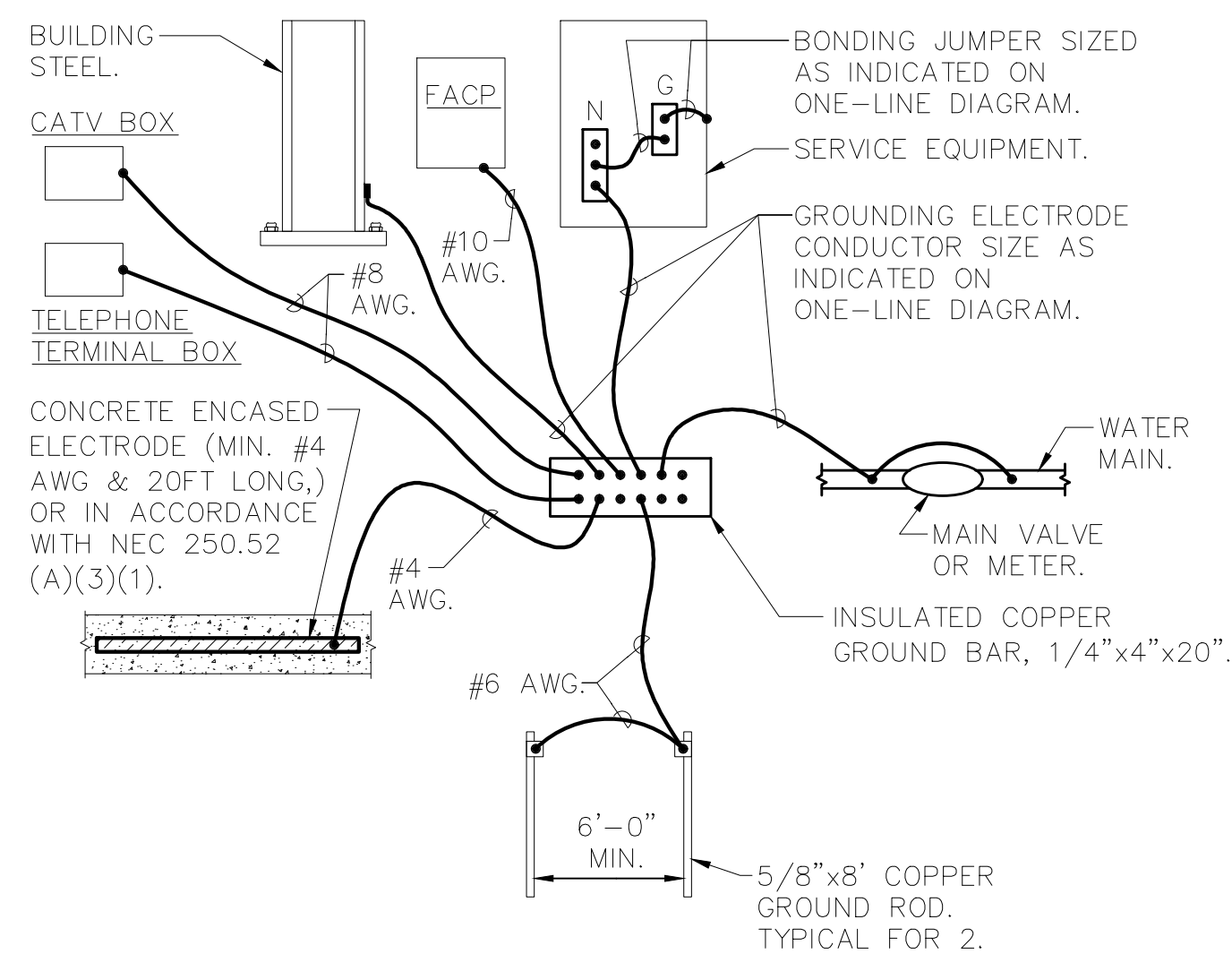
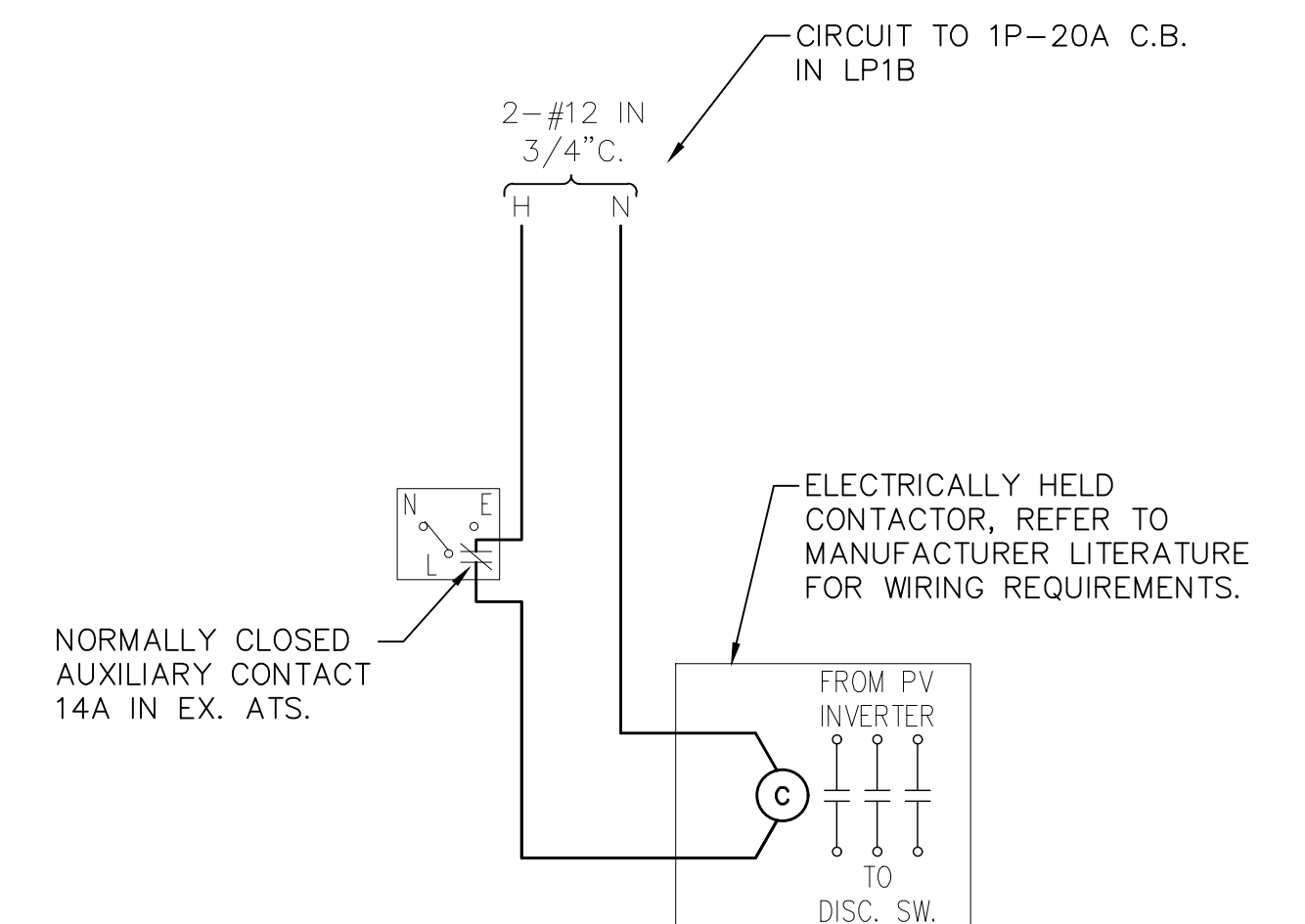
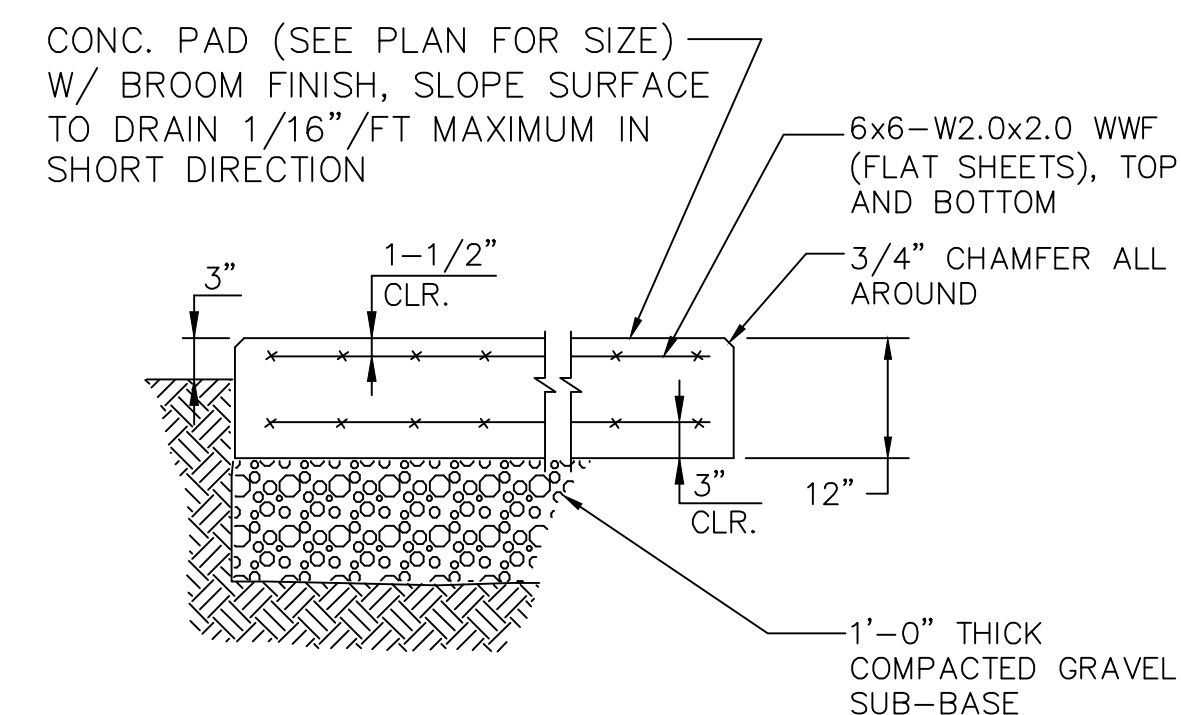
NOTES:

1. DETAIL SHOWN FOR INFORMATION PURPOSES. SAME CONCEPT SHALL ALSO APPLY FOR SINGLE CONDUITS.
2. SAND MAY BE OMITTED FOR INSTALLATIONS WHERE COVER REQUIREMENTS ARE 6" OR LESS.



SCALE: NONE





NOTES:

1. HAND HOLE SHALL BE HAVE OPEN BOTTOM AND RATED FOR VEHICULAR TRAFFIC, H20, AS MANUFACTURED BY QUAZITE OR APPROVED EQUAL. BOX SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. SEE PLAN FOR SIZE.
2. PROVIDE 6" OF GRAVEL BELOW BOX.
3. COVER SHALL BE IMPRINTED WITH "COMMUNICATIONS" FOR FIBER/IT AND "ELECTRIC" FOR POWER.