

DRAWING FILE: N:\PROJECTS\19401-01-Waltham\_Police\_Station\_Renovation\ACAD\Civil\Site\Site.dwg PLOTTED: Jul 14, 2014 - 5:39pm BY: meagan.ogoff  
 REVIEWED BY: CIVIL: INITIAL/DATE ARCH: INITIAL/DATE STRU: INITIAL/DATE PLUM: INITIAL/DATE FIRE: INITIAL/DATE MECH: INITIAL/DATE ELEC: INITIAL/DATE

REVISIONS

Number	Description	Date

**ISSUED FOR BID**

**WALTHAM POLICE STATION RENOVATION**

155 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS

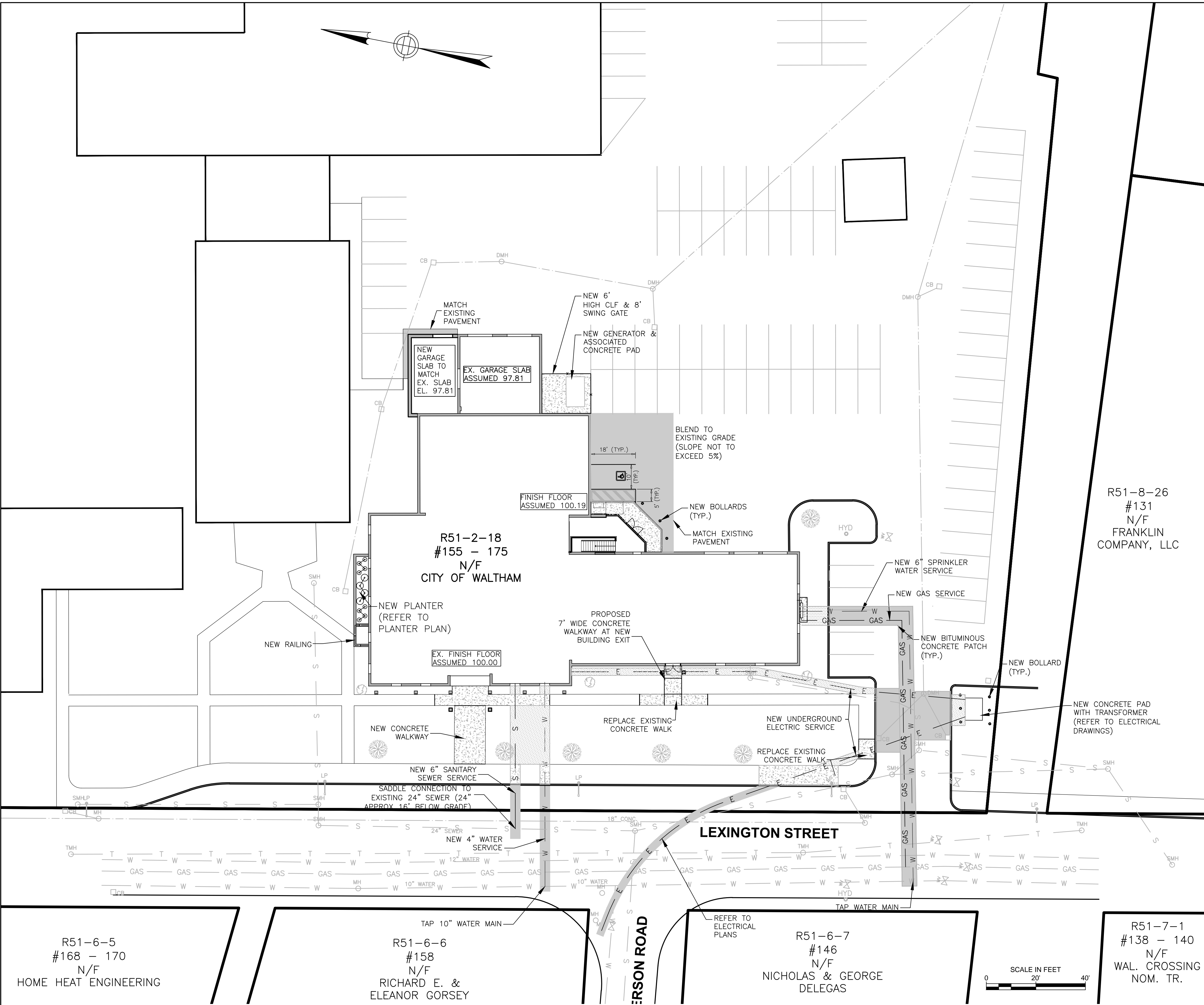
**SITE DEMOLITION PLAN**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: FC  
 DRAWN BY: RED  
 CHECKED BY:  
 DATE: July-Aug. 2016  
 SCALE: AS NOTED

**CD100**



DRAWING FILE: N:\PROJECTS\19401-01-Waltham\_Police\_Station\_Renovation\ACAD\Civil\Site\Site.dwg PLOTTED: Jul 14, 2016 4:53:39pm BY: meagan.ogoff  
 REVIEWED BY: CIVIL: INTD\ADG\GAE STRU: INTD\ADG\GAE ARCH: INTD\ADG\GAE PLUM: INTD\ADG\GAE FIRE: INTD\ADG\GAE MECH: INTD\ADG\GAE ELEC: INTD\ADG\GAE



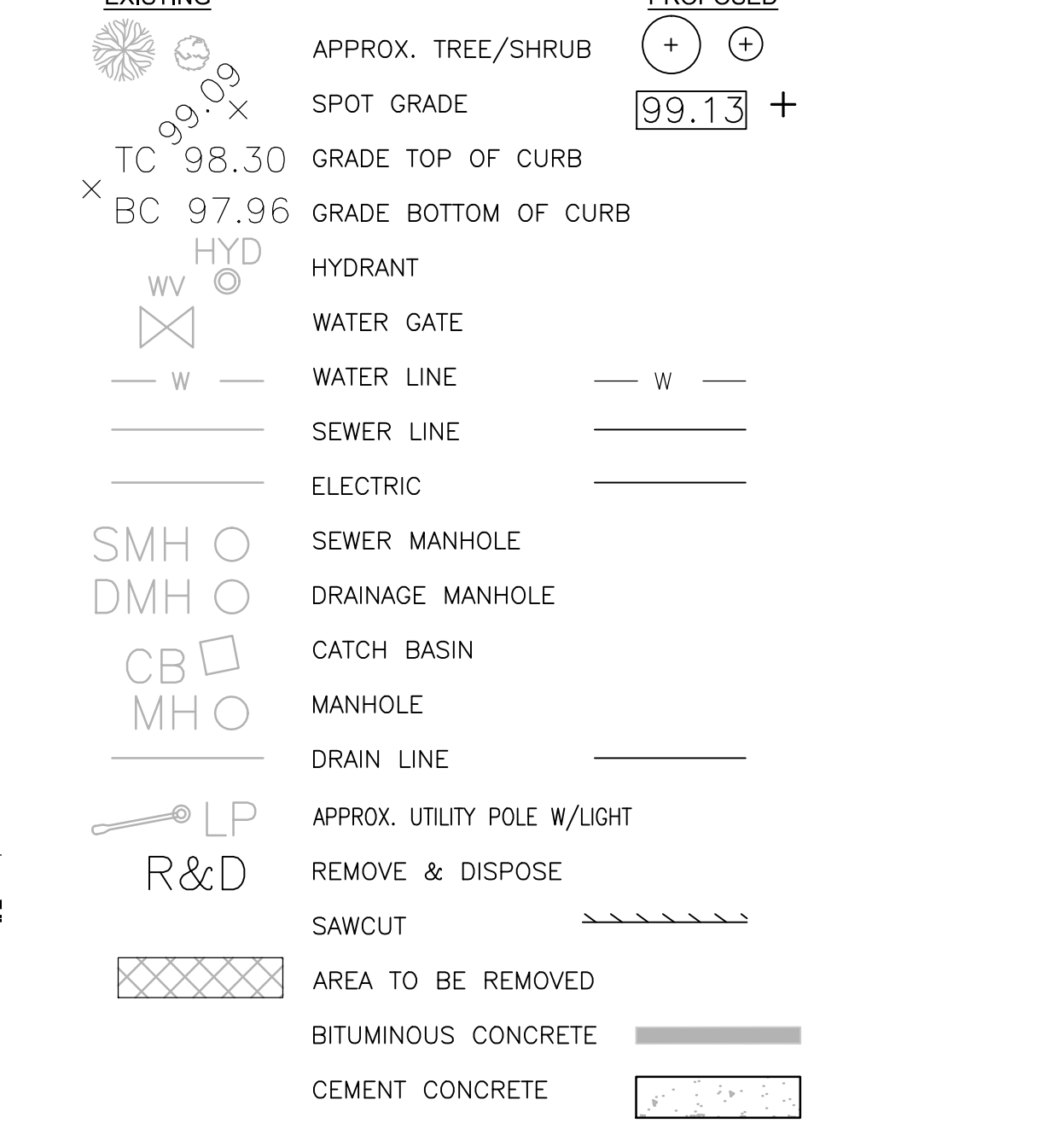
**EROSION & SEDIMENT CONTROL NOTES**

- ALL SEDIMENTS SPILLED, DROPPED, WASHED OR TRACKED ONTO THE PUBLIC RIGHT OF WAY MUST BE CLEANED UP/REMOVED PRIOR TO THE END OF THE WORK DAY.
- EXPOSED AREAS SHALL NOT BE LEFT UNATTENDED OR EXPOSED IN AREAS WHERE WORK IS TO CEASE FOR A PERIOD OF 14 DAYS OR GREATER OR DURING THE INACTIVE WINTER SEASON. AREAS EXPOSED FOR THE DESCRIBED PERIODS SHALL RECEIVE TEMPORARY VEGETATIVE COVER AND BE COMPLETELY COVERED WITH LOOSE HAY MULCH.
- TEMPORARY TREATMENTS SHALL CONSIST OF A HAY, STRAW, OR FIBER MULCH OR PROTECTIVE COVERS SUCH AS A MAT OR FIBER LINING (BURLAP, JUTE, FIBERGLASS NETTING, EXCELSIOR BLANKETS). THEY SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER.
- GRASS AREAS DISTURBED DURING CONSTRUCTION ACTIVITIES WHICH ARE NOT DESIGNATED TO HAVE ASPHALT OR CONCRETE INSTALLED SHALL RECEIVE PERMANENT LOAM AND SEED AS REQUIRED IMMEDIATELY AFTER THE COMPLETION OF CONSTRUCTION ACTIVITIES IN THE AREA.

**GENERAL NOTES**

- EXISTING CONDITIONS INFORMATION WAS COMPILED WITH INFORMATION OBTAINED FROM MASS GIS SUPPLEMENTED BY SITE INVESTIGATION.
- EXISTING SPOT GRADES AND LOCATION OF WATER GATES WERE OBTAINED IN THE FIELD ON JUNE 19, 2014.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF THE LOCATION OF EXISTING UTILITIES. THE CONTRACTOR SHALL CONTACT THE ENGINEER IF CONDITIONS ARE ENCOUNTERED IN THE FIELD WHICH IMPACT OR INTERFERE WITH THE PROPOSED CONSTRUCTION.
- THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS AS DIRECTED BY THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL GIVE NOTICES AND COMPLY WITH ALL PERMITS, LAWS, ORDINANCES, RULES AND REGULATIONS BEARING ON THE CONDUCT OF THE WORK AS DRAWN AND SPECIFIED.
- THE CONTRACTOR'S WORK SHALL BE SUBJECT TO INSPECTION BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
- THE LIMIT OF DISTURBANCE WILL BE KEPT TO A MINIMUM.
- ASPHALT AND CONCRETE REMOVED DURING THE DEMOLITION PROCESS SHALL BE DISPOSED OF OFF SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS AND THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL SATISFY HIMSELF/HERSELF AS TO THE EXTENT, DEPTH, TYPE AND LOCATION OF ALL ASPHALT AREAS, CONCRETE AREAS, WALLS AND UNDERGROUND UTILITIES, ETC. WHICH MAY BE ENCOUNTERED DURING THE DEMOLITION AND/OR CONSTRUCTION ACTIVITIES. INFORMATION ON THE PLANS IS GENERAL AND SHALL NOT RELIEVE THE CONTRACTOR OF FAMILIARIZING HIMSELF/HERSELF WITH THE EXISTING CONDITIONS.
- THE COST INCURRED BY DAMAGE TO ANY UTILITIES, INCLUDING THOSE NOT SHOWN SHALL BE BORNE BY THE CONTRACTOR.
- SAFE ACCESS TO THE BUILDING SHALL BE PROVIDED DURING THE CONSTRUCTION ACTIVITIES.
- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL CONSTRUCTION ACTIVITIES FOLLOW OSHA SAFETY RULES AND GUIDELINES AS APPROPRIATE.
- THE CONTRACTOR SHALL CONTACT DIG SAFE AT 888-DIG-SAFE A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
- GRAVEL AND BITUMINOUS CONCRETE GRADATIONS AS SHOWN ABOVE WERE OBTAINED FROM THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATION FOR HIGHWAYS AND BRIDGES"

**SITE LEGEND**

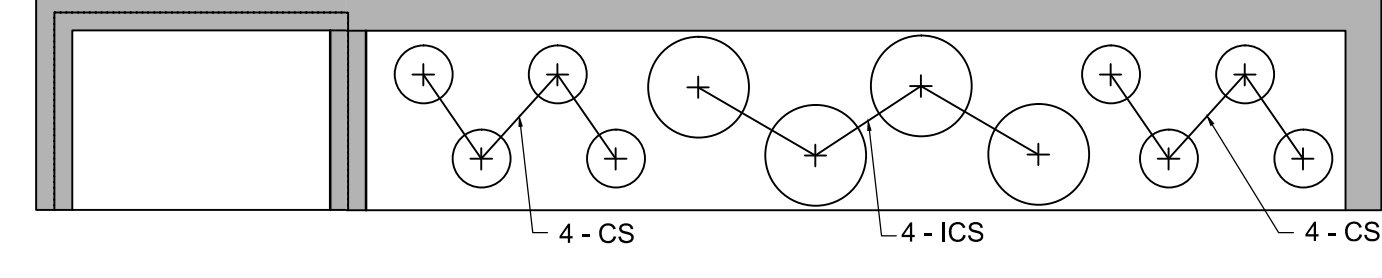


**PLANTING NOTES**

- ALL PLANT MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY "THE AMERICAN STANDARD NURSERY STOCK," PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
- ALL DECIDUOUS SHRUBS SHALL HAVE AT LEAST THE MINIMUM NUMBER OF CANES SPECIFIED IN ANSI Z60.1 (CURRENT RELEASE) FOR THE PARTICULAR NURSERY STOCK.
- FOR SHRUB AND TREE PLANTINGS, THE DEPTH OF PLANT MIX SHALL BE EQUAL TO THE DEPTH OF THE PLANT MATERIAL'S ROOTBALL. ROOTBALL DEPTHS SHALL MEET THE ANSI Z60.1 GUIDELINES (CURRENT RELEASE) FOR NURSERY STOCK.
- ALL PLANTS TO BE APPROVED BY THE PROJECT LANDSCAPE ARCHITECT PRIOR TO ARRIVAL AT THE SITE.
- STAKE LOCATION OF ALL PROPOSED PLANT MATERIAL FOR THE APPROVAL OF THE PROJECT LANDSCAPE ARCHITECT PRIOR TO THE BEGINNING OF PLANTING.

**PLANT LIST**

SYM	QTY.	BOTANICAL NAME	COMMON NAME	COMMENTS
SHRUBS/GROUNDCOVER				
CS	91	CORNUS SERICEA 'KELSEY'	KELSEY'S DWARF REDTWIG DOGWOOD	5 GAL. CONT., 3" O.C.
ICS	9	ILEX CRENATA 'STEEDS'	STEEDS JAPANESE HOLLY	5 GAL. CONT., 3" O.C.



**Architects / Engineers / Planners**  
 211 Congress Street, 11th Floor  
 Boston, Massachusetts 02110  
 TEL: (617) 778-1440  
 www.cdrmaguire.com

**REVISIONS**

Number	Description	Date

**ISSUED FOR BID**

**WALTHAM POLICE STATION RENOVATION**  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**SITE PLAN**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: FC  
 DRAWN BY: RED  
 CHECKED BY:  
 DATE: July-Aug. 2016  
 SCALE: AS NOTED  
 SHEET NUMBER:

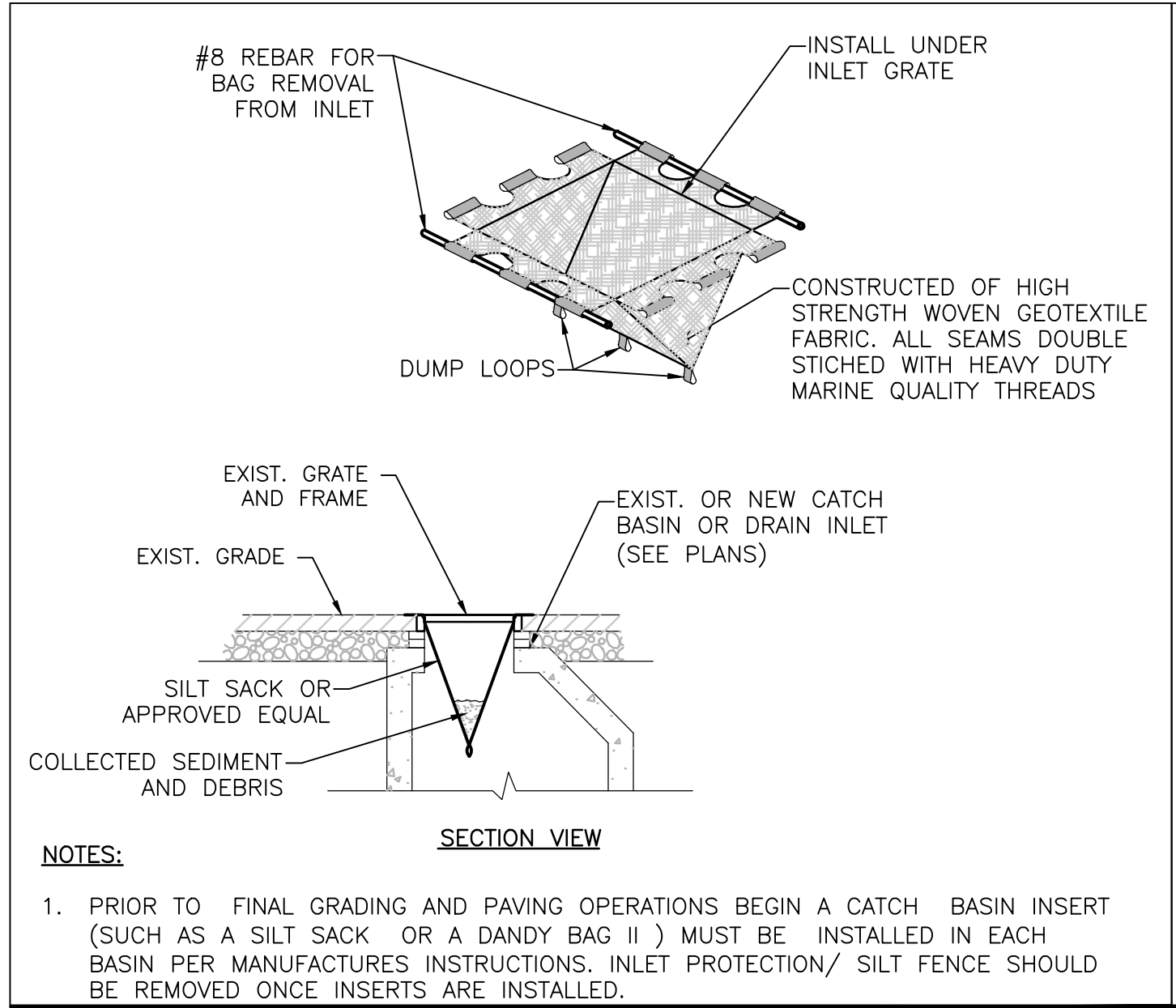
**C101**



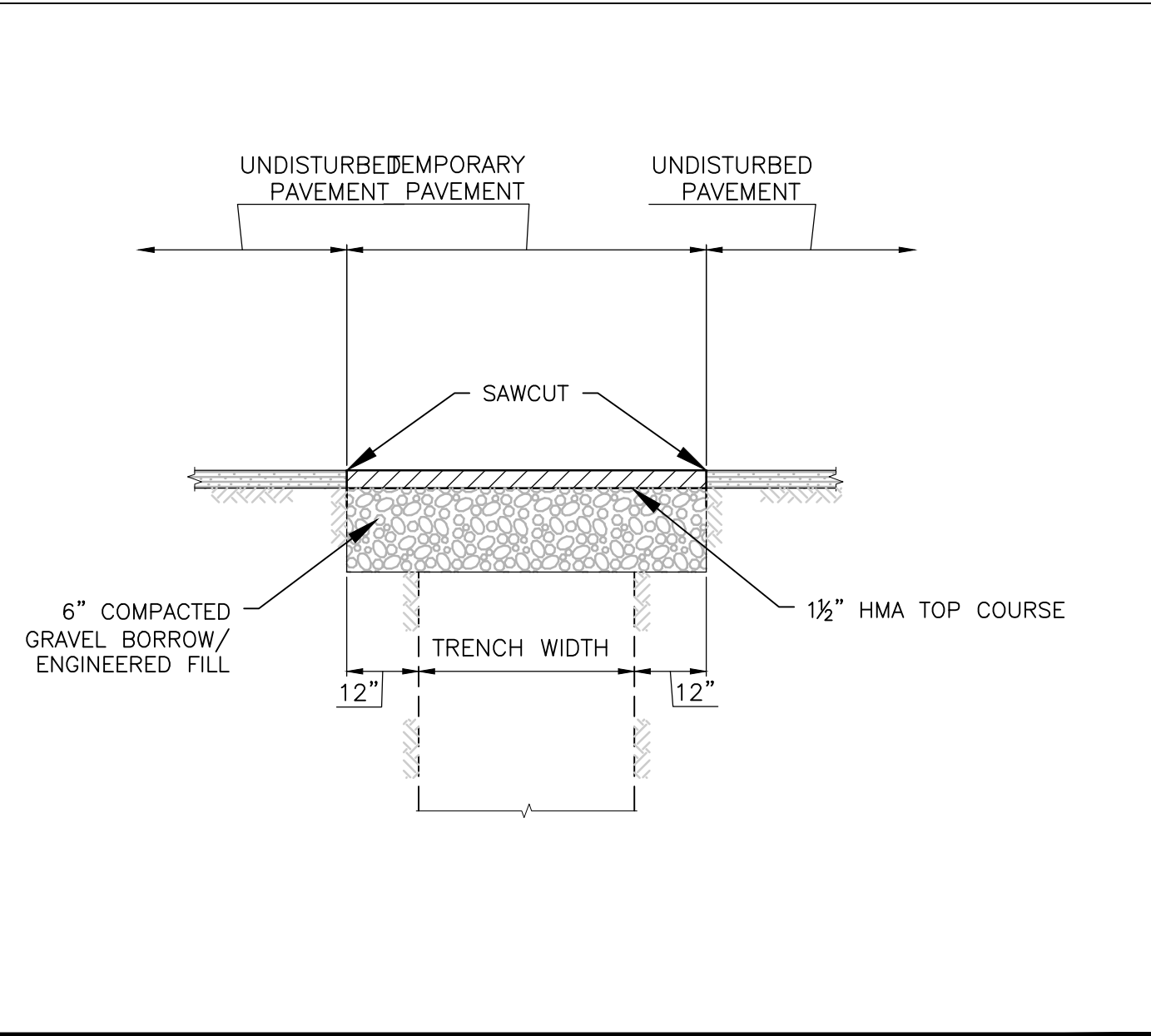




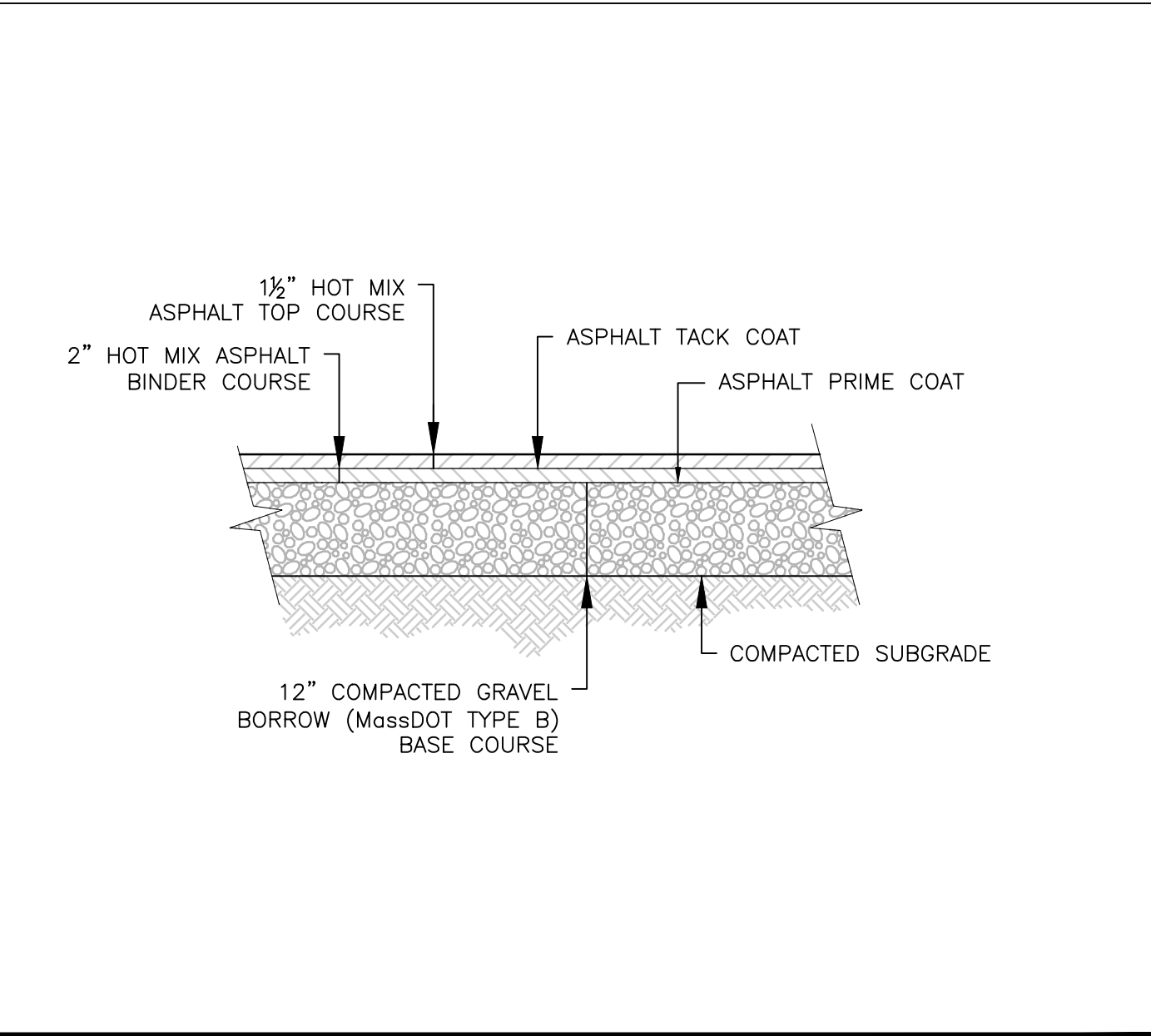
DRAWING FILE: N:\PROJECTS\19401-01-Waltham\_Police\_Station\_Renovation\ACAD\Civil\Site\Detail.dwg PLOTTED: Jul 14, 2014 - 5:38pm BY: meagan.ogoff



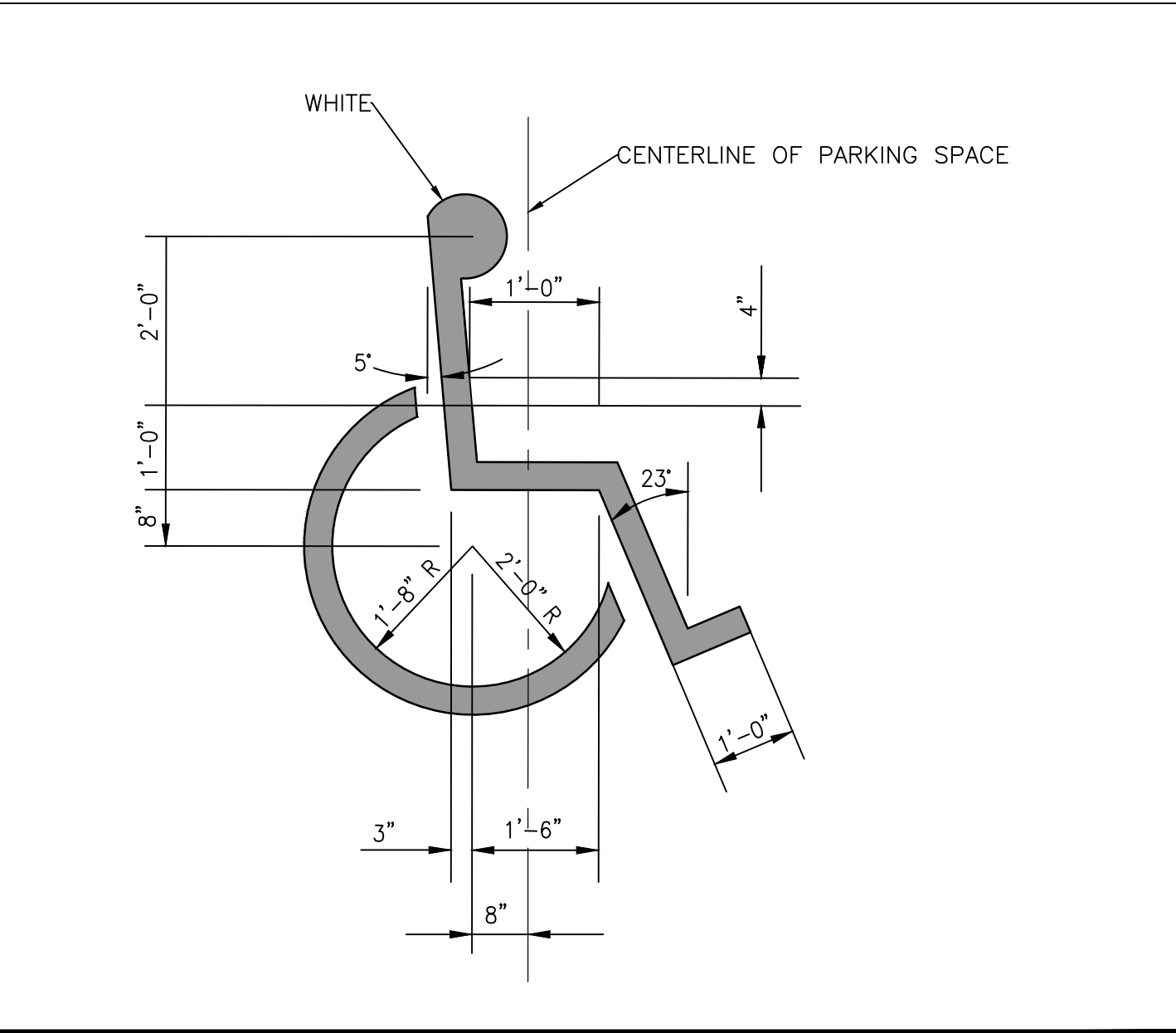
**1** INLET PROTECTION DETAIL  
N.T.S.



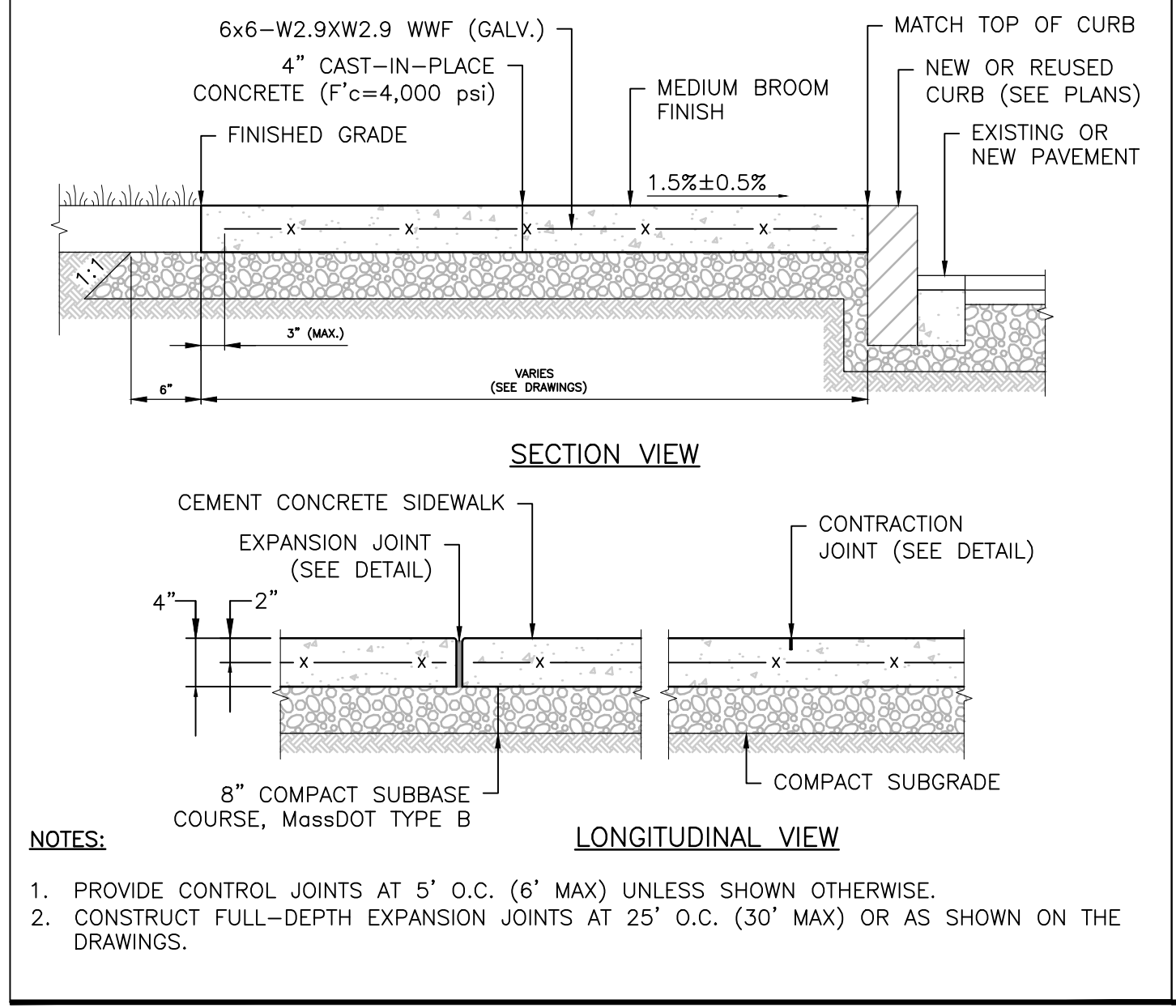
**5** TEMPORARY PAVEMENT RESTORATION DETAIL  
N.T.S.



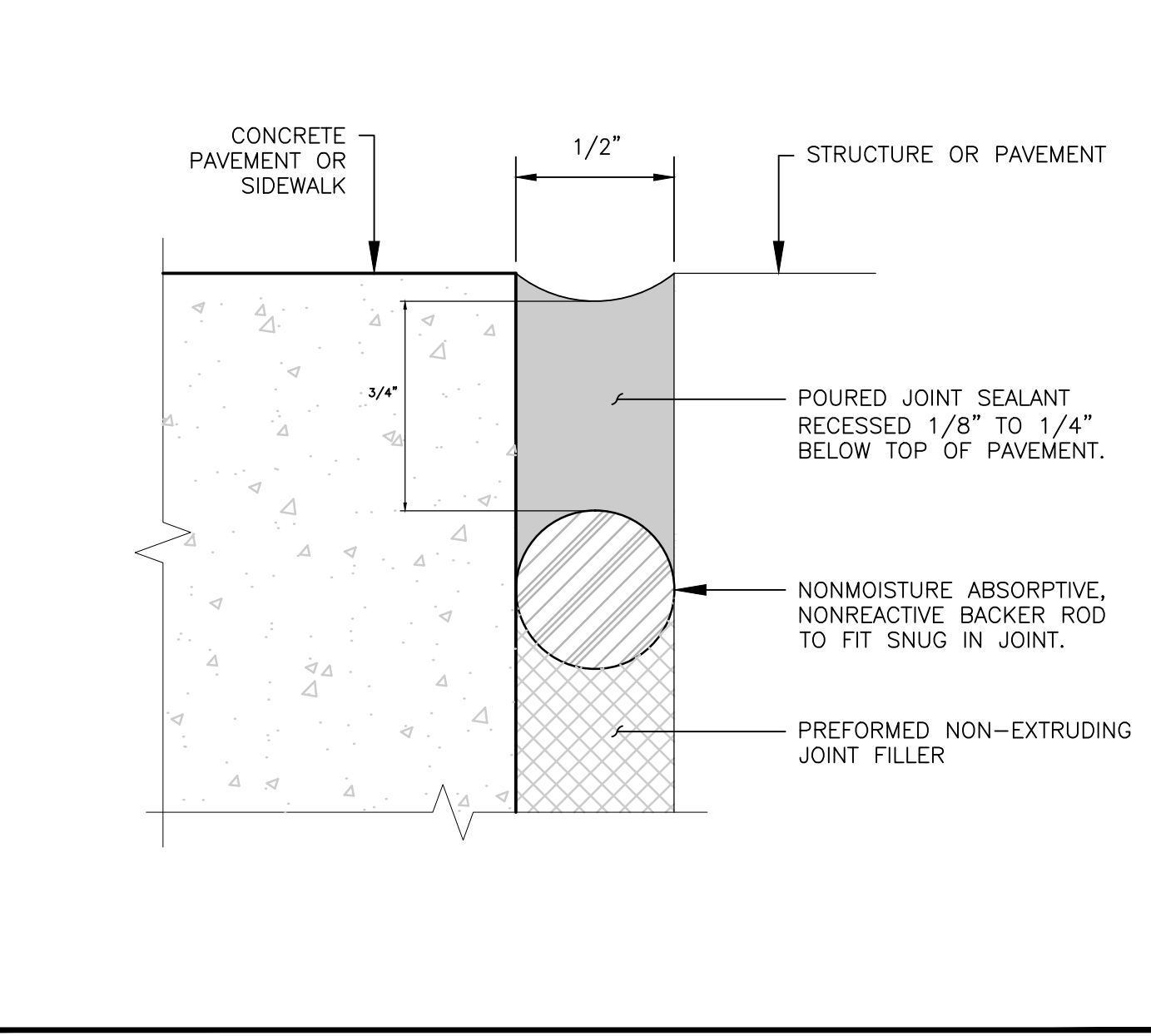
**5** HOT MIX ASPHALT PAVEMENT  
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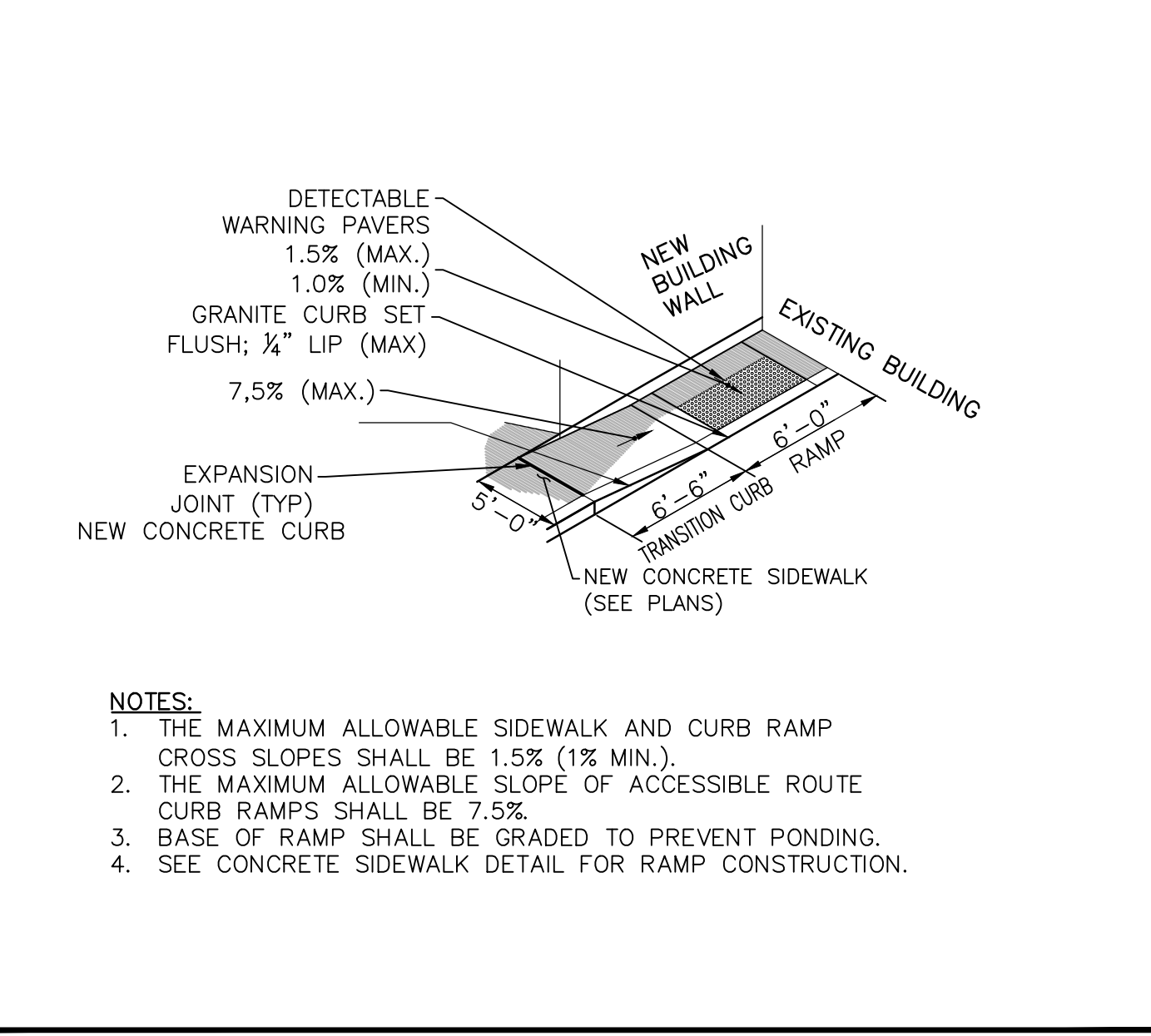
**5** INTERNATIONAL SYMBOL OF ACCESSIBILITY DETAIL  
N.T.S.



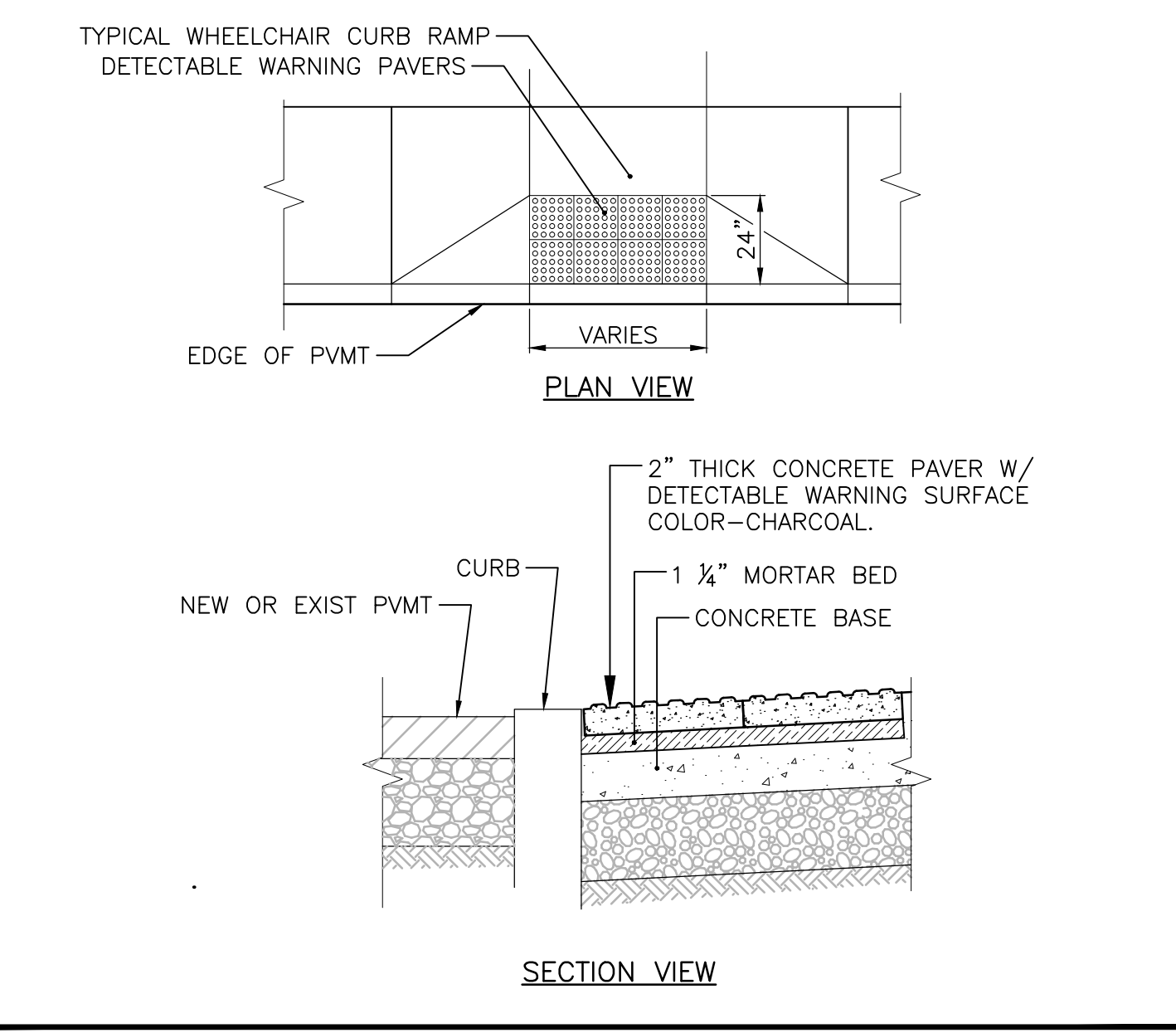
**5** CONCRETE SIDEWALK DETAIL  
N.T.S.



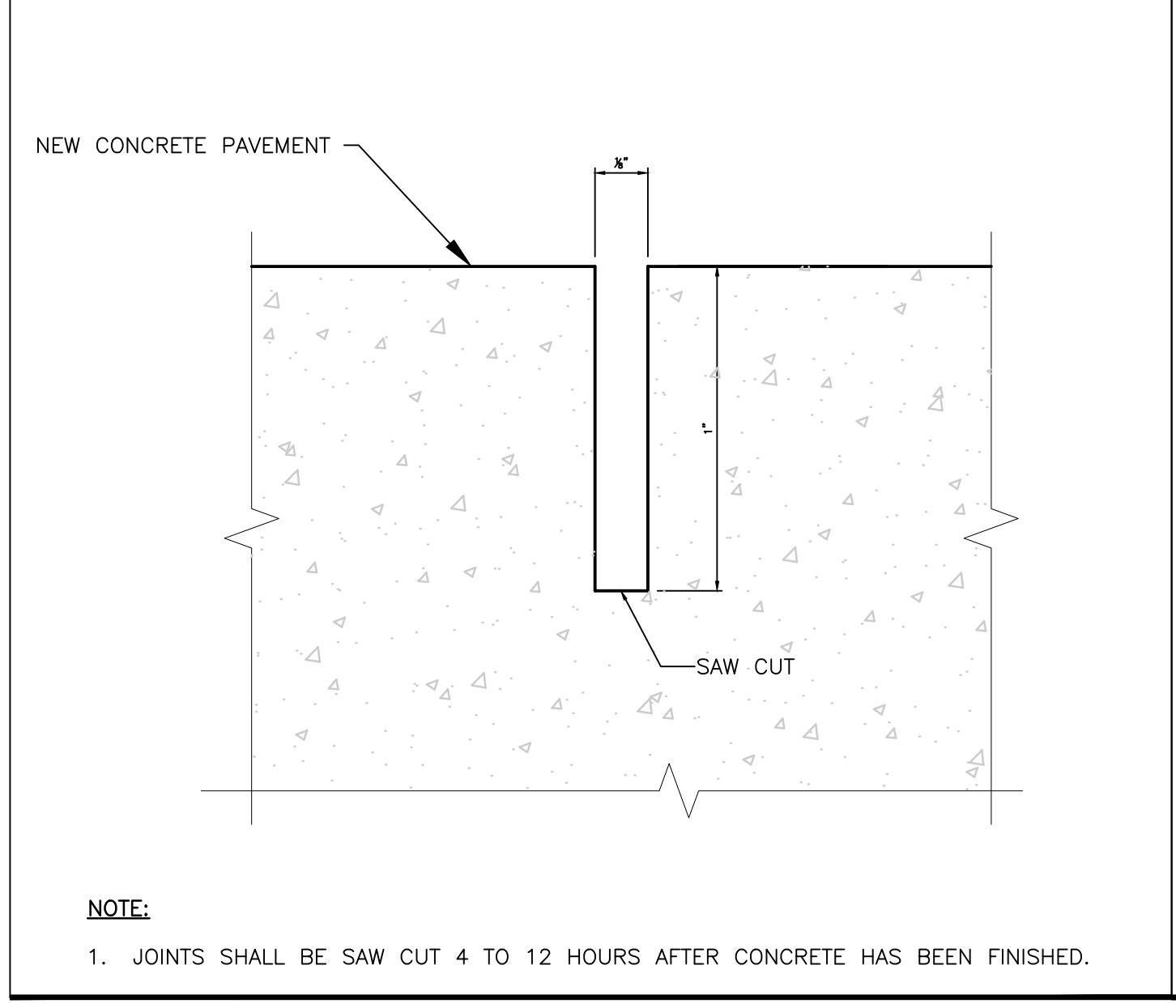
**5** EXPANSION JOINT (EJ) DETAIL  
N.T.S.



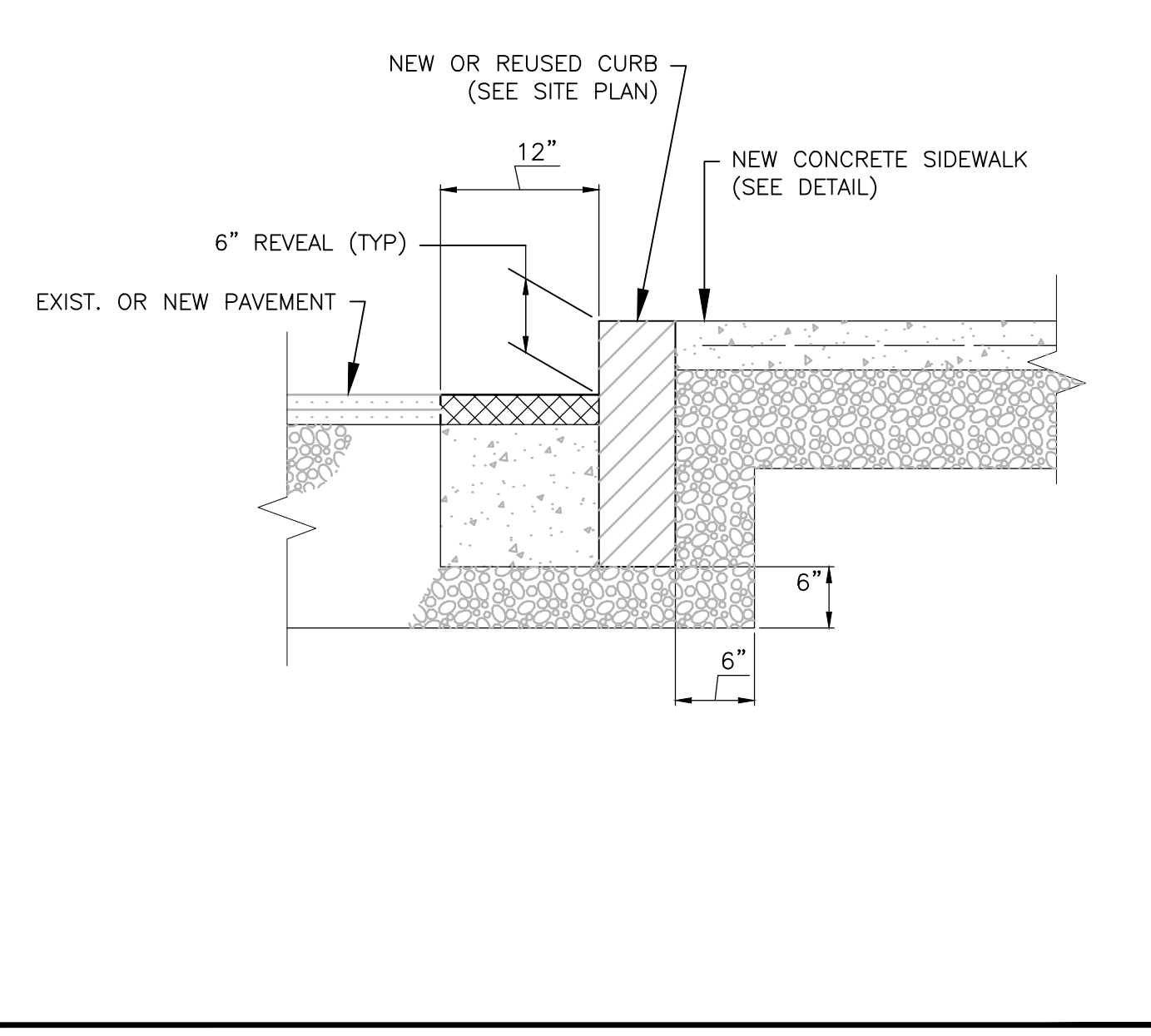
**5** WHEELCHAIR RAMP TYPE "F"  
N.T.S.



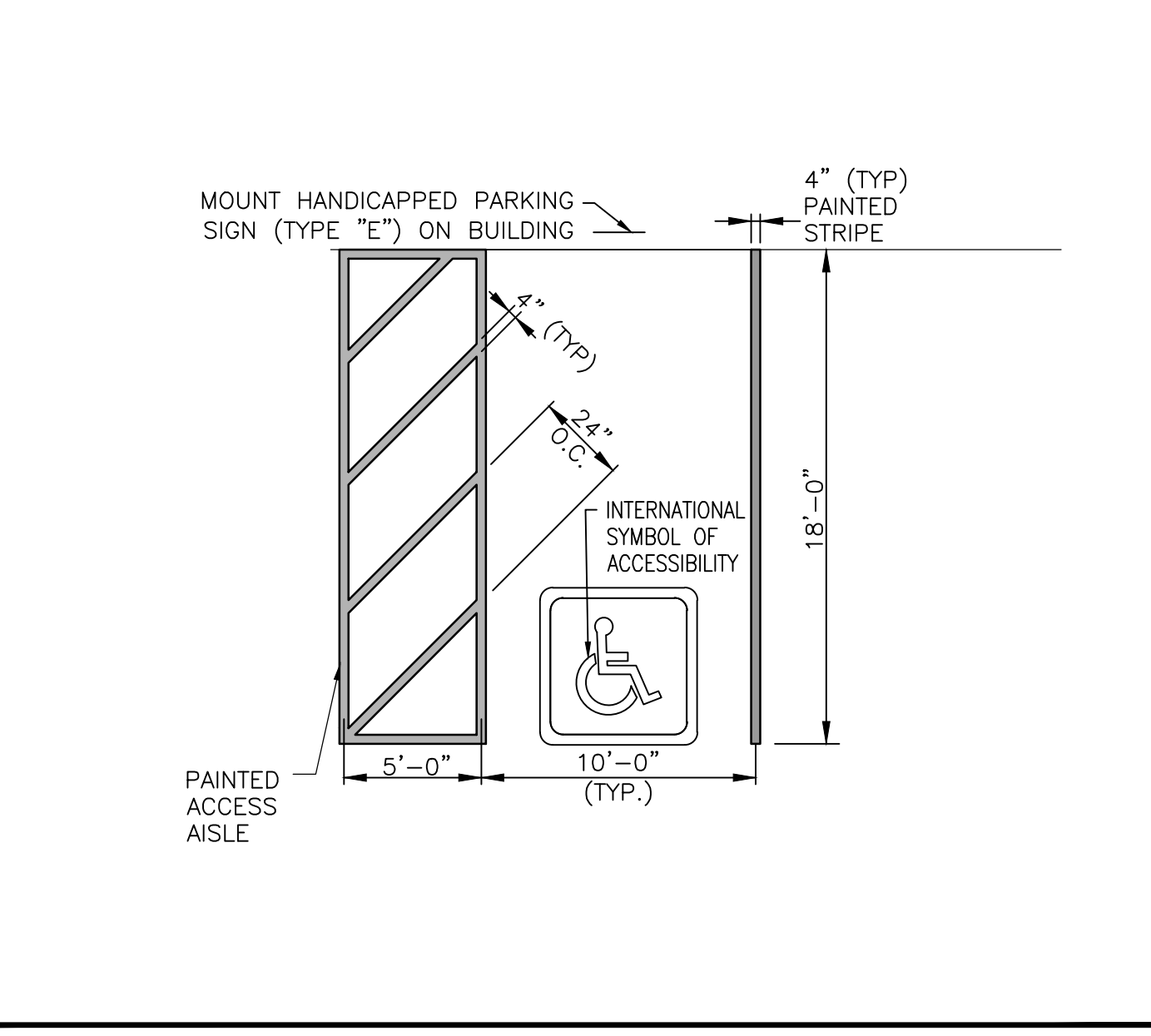
**5** PRECAST DETECTABLE WARNING PAVERS  
N.T.S.



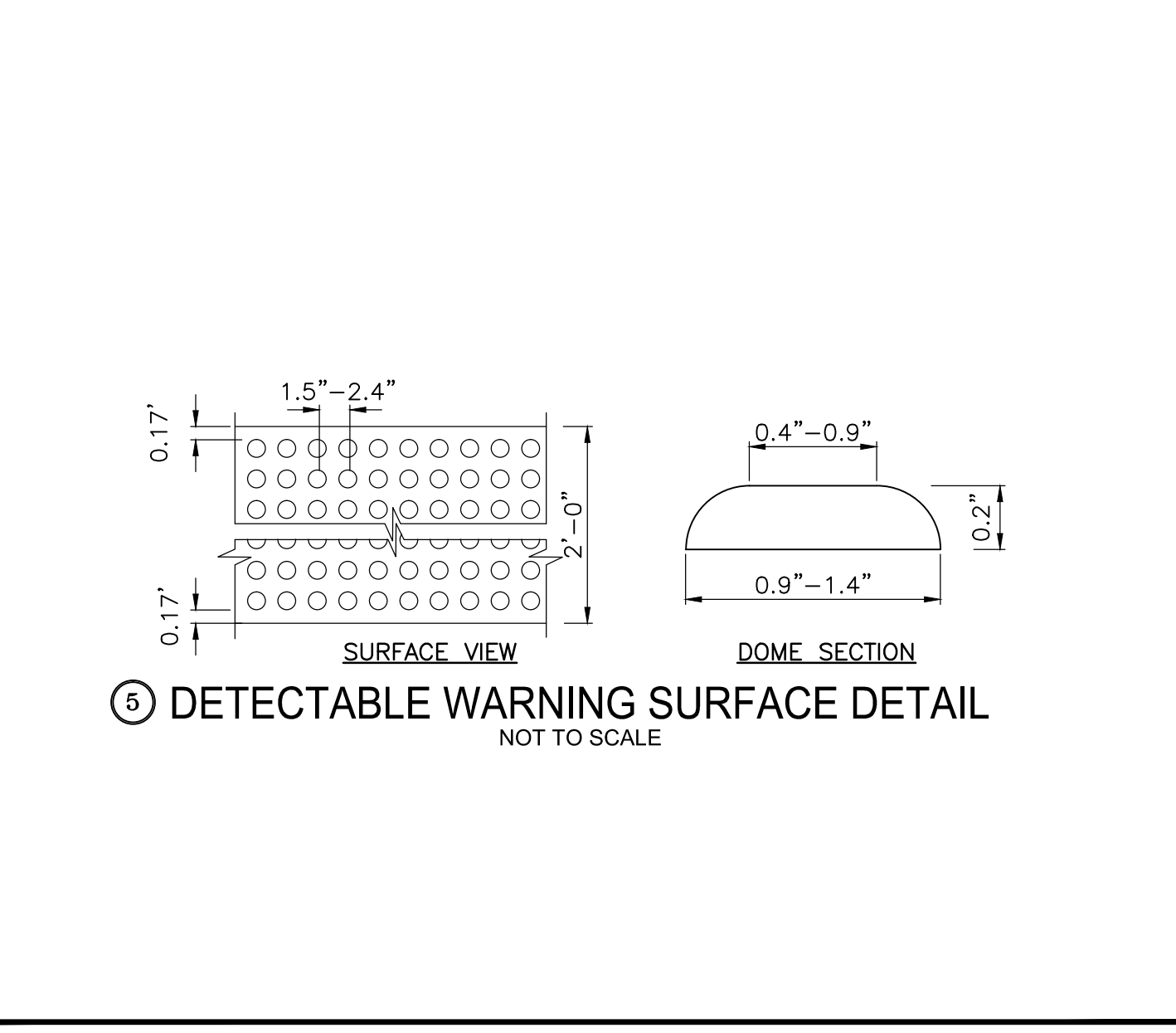
**5** CONTRACTION JOINT (CJ) DETAIL  
N.T.S.



**5** CURB SETTING DETAIL  
N.T.S.



**5** HANDICAPPED PARKING DETAIL  
N.T.S.



**5** DETECTABLE WARNING SURFACE DETAIL  
N.T.S.

REVISIONS		
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**ISSUED FOR BID**

**WALTHAM POLICE STATION RENOVATION**  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

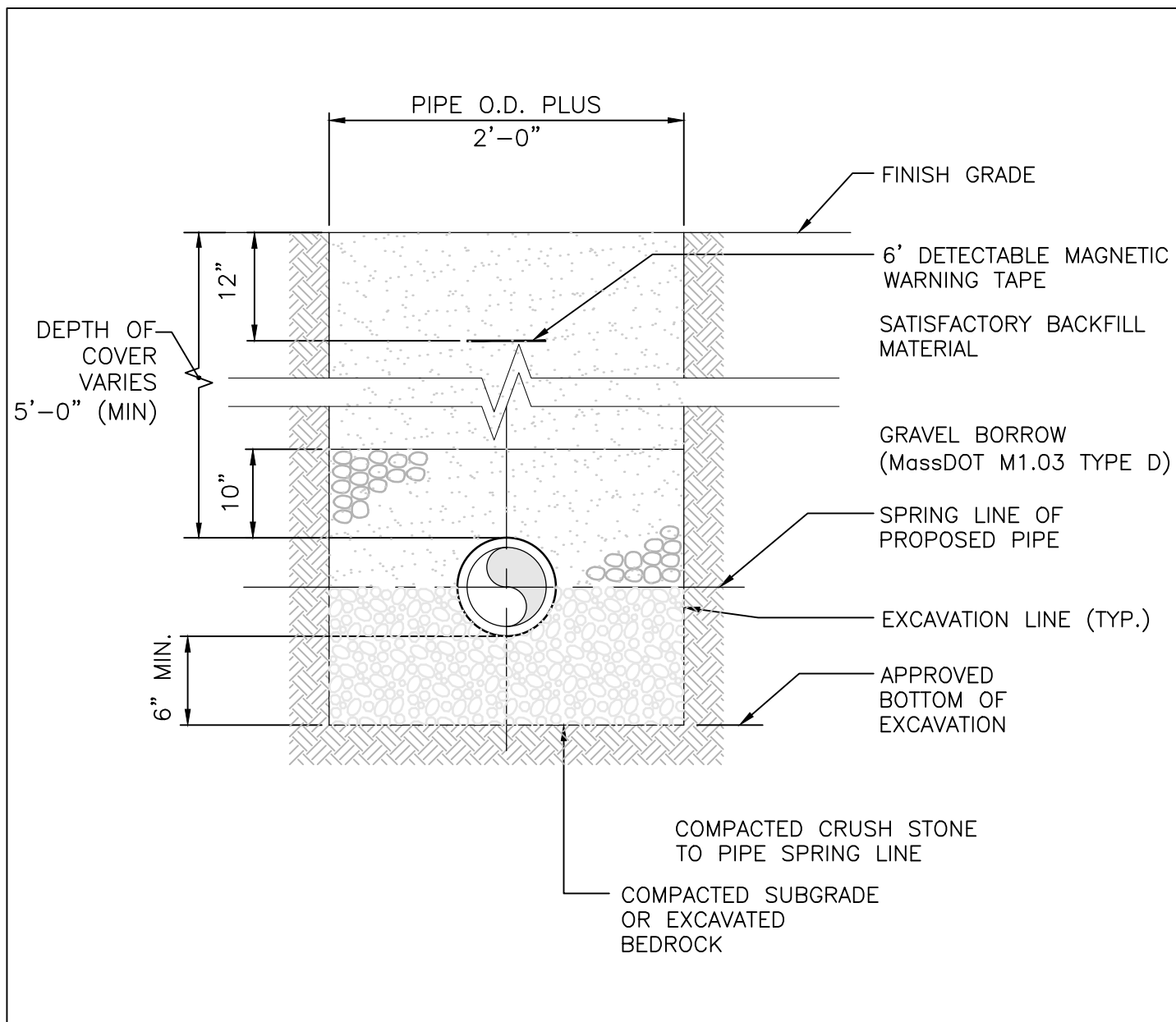
**SITE DETAILS - 2**

PROJECT NUMBER: 19401.01  
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 DATE: July-Aug. 2016  
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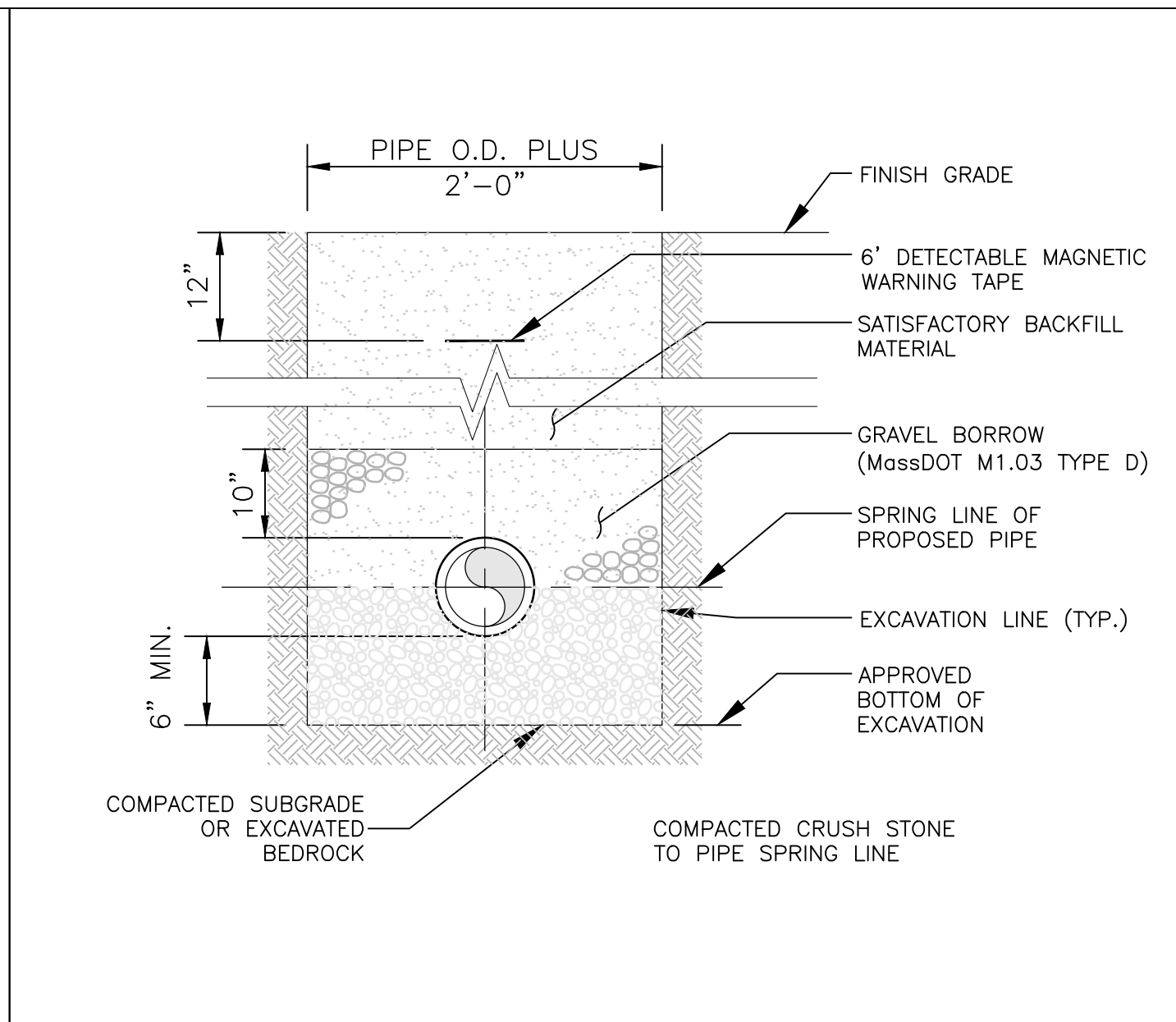
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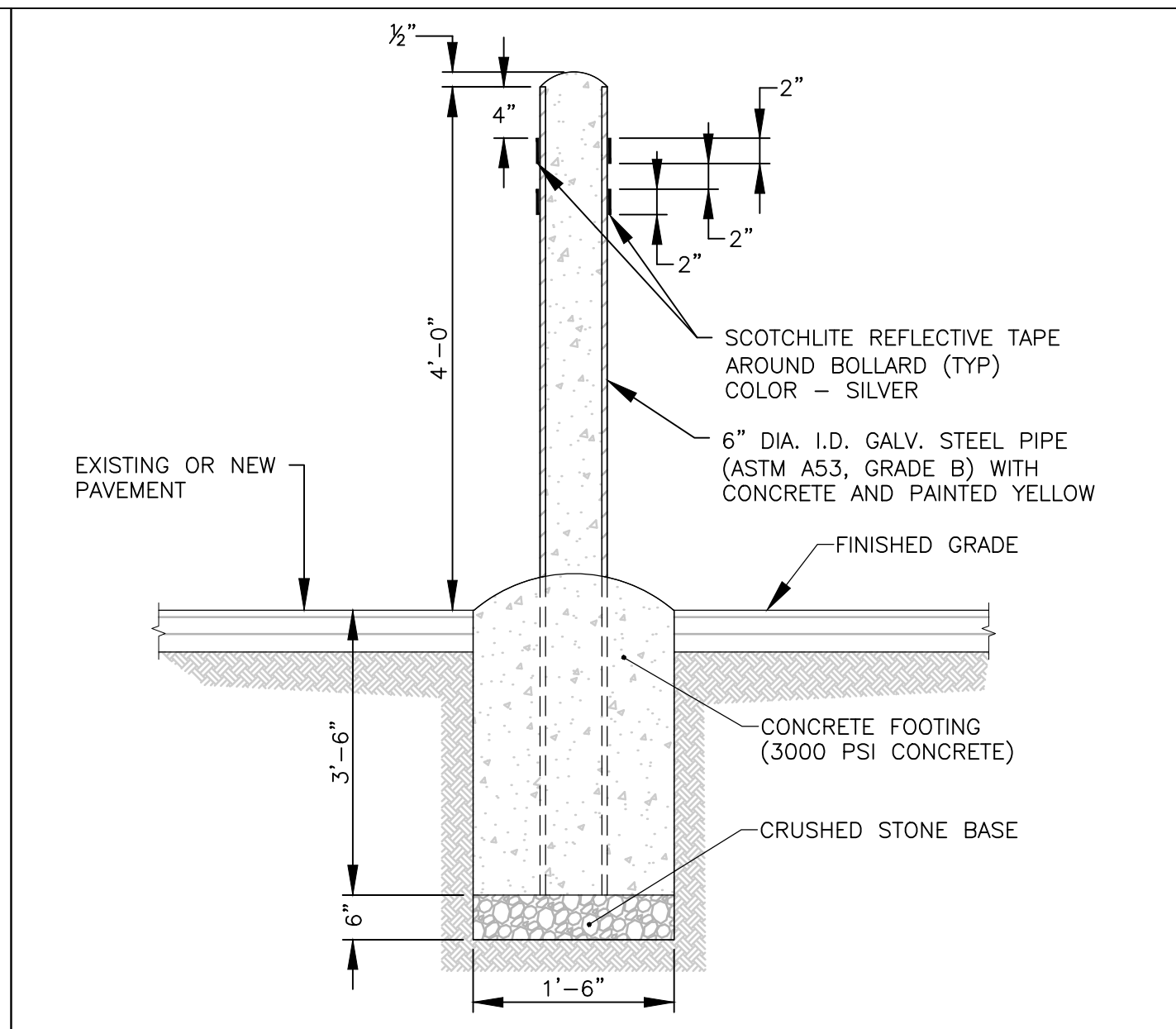
DRAWING FILE: N:\PROJECTS\19401-01-Waltham\_Police\_Station\_Renovation\ACAD\Civil\Site\bae.dwg PLOTTED: Jul 14, 2014 - 5:38pm BY: megan.ogoff  
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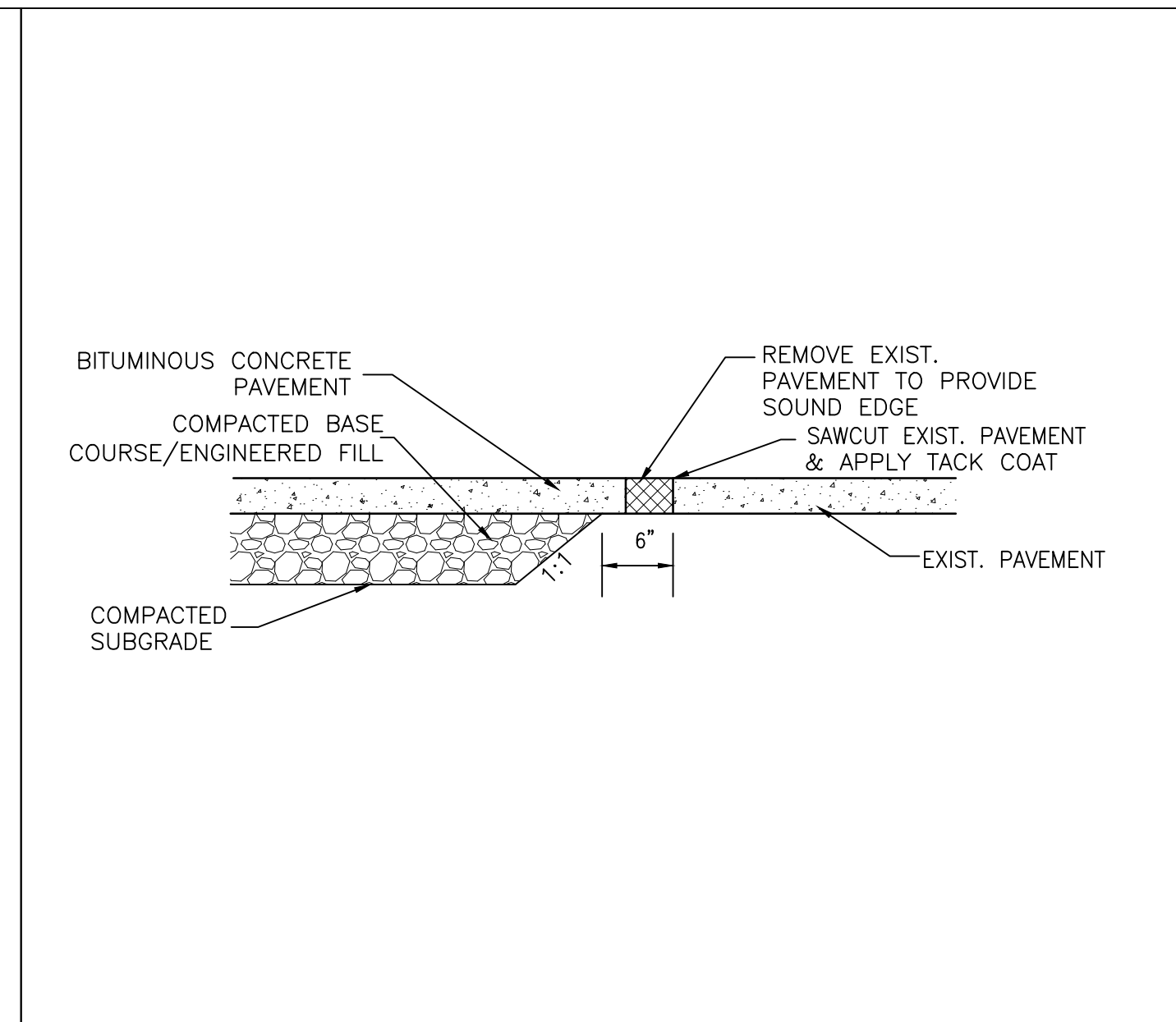
**1 WATER PIPE TRENCH DETAIL**  
N.T.S.



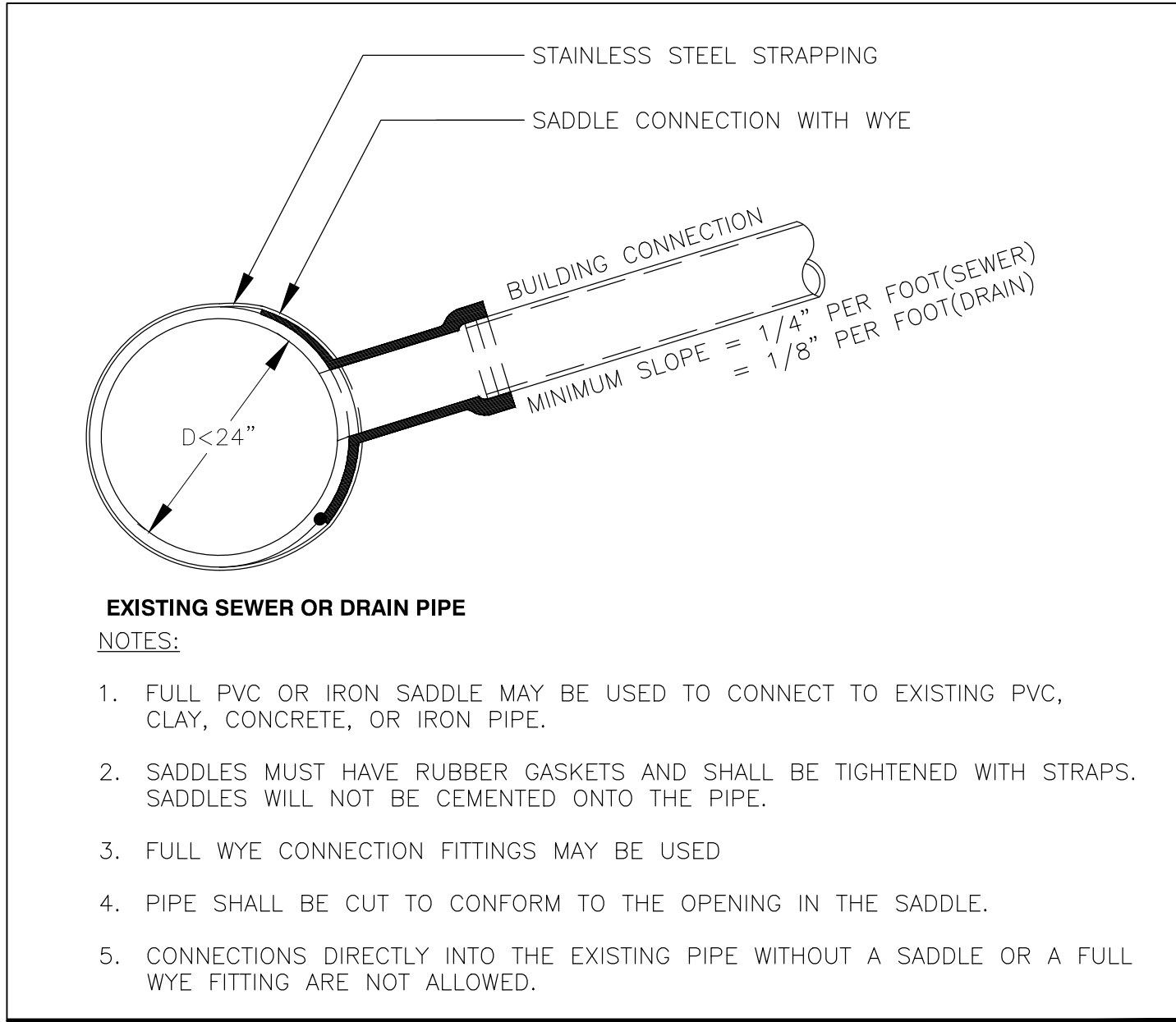
**5 DRAIN & SEWER PIPE TRENCH DETAIL**  
N.T.S.



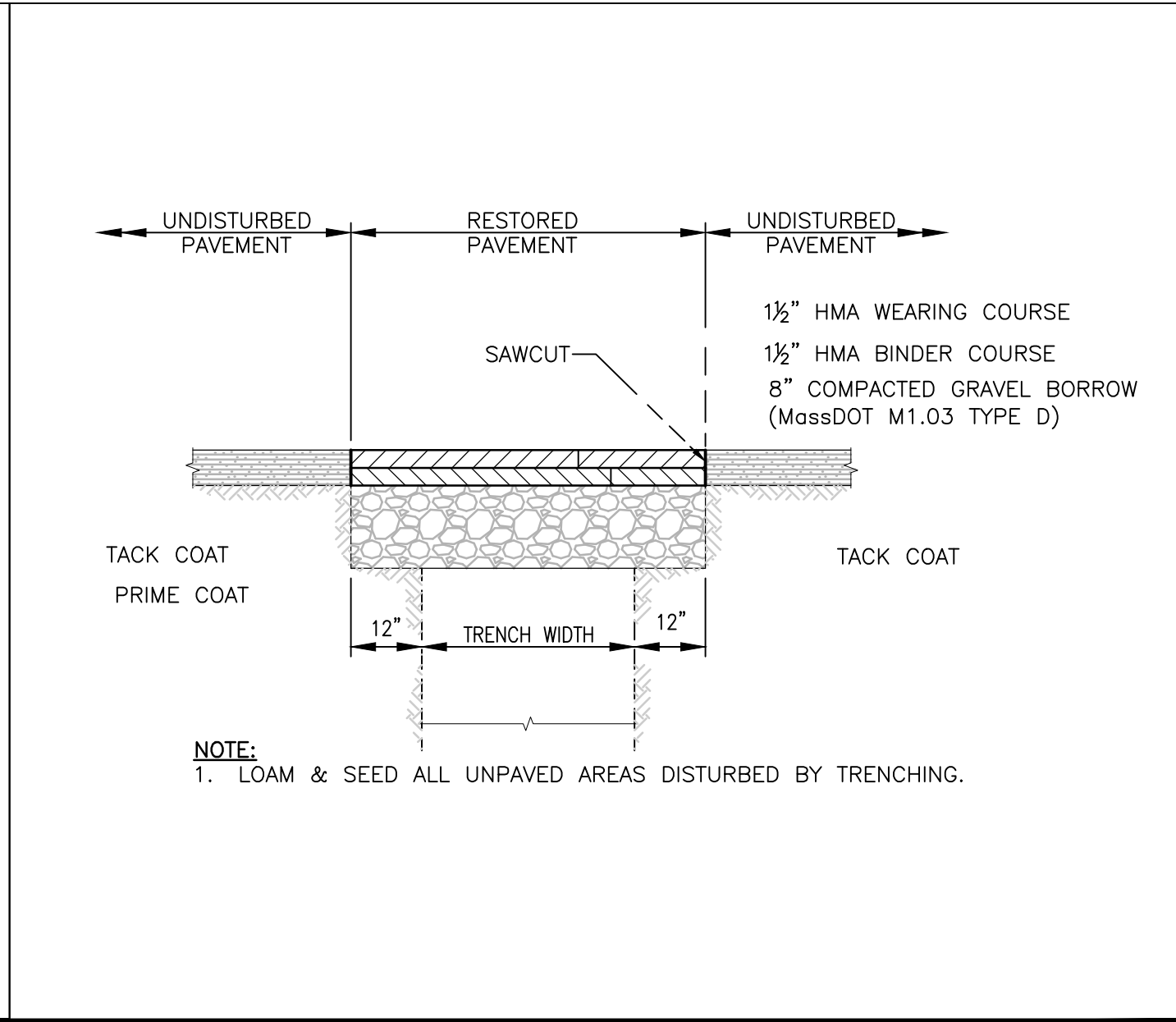
**5 EXTERIOR BOLLARD DETAIL**  
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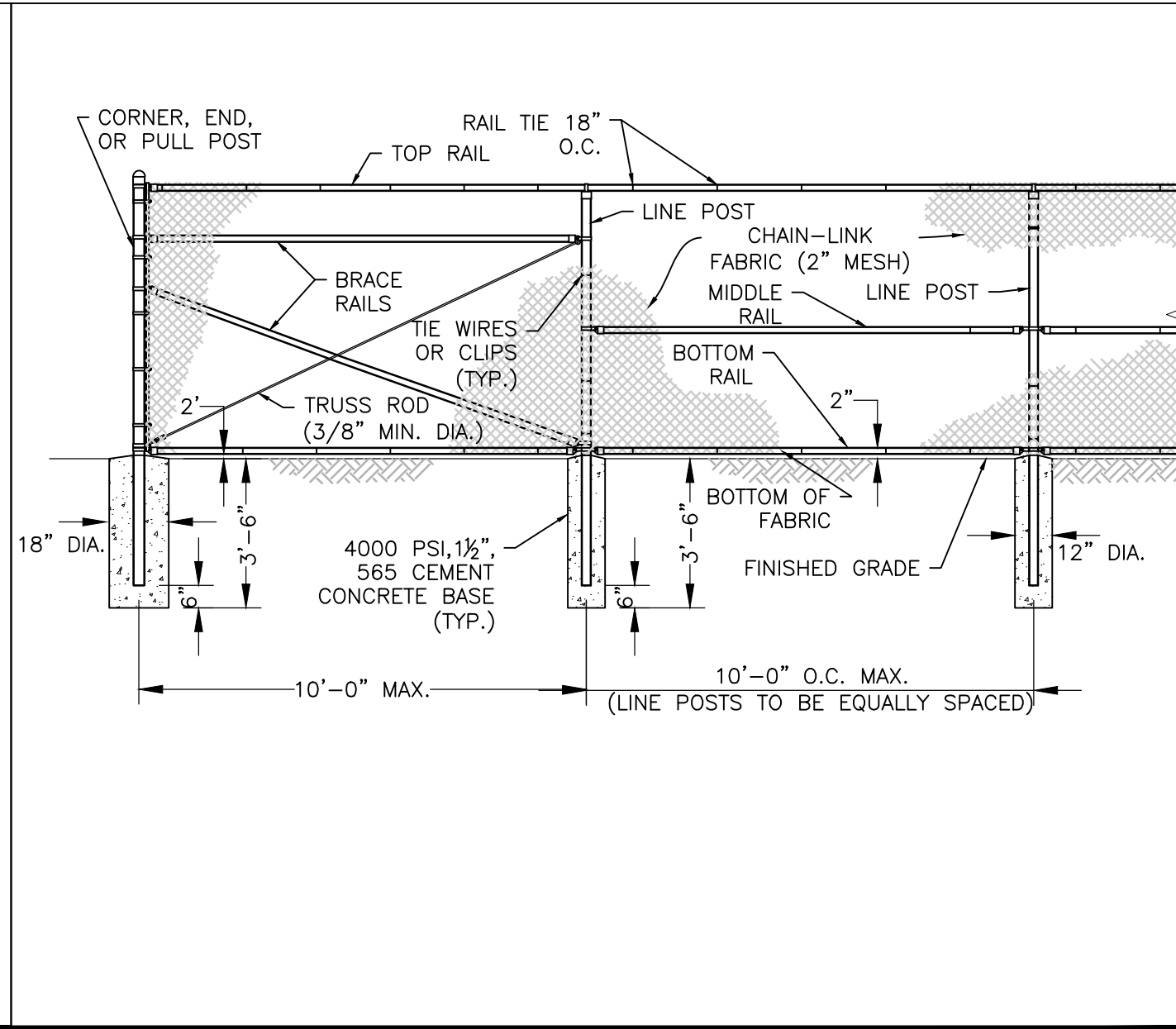
**5 PAVEMENT MATCH DETAIL**  
N.T.S.



**5 SEWER SERVICE CONNECTION DETAIL**  
N.T.S.



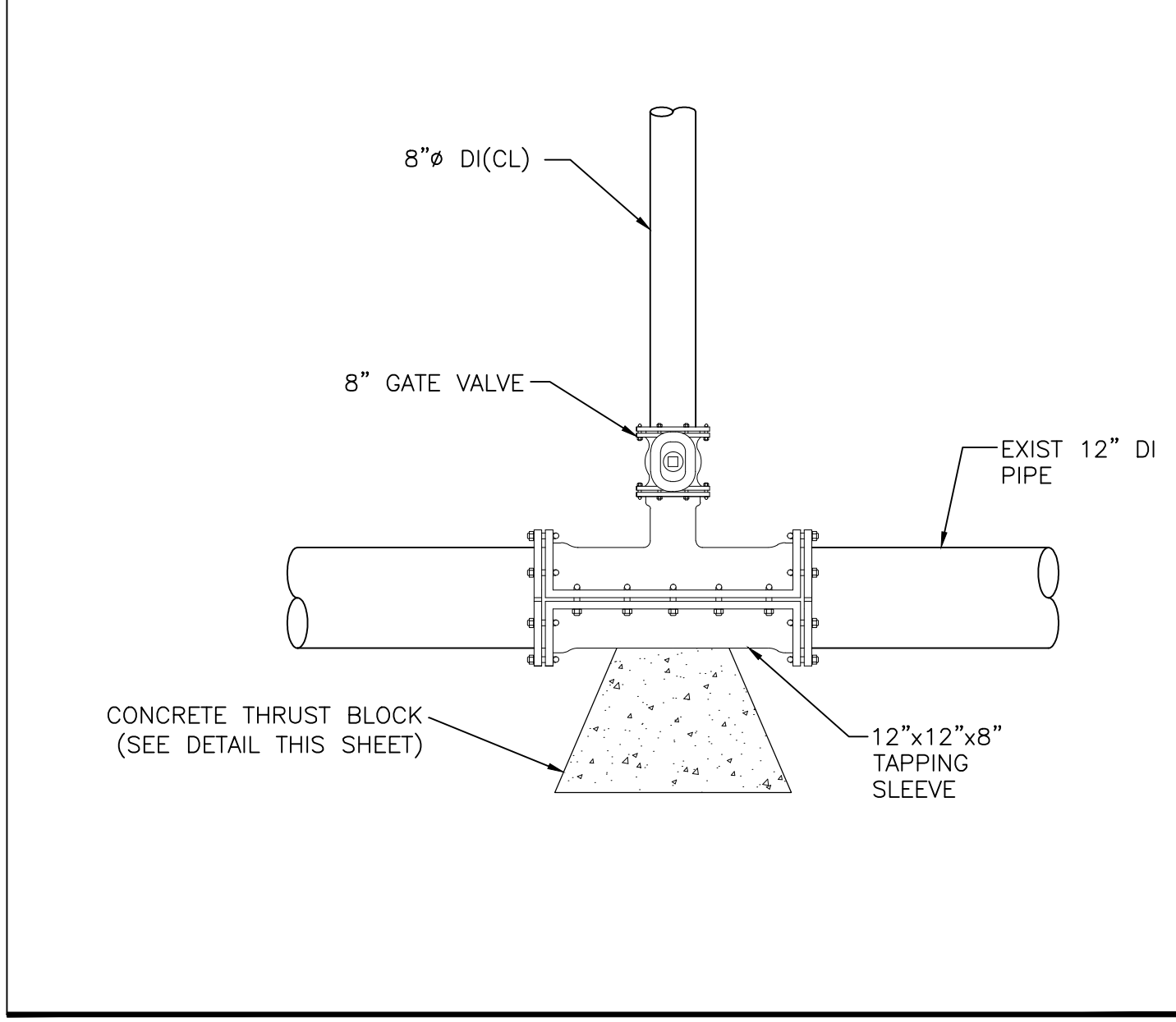
**5 TRENCH RESTORATION DETAIL**  
N.T.S.



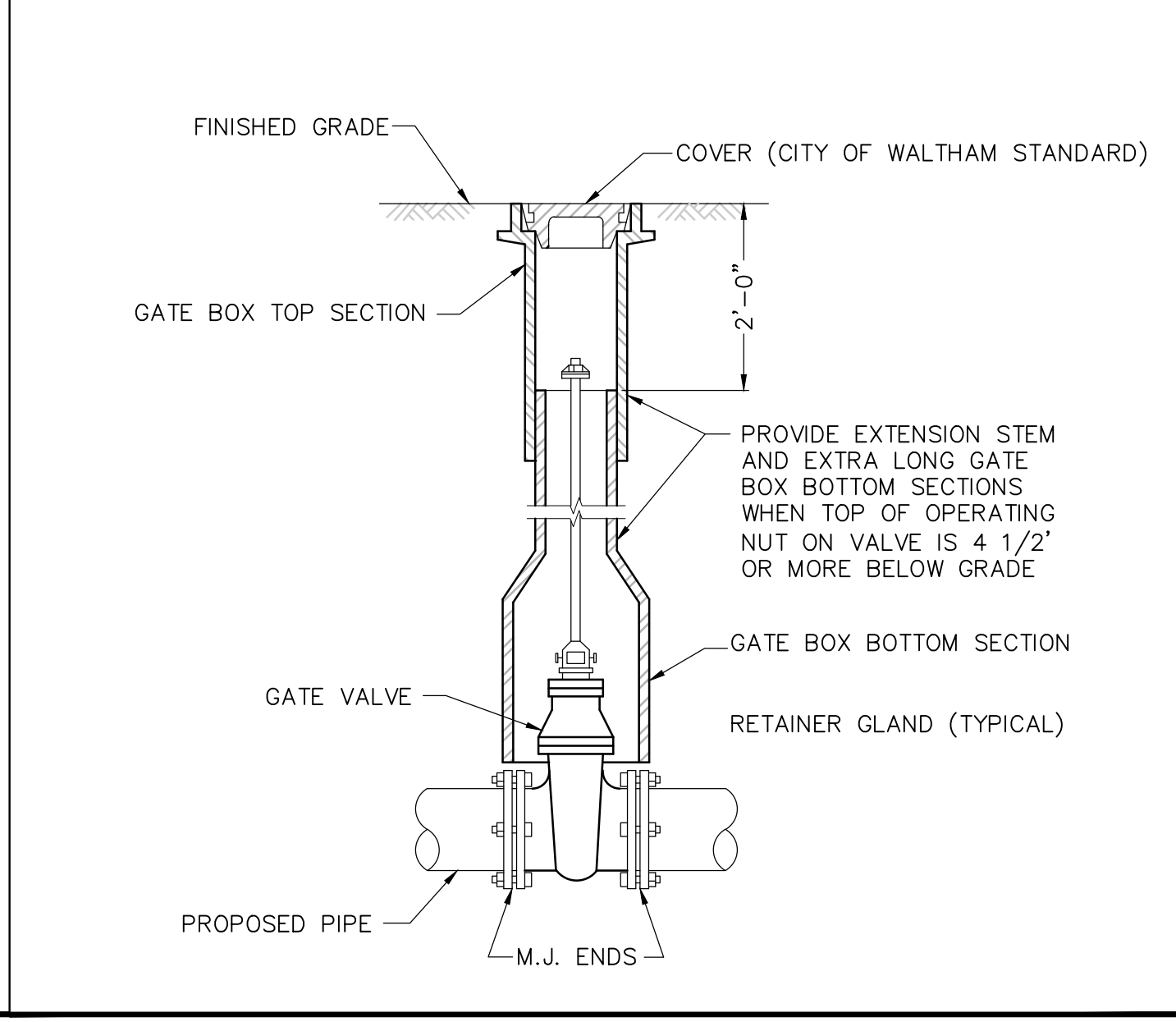
**5 CHAIN LINK FENCE DETAIL**  
N.T.S.

POST OR RAIL	MINIMUM OUTSIDE DIMENSIONS (NOMINAL)		
	FENCE HEIGHT 72" OR LESS	FENCE HEIGHT 84" TO 96"	FENCE HEIGHT 108" AND OVER
CORNER, END & PULL POSTS	2.375" O.D.	2.875" O.D.	4.00" O.D.
LINE POSTS	1.90" O.D.	2.375" O.D.	2.875" O.D.
TOP, MIDDLE, BOTTOM & BRACE RAILS	1.66" O.D.		

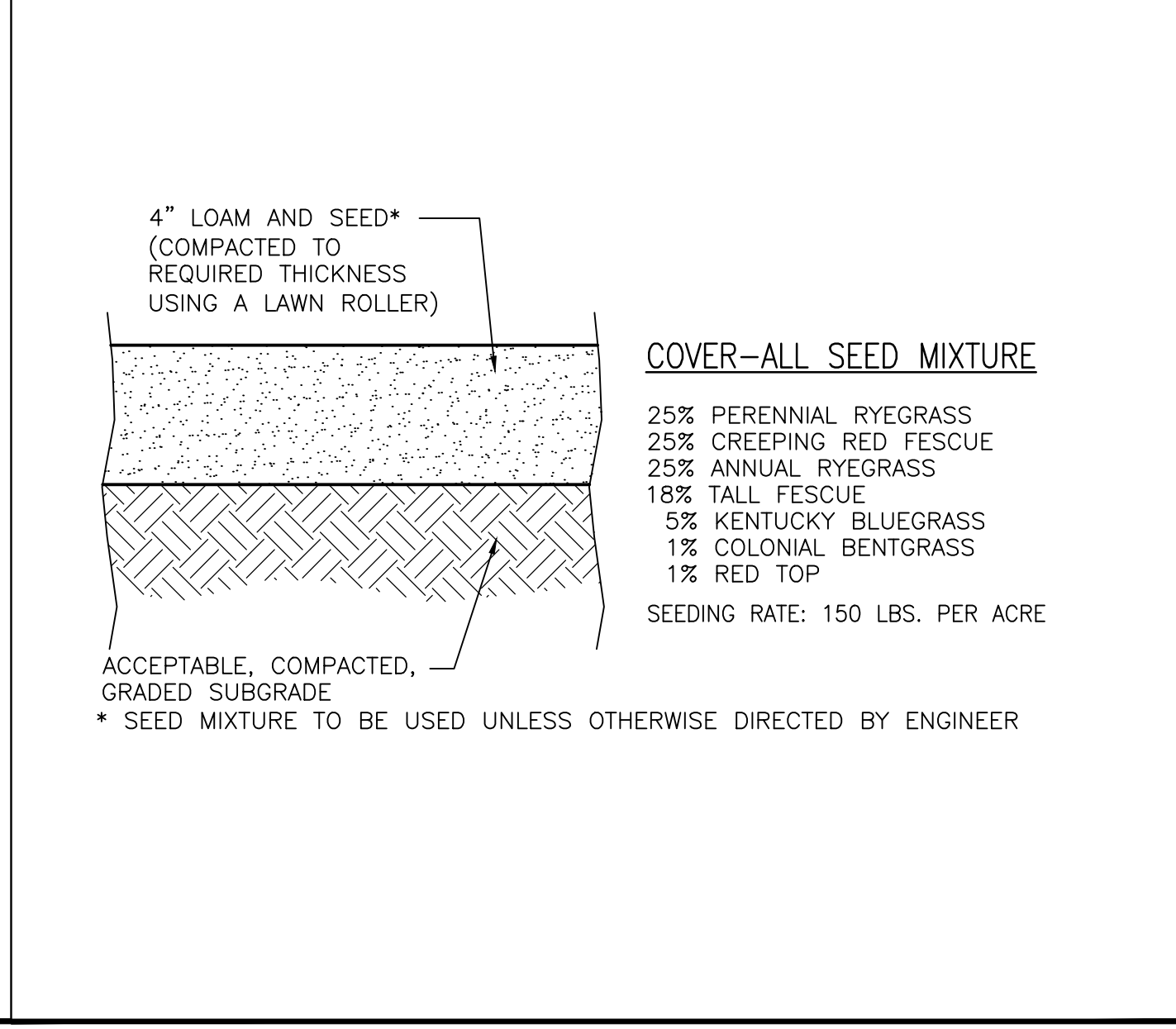
**NOTES:**  
 1. ALL CORNER AND ANCHOR POSTS SHALL BE BRACED TO BOTH ADJACENT POSTS.  
 2. CHAIN LINK MESH SHALL BE VINYL COATED - COLOR BLACK.  
 3. ALL POST SHALL BE GALVANIZED STEEL AND PAINTED - COLOR BLACK.



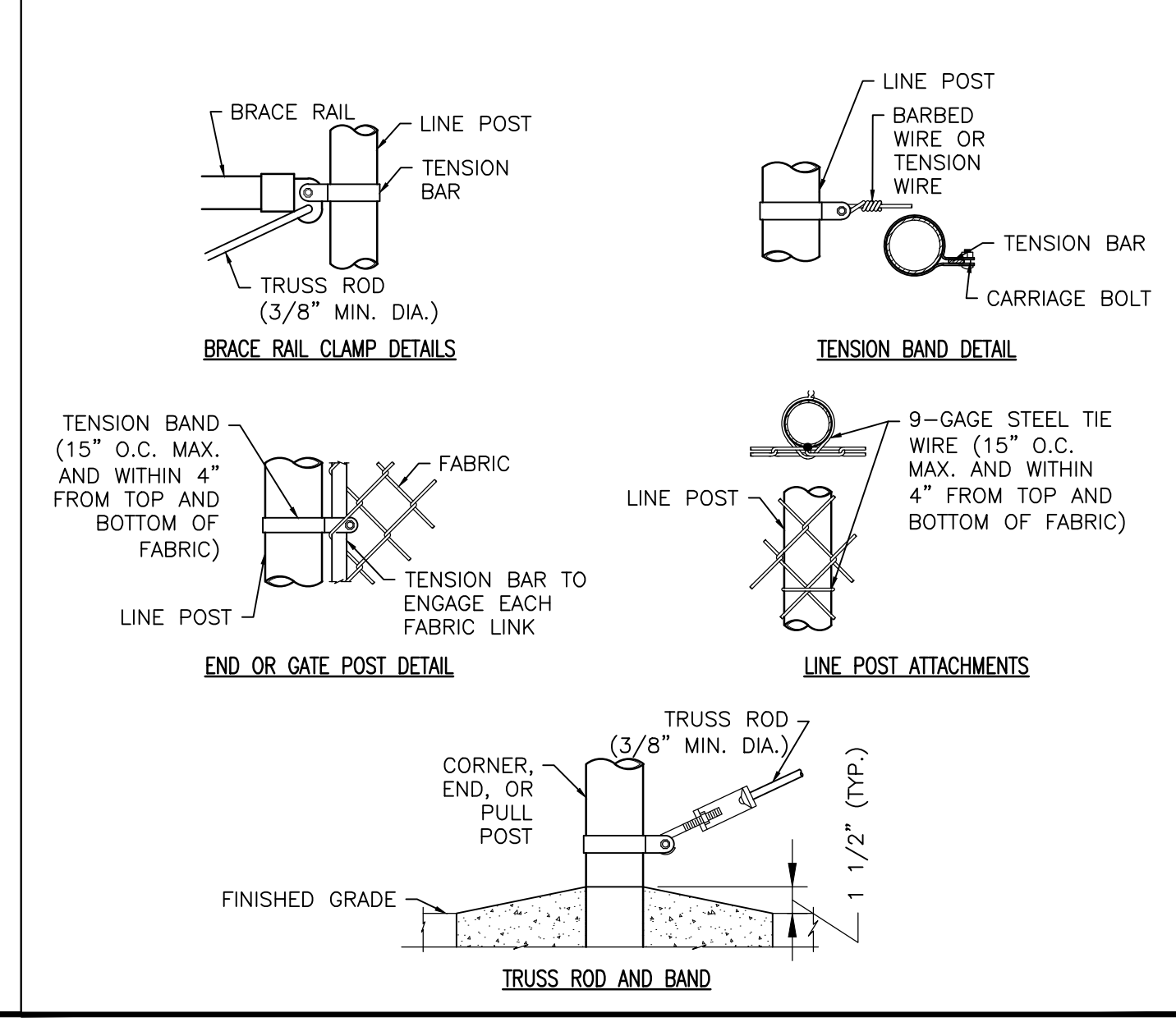
**5 TAPPING SLEEVE & VALVE DETAIL**  
N.T.S.



**5 TYPICAL GATE VALVE AND VALVE BOX DETAIL**  
N.T.S.



**5 LOAM AND SEED DETAIL**  
N.T.S.



**5 CHAINLINK FASTENING DETAIL**  
N.T.S.

**REVISIONS**

Number	Description	Date

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**WALTHAM POLICE STATION RENOVATION**  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

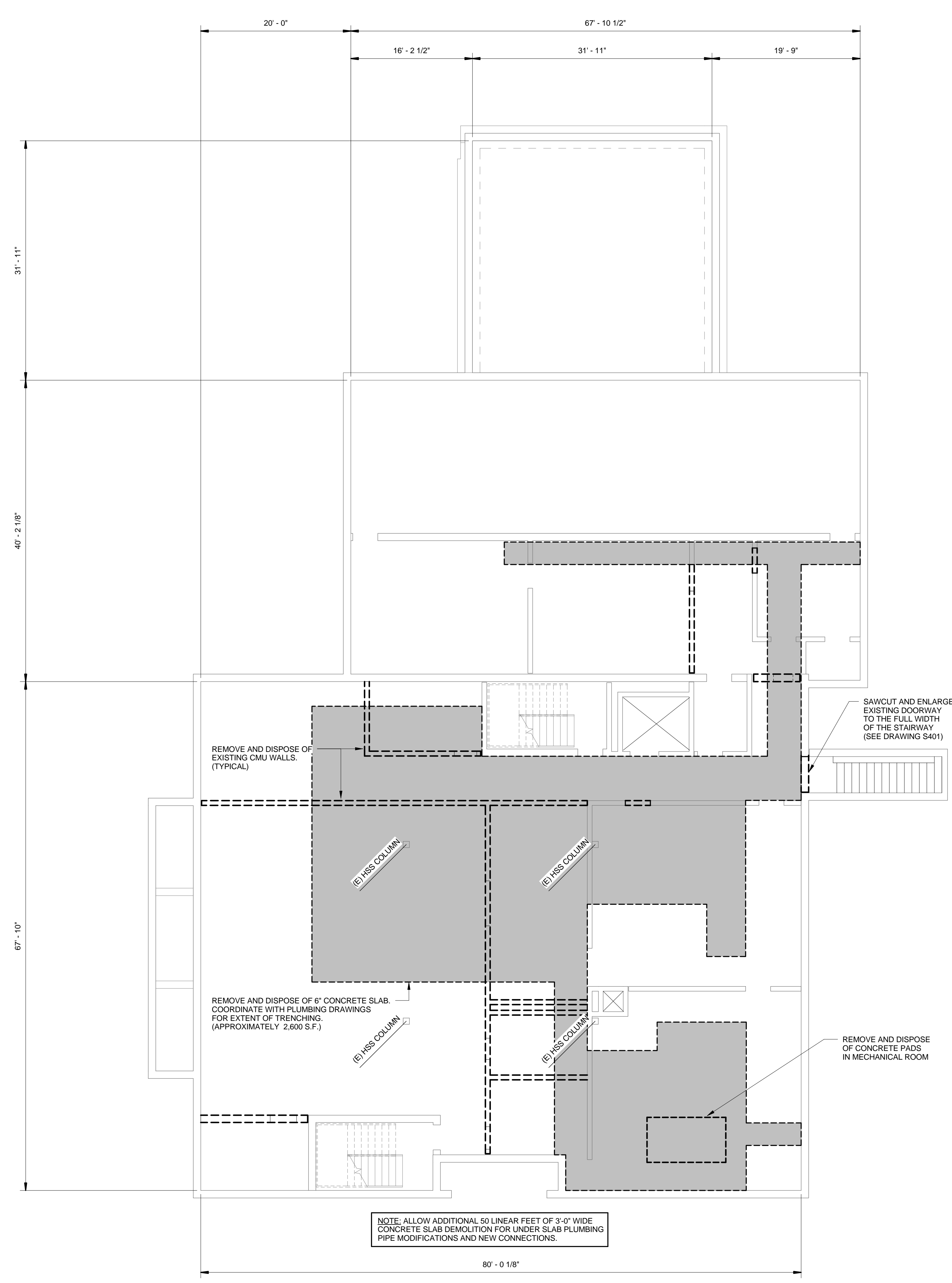
**SITE DETAILS - 3**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: FC  
 DRAWN BY: RED  
 CHECKED BY:  
 DATE: July-Aug. 2016  
 SCALE: AS NOTED

**C104**



PROJECT FILE: C:\Users\Wjgoff\Documents\19401\Waltham Police Station Structural\_MRF.dwg  
 PLOTTED: 7/14/2016 3:48 PM  
 REVIEWED BY: CIVIL ARCH PLUM FIRE MECH ELEC STRU



NOTE: ALLOW ADDITIONAL 50 LINEAR FEET OF 3'-0" WIDE CONCRETE SLAB DEMOLITION FOR UNDER SLAB PLUMBING PIPE MODIFICATIONS AND NEW CONNECTIONS.

**SHEET NOTES:**

1. ALL SAFETY REGULATIONS TO BE FOLLOWED STRICTLY. METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIALS IS CONTRACTOR'S RESPONSIBILITY.
2. EXISTING DIMENSIONS AND CONDITIONS MUST BE VERIFIED OR DETERMINED IN THE FIELD BY THE CONTRACTOR. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PORTION OF THE WORK.
3. PERFORM ALL DEMOLITION PROCEDURES WITH CARE TO AVOID DAMAGE TO ADJACENT STRUCTURES AND FINISHES. PATCH ANY DAMAGE TO MATCH EXISTING.
4. PROVIDE SHORING UNDER THE EXISTING JOISTS PRIOR TO CUTTING OR REMOVING OF ANY PORTION OF THE JOIST UNTIL STRUCTURAL RE-FRAMING IS COMPLETE.
5. THE CONTRACTOR SHALL DESIGN AND CONSTRUCT SHORING AND TEMPORARY WALLS AS REQUIRED TO PROTECT EXISTING AND NEW WORK.
6. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXTENT OF CMU WALL DEMOLITION.
7. COORDINATE WITH ARCHITECTURAL, HVAC, ELECTRICAL AND PLUMBING DRAWINGS FOR ANY ADDITIONAL OPENINGS THAT MAY NEED TO BE PROVIDED OR FILLED IN.

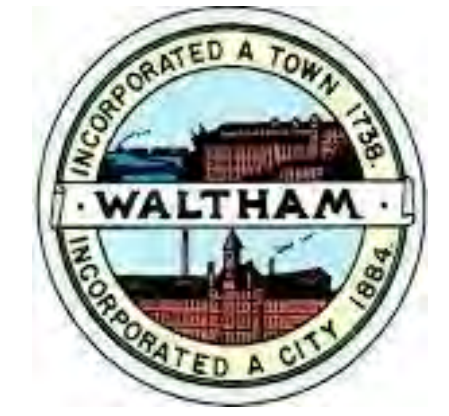
**LEGEND:**

- (E) INDICATES EXISTING MEMBER.
- INDICATES ELEMENTS TO BE REMOVED AND DISPOSED OF, UNLESS NOTED OTHERWISE.

**CDR MAGUIRE**  
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 Boston, Massachusetts 02110  
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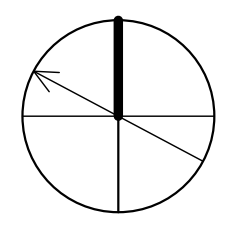
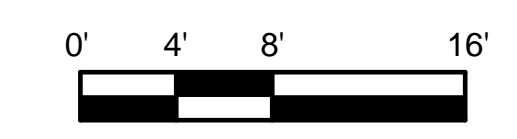
**WALTHAM POLICE STATION RENOVATION**  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**BASEMENT DEMOLITION PLAN**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: JS  
 DRAWN BY: KC  
 CHECKED BY: JS  
 DATE:  
 SCALE: 2016 As Indicated  
 SHEET NUMBER:

**SD101**

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









ELEC. MECH. FIRE. PLUMB. STRUCT. ANCH. REVIEWED BY: CIVIL. PROJECT FILE: C:\Users\Wjg\Documents\19401-Waltham Police Station Structural\_MR09.dwg

### GENERAL

- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH MECHANICAL, ARCHITECTURAL, ELECTRICAL, AND CIVIL DRAWINGS AND PROJECT SPECIFICATIONS.
- CODES AND STANDARDS:
  - MASSACHUSETTS STATE BUILDING CODE 8th EDITION
  - ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
  - AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
  - ASCE 7-05 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
- ALL SAFETY REGULATIONS SHALL BE FOLLOWED STRICTLY. METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIALS IS CONTRACTOR'S RESPONSIBILITY.
- UNLESS OTHERWISE NOTED, DETAILS SHOWN ON ANY DRAWING ARE TO BE CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS.
- EXISTING DIMENSIONS AND CONDITIONS MUST BE VERIFIED OR DETERMINED IN THE FIELD BY THE GENERAL CONTRACTOR. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PORTION OF THE WORK.
- THE CONTRACTOR SHALL PROVIDE A FIRE WATCH AT ALL TIMES AT AREAS WHERE FIELD WELDING AND/OR BURNING OPERATIONS ARE BEING DONE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY FIRE.

### DESIGN CRITERIA

- SNOW LOAD:
 

GROUNDED SNOW LOAD	Pg = 40 PSF
SNOW EXPOSURE FACTOR	Ce = 1.0
SNOW IMPORTANCE FACTOR	Is = 1.2
SNOW THERMAL FACTOR	Ct = 1.0
DESIGN ROOF SNOW LOAD	Pf = 34 PSF
- WIND LOAD:
 

BASIC WIND SPEED:	105 MPH
WIND IMPORTANCE FACTOR:	Iw = 1.15
WIND EXPOSURE CATEGORY:	B
BUILDING ENCLOSURE:	ENCLOSED
- EARTHQUAKE DESIGN DATA:
 

MAPPED SPECTRAL RESPONSE ACCELERATION:	Ss = 0.28,	S1 = 0.069
SITE CLASS:	C	
SEISMIC DESIGN CATEGORY:	C	
ANALYSIS PROCEDURE USED:	EQUIVALENT LATERAL FORCE	
EXISTING BUILDING FRAME SYSTEM:	ORDINARY STEEL MOMENT FRAMES	

### FOUNDATIONS

- ALLOWABLE BEARING CAPACITY, 2.0 KSF.
- ALL EXTERIOR BUILDING FOUNDATION INVERTS SHALL BE A MINIMUM OF 4'-0" BELOW FINISHED GRADE FOR FROST PROTECTION, UNLESS OTHERWISE SHOWN.
- COMPLETELY REMOVE ALL UNSUITABLE AND UNSATISFACTORY MATERIALS FROM BENEATH SLABS-ON-GRADE, FOOTINGS, FOUNDATIONS AND UTILITIES. REFER TO SPECIFICATION SECTION 312000.
- REFILL ALL EXCAVATIONS FOR SLABS-ON-GRADE, FOOTINGS AND FOUNDATIONS WITH ENGINEERED FILL OR SOIL MATERIAL FROM ON-SITE SOURCES MEETING THE REQUIREMENTS FOR ENGINEERED FILL. REFER TO SPECIFICATION SECTION 312000.
- ALL FILL MATERIALS WITHIN THE BUILDING AREA SHALL BE COMPACTED TO NOT LESS THAN 95-PERCENT OF THE ASTM 1557 MAXIMUM DRY DENSITY.
- A MINIMUM OF 12 INCHES OF COMPACTED ENGINEERED FILL SHALL BE PLACED BENEATH ALL FOUNDATION WALLS, FOOTINGS AND SLAB-ON-GRADE ELEMENTS, UNLESS OTHERWISE SHOWN. THE 12 INCH ENGINEERED FILL LAYER DIRECTLY BENEATH NEW FOOTINGS AND SLABS SHALL BE PLACED AND COMPACTED IN TWO LIFTS OF EQUAL THICKNESS. THE EXPOSED FINAL SUBGRADE SURFACE SHALL BE PROOF COMPACTED BY AN OBSERVED 4 TO 6 PASSES WITH APPROVED VIBRATORY COMPACTION EQUIPMENT. ANY LOOSE OR UNSUITABLE SOILS SHALL BE REMOVED AND REPLACED WITH COMPACTED ENGINEERED FILL. SUBGRADE AND ENGINEERED FILL COMPACTION IN/AROUND FOOTING INVERT ELEVATION SHALL BE SUBJECT TO GOOD ENGINEERING JUDGEMENT RELATIVE TO EXISTING SOIL AND GROUND WATER CONDITIONS.
- FINAL FOOTING EARTHWORK, FINAL FOOTING EXCAVATION, SUBGRADE PROOF COMPACTION AND MINIMUM 12 INCH LAYER OF COMPACTED ENGINEERED FILL PLACEMENT FOR AN INDIVIDUAL COLUMN FOOTING SHALL BE INITIATED/COMPLETED IN ONE WORKING DAY. PARTICULAR ATTENTION SHALL BE DIRECTED TO EARTHWORK PERFORMED ADJACENT TO AND BELOW EXISTING FOOTING INVERT ELEVATION. IF SIGNIFICANT UNDERMINING OF EXISTING FOOTINGS IS OBSERVED AS A RESULT OF NEW FOOTING EARTHWORK, THE CONTRACTOR SHALL STOP WORK AND PROPOSE TO THE ENGINEER ALTERNATIVE MEANS AND METHODS.
- GROUNDWATER LEVELS SHALL BE MAINTAINED A MINIMUM OF 2'-0" BELOW THE DEEPEST EXCAVATION ELEVATION.
- ALL WALLS RETAINING EARTH SHALL BE SHORED AGAINST LATERAL EARTH PRESSURE UNTIL FLOOR SLABS AND WALLS ABOVE ARE IN PLACE AND CONCRETE HAS ATTAINED ITS 28 DAY COMPRESSIVE STRENGTH.
- DO NOT PLACE CONCRETE ON FROZEN GROUND OR IN WATER. FOUNDATIONS SHALL NOT BE PARTLY SUPPORTED ON ROCK AND PARTLY ON SOIL. ALL NEW FOOTINGS SHALL BE SUPPORTED ON A MINIMUM 6 INCH LAYER OF COMPACTED ENGINEERED FILL.
- DO NOT PLACE BACKFILL UNBALANCED BY MORE THAN 2'-0" ON EITHER SIDE OF FOUNDATION WALLS AND PIERS, OR BY THE AMOUNT OF FINISH GRADE DIFFERENTIAL.
- PROVIDE TEMPORARY OR PERMANENT SUPPORTS TO PREVENT HORIZONTAL MOVEMENT OR VERTICAL SETTLEMENT OF EXISTING STRUCTURES, STREETS, SOIL OR UTILITIES ADJACENT TO OR ON THE PROJECT SITE. DESIGN OF SUCH SUPPORT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- PROVIDE CONTINUOUS CONTROL OF SURFACE AND SUBSURFACE WATER DURING CONSTRUCTION AS NECESSARY TO PERFORM FOUNDATION WORK IN THE DRY AND ON UNDISTURBED SUBGRADE MATERIAL.
- PROTECT FOUNDATIONS AND SLABS FROM FROST FOR A MINIMUM OF 28 DAYS.
- FOUNDATION CONSTRUCTION SHALL COMPLY WITH ALL OSHA REGULATIONS.

### DEMOLITION

- PERFORM ALL DEMOLITION PROCEDURES WITH CARE TO AVOID DAMAGE TO ADJACENT STRUCTURAL ELEMENTS & FINISHES.
- A SAW-CUT TO A MAXIMUM DEPTH OF 1/2-INCH SHALL BE MADE ALONG ALL BOUNDARIES OF CONCRETE TO BE DEMOLISHED.
- CONCRETE AND REINFORCING STEEL SURFACES EXPOSED BY DEMOLITION SHALL BE FREE OF RUST, OIL, SOLVENTS, GREASE, DIRT, DUST, BITUMEN, LOOSE PARTICLES, AND OTHER FOREIGN MATTER.
- WHERE NEW CONCRETE IS TO BE PLACED AGAINST EXISTING SURFACES, ANY EXPOSED REINFORCING BARS AND NEWLY EXPOSED CONCRETE SURFACES SHALL BE THOROUGHLY CLEANED BY GRIT BLASTING OR OTHER MECHANICAL ABRASION METHODS AS APPROVED BY THE ENGINEER.
- PROVIDE ANY SHORING NECESSARY FOR SAFETY AND PROTECTION OF EXISTING ELEMENTS TO REMAIN IN ORDER TO MAINTAIN LATERAL STABILITY OF THE BUILDING UNTIL ALL PERMANENT SHEARWALLS AND LATERAL BRACING ARE INSTALLED. CONTRACTOR IS RESPONSIBLE TO DESIGN AND PROVIDE ANY NECESSARY SHORING.

### CONCRETE

- ALL CONCRETE SHALL HAVE ULTIMATE COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED.
- ALL CONCRETE WORK SHALL CONFORM TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) AND TO "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301).
- ALL CONCRETE SUBJECT TO FREEZE-THAW SHALL BE AIR-ENTRAINED. VERIFY AIR CONTENT BEFORE PLACEMENT OF ALL CONCRETE.
- REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 (UNLESS OTHERWISE NOTED), OR ASTM A706 WHERE DOWELS ARE INDICATED TO BE WELDED.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
- MINIMUM CONCRETE COVER FROM FACE OF CONCRETE TO MAIN REINFORCING SHALL BE AS FOLLOWS UNLESS SHOWN OTHERWISE:
 

SLABS AND WALLS (NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND).....1"
FACE OF WALLS AND TOP OF SLABS EXPOSED TO EARTH, WEATHER, OR IMMERSED.....2"
FOOTINGS, BOTTOM OF WALLS AND STRUCTURAL SLABS CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.....3"
- BAR PLACING SHALL CONFORM TO CONCRETE REINFORCING STEEL INSTITUTE'S "RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS".
- REINFORCING BARS SHALL BE DETAILED IN ACCORDANCE WITH LATEST ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315)
- UNLESS INDICATED OTHERWISE ON THE DRAWINGS, REBAR SPLICES SHALL BE STAGGERED WITH NOT MORE THAN 50 PERCENT OF THE REBARS SPLICED WITHIN A REQUIRED LAP LENGTH. LOCATIONS OF ALL SPLICES SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
- REINFORCING BARS SHALL BE LAPPED ACCORDING TO SCHEDULE BELOW UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
 

CONCRETE COVER	1"	2" OR MORE
CONCRETE (PSI)	3000	4000
	3000	4000

BAR SIZE	#4	#5	#6	#7
	22"	34"	44"	54"
	19"	29"	37"	42"
	22"	27"	32"	35"
- NOTES:
  - LENGTHS ARE BASED ON fy = 60 KSI, NORMAL WEIGHT CONCRETE, UNCOATED BARS, WITH SPACING OVER 6 BAR DIAMETERS.
  - LAP SPlice LENGTHS ARE FOR CLASS "B" SPLICES. CLASS "A" SPLICES (77% OF THE TABLE VALUES) MAY BE USED WHERE APPROVED BY THE ENGINEER.
  - BARs THAT HAVE OVER 12" OF FRESH CONCRETE PLACED BELOW THE LAPS SHALL HAVE THEIR SPlice AND DEVELOPMENT LENGTHS MULTIPLIED BY 1.3.
  - MINIMUM DEVELOPMENT LENGTHS ARE 77% OF THE TABLE VALUES.

- WELDED WIRE FABRIC SHALL BE LAPPED 2 MESHES AT SIDES AND ENDS.
- ALL EXPOSED CORNERS OF CONCRETE SHALL HAVE A 3/4" x 45 DEGREE CHAMFER, UNLESS OTHERWISE NOTED.
- PROVIDE WELDED WIRE FABRIC IN ALL SLABS-ON-GRADE, CONCRETE SIDEWALKS AND RAMPS AS FOLLOWS UNLESS SHOWN OTHERWISE:
 

4" SLABS-ON-GRADE	6x6-W1.4xW1.4
5" SLABS-ON-GRADE	6x6-W2.9xW2.9
- SLABS-ON-GRADE SHALL BE PLACED IN ALTERNATE STRIPS BOUNDED BY CONSTRUCTION AND CONTROL JOINTS. ALLOW 72 HOURS TO ELAPSE BETWEEN ADJACENT CONCRETE PLACEMENTS.
- MAXIMUM LENGTH OF CONCRETE WALL POUR SHALL BE 40 FEET. CONSTRUCTION JOINTS SHALL NOT BE LOCATED AT ANY CORNER OF WALLS. CONCRETE SHALL BE POURED IN LEVEL COURSES FULL HEIGHT. CONCRETE WALLS SHALL BE PLACED IN ALTERNATE SECTIONS BETWEEN VERTICAL CONSTRUCTION JOINTS.
- FOR LOCATIONS OF VENTS, PIPES, OPENINGS, INSERTS, HANGERS, EQUIPMENT PADS, SUPPORTS, AND FLOOR DRAINS, CONSULT MECHANICAL DRAWINGS.
- CUT NO BARS AND OMIT NO BARS BECAUSE OF SLEEVE OR DUCT OPENINGS IN FLOORS OR WALLS. BARS MAY BE MOVED ASIDE WITHOUT CHANGING THE DISTANCE FROM THE FACE OF CONCRETE. BEND NO BARS IN FIELD WITHOUT APPROVAL OF THE ENGINEER.
- CONCRETE SLABS, INCLUDING CONCRETE PLACED ON STEEL DECK, SHALL BE PLACED SO THAT THE SLAB THICKNESS IS AT NO POINT LESS THAN THAT INDICATED ON THE DRAWINGS. THIS WILL REQUIRE THAT THE SLAB NOT BE CAST DEAD LEVEL WHERE SUPPORTING BEAMS, GIRDERS, OR TRUSSES HAVE AN UPWARD CAMBER. PROVIDE ADDITIONAL CONCRETE AS REQUIRED TO COMPENSATE FOR DEFLECTIONS OF STEEL BEAMS AND DECK.
- PROVIDE THE NECESSARY ACCESSORIES TO HOLD REINFORCEMENT SECURELY IN POSITION. MINIMUM REQUIREMENTS SHALL BE: HIGH CHAIRS, 4'-0" O.C. WITH CONTINUOUS #5 SUPPORT BAR; SLAB BOLSTERS, CONTINUOUS AND 3'-6" O.C.; BEAM BOLSTERS, 5'-0" O.C.
- WHERE REINFORCEMENT IS NOT SHOWN ON DRAWINGS, PROVIDE REINFORCEMENT IN ACCORDANCE WITH THE NEAREST APPLICABLE DETAILS AS DETERMINED BY THE ENGINEER. IN NO CASE SHALL REINFORCEMENT BE LESS THAN THE MINIMUM REINFORCEMENT PERMITTED BY THE APPLICABLE CODES, AND NOT LESS THAN THE FOLLOWING:
  - BEAM STIRRUPS: #3 @ 12" O.C.
  - BEAM STIRRUPS SUPPORTS: (1) - #5 @ EACH STIRRUP BEND
  - FACE REINFORCEMENT IN BEAMS OR PORTIONS OF BEAMS: #4@12" EACH FACE
  - STRUCTURAL SLABS: 0.0020 x GROSS CONCRETE AREA IN EACH DIRECTION
  - CONCRETE WALLS: 0.0025 x GROSS CONCRETE AREA IN EACH DIRECTION
- DOWELS SHALL MATCH SIZE AND NUMBER OF MAIN BARS, UNLESS OTHERWISE NOTED.
- NO PIPES, CONDUITS OR SIMILAR NON-STRUCTURAL ELEMENTS SHALL BE EMBEDDED IN THE SLAB WITHOUT APPROVAL OF THE ENGINEER.

### MASONRY

- ALL MASONRY CONSTRUCTION SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530) AND TO "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530.1)
- ALL MASONRY UNITS SHALL CONFORM TO ASTM C90 TYPE 1, MINIMUM Fm = 2000 PSI.
- ALL GROUT SHALL CONFORM TO ASTM C476, FINE OR COARSE GROUT, MINIMUM COMPRESSIVE STRENGTH, 3000 PSI.
- ALL MORTAR FOR CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C270, TYPE S.
- MORTAR FOR BRICK VENEER SHALL CONFORM TO ASTM C270, TYPE N.
- REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60, DEFORMED.
- ALL CORES OF MASONRY CONTAINING REINFORCING BARS AND ALL BOND BEAMS SHALL BE FILLED SOLID WITH GROUT. VERTICAL BARS SHALL BE LOCATED AT THE CENTER OF WALL. FILLING CORES AND BOND BEAMS WITH MORTAR IS STRICTLY PROHIBITED. EXERCISE CARE TO KEEP CORES FREE FROM MORTAR DROPPINGS.
- VERTICAL AND HORIZONTAL REINFORCING SHALL BE SECURELY HELD IN PROPER ALIGNMENT AND POSITION DURING GROUTING OPERATIONS BY USING HOT-DIPPED GALVANIZED REBAR POSITIONERS.
- GROUT SHALL BE PLACED USING LOW-LIFT GROUTING PROCEDURES CONFORMING TO ACI 530 REQUIREMENTS. THE MAXIMUM GROUT LIFT SHALL NOT EXCEED 4'-8" ALTERNATE GROUT POURS 1 1/2' BELOW TOP COURSE OF POUR. REINFORCING SHALL BE SPLICED A MINIMUM OF 48 BAR DIAMETERS.
- REINFORCEMENT FOR CONCRETE MASONRY BOND BEAMS SHALL BE (2)- #5 BARS CONTINUOUS, UNLESS OTHERWISE NOTED.
- WHERE STEEL BEAMS, STEEL JOISTS, OR LINTELS ARE SUPPORTED ON CONCRETE MASONRY, THE MASONRY SHALL BE FILLED SOLID WITH GROUT CONTINUOUSLY FOR TWO COURSES UNDER BEAM, JOIST, OR LINTEL. FILL AFTER STEEL HAS BEEN ERECTED AND PLUMBED.
- ALL BEAMS SUPPORTED ON MASONRY SHALL BEAR ON A BEARING PLATE 6 INCHES x 1/2 INCH x (FLANGE WIDTH PLUS 4 INCHES) WITH:
 

6" CMU UP TO 10'-0" UNSUPPORTED LENGTH:	#5 @ 32" ON CENTER
8" CMU UP TO 10'-0" UNSUPPORTED LENGTH:	#5 @ 32" ON CENTER
8" CMU UP TO 20'-0" UNSUPPORTED LENGTH:	#5 @ 16" ON CENTER
12" CMU:	#6 @ 8" ON CENTER

 PROVIDE ADDED BARS AT WALL ENDS, AND CORNERS AS SHOWN. PROVIDE MATCHING DOWELS, LAP 40 BAR DIAMETERS TO VERTICAL BARS.
- PROVIDE CUT OUTS IN EXISTING MASONRY WALL FOR THE NEW DUCT WORK. COORDINATE WITH MECHANICAL AND PLUMBING DRAWINGS.

### STRUCTURAL STEEL

- STRUCTURAL STEEL SHALL CONFORM TO "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (AISC); "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS & BRIDGES" (AISC); AND "STRUCTURAL WELDING CODE - STEEL" (AWS D1.1).
- STRUCTURAL STEEL SHALL BE DETAILED IN ACCORDANCE WITH "DETAILING FOR STEEL CONSTRUCTION" (AISC).
- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:
  - ROLLED BEAM SHAPES.....ASTM A992 GRADE 50 (Fy=50 KSI)
  - ANGLES AND PLATES.....ASTM A36 (Fy = 36 KSI)
  - TUBES.....ASTM A500 GRADE B (Fy = 46 KSI)
  - PIPES.....ASTM A501; OR ASTM A53, TYPE E OR S GRADE B
  - ANCHOR RODS.....ASTM F1554-99 (36 KSI MIN.)
  - HIGH STRENGTH BOLTS.....ASTM A325
  - THREADED ROD.....ASTM A449 GRADE 81 FOR 1'-0" AND UNDER  
ASTM A449 GRADE 92 FOR OVER 1'-0"
- ANCHOR BOLTS, LEVELING PLATES, AND BEARING PLATES SHALL BE SET BY TEMPLATES.
- BOLTED CONNECTIONS SHALL BE AS FOLLOWS:
  - MINIMUM BOLT DIAMETER - 3/4"; TWO BOLTS, MINIMUM.
  - STANDARD, OVERSIZED, OR HORIZONTAL SHORT SLOTTED HOLES IN WEBS OF BEAMS.
  - SHEAR CONNECTIONS FOR MOMENT CONNECTED MEMBERS - FRICTION TYPE HIGH STRENGTH BOLTS IN SINGLE SHEAR.
  - SHEAR CONNECTIONS FOR OTHER MEMBERS - SIMPLE SHEAR CONNECTIONS WITH EITHER FRICTION TYPE HIGH STRENGTH BOLTS IN SINGLE SHEAR OR BEARING TYPE HIGH STRENGTH BOLTS (THREADS INCLUDED IN SHEAR PLANE) IN SINGLE OR DOUBLE SHEAR.
  - SIMPLE SHEAR CONNECTIONS SHALL BE CAPABLE OF END ROTATION PER AISC REQUIREMENTS FOR "UNRESTRAINED MEMBERS."
- BEAM CONNECTIONS, UNLESS NOTED OTHERWISE, SHALL PROVIDE CONNECTION CAPACITY AS FOLLOWS:
  - NON-COMPOSITE BEAMS, SUPPORT A REACTION "R" EQUAL TO 1/2 THE TOTAL UNIFORM LOAD CAPACITY OF BEAM FOR A GIVEN SHAPE, SPAN, AND GRADE OF STEEL PER "ALLOWABLE LOADS ON BEAMS" PART 2 AISC MANUAL OF STEEL CONSTRUCTION, 9TH EDITION.
  - ADD TO "R" THE LOADS OR REACTIONS OF MEMBERS SUPPORTED BY THE BEAM NEAR SUPPORTS AND FORCES FROM LATERAL BRACING MEMBERS.
- WELDED CONNECTIONS SHALL BE MADE BY AWS CERTIFIED WELDERS USING FILLER METAL CONFORMING TO E70XX WITH LOW HYDROGEN.
- STRUCTURAL STEEL ENCASED IN MASONRY SHALL BE COVERED WITH MASTIC COATING PER SPECIFICATIONS.
- NO FIELD CUTTING OF STRUCTURAL STEEL OR FIELD MODIFICATIONS OF STRUCTURAL STEEL SHALL BE DONE WITHOUT PRIOR WRITTEN APPROVAL BY ENGINEER FOR EACH SPECIFIC CASE.
- MOMENT CONNECTIONS INDICATED IN PLANS SHALL BE DESIGNED FOR FULL MOMENT CAPACITY OF MEMBER PER ASCE 7 AND AISC. (INCLUDE SEISMIC PROVISION). STEEL FABRICATOR MUST PROVIDE CALCULATIONS AND SHOP DETAILS FOR APPROVAL PREPARED AND SIGNED BY A STRUCTURAL ENGINEER REGISTERED IN MASSACHUSETTS.
- GENERAL CONTRACTOR SHALL COAT ALL STEEL COLUMNS AND BASE PLATES BELOW TOP OF SLABS WITH ASPHALTIC PAINT. PRIOR TO POURING BOX OUT CONCRETE.
- ALL EXPOSED EXTERIOR STEEL FRAMING SHALL BE HOT DIP GALVANIZED PER ASTM A123.

### METAL DECK

- STEEL DECK SHALL BE FORMED FROM STEEL SHEETS CONFORMING TO ASTM A653, GRADE 33 OR HIGHER, TYPE B. BEFORE FORMING, SHEETS SHALL BE COATED WITH ZINC COATING CONFORMING TO ASTM A653, G-90 COATING.
- BEAR DECK A MINIMUM OF 2" ON STEEL FRAMING AND 4" ON MASONRY. WHEN TWO UNITS ABUT, WELD BOTH TO THE SUPPORT.
- STEEL DECK UNITS SHALL SPAN THREE OR MORE SUPPORTS WHERE POSSIBLE. SINGLE SPAN DECK UNITS ARE NOT ACCEPTABLE.
- ROOF DECK UNITS SHALL BE WELDED AT ALL SUPPORTS WITH 5/8" DIAMETER FUSION WELDS AT EACH DECK VALLEY (6" O.C. MAX.). SIDE LAPS SHALL BE FASTENED IN THE FIELD WITH #10 TEK SCREWS AT 12" O.C. MAXIMUM AND 6" O.C. IN THE CORNERS AND EDGE STRIP ZONE. (EDGE STRIP ZONE IS DEFINED AS EDGE STRIP AREA WITH A WIDTH OF 10 PERCENT OF LEAST HORIZONTAL DIMENSION OR 40 PERCENT OF EAVE HEIGHT, WHICH EVER IS SMALLER, BUT NOT LESS THAN 4 PERCENT OF LEAST HORIZONTAL DIMENSION OR 3 FEET)
- FLOOR DECK UNITS SHALL BE WELDED AT ALL SUPPORTS WITH 5/8" DIAMETER FUSION WELDS SPACED AT EACH DECK VALLEY. SIDE LAPS SHALL BE FASTENED WITH #10 TEK SCREWS AT 2'-0" O.C. MAXIMUM.
- NOTHING SHALL BE HUNG FROM THE METAL DECK, UNLESS APPROVED BY THE ENGINEER.
- ALL OPENINGS IN METAL DECK WILL REQUIRE ADDITIONAL FRAMING AS SHOWN ON THE DRAWINGS.
- FOR DECK OPENINGS OF 13" OR LESS, NOT ADJACENT TO SUPPORTS, PLACE A 14 GAGE SHEET ON TOP OF THE DECK (OVERLAP THE OPENING A MINIMUM OF 6 INCHES ON ALL SIDES). SCREW OR WELD ALL AROUND TO EACH CELL.

### MECHANICAL EQUIPMENT SUPPORTS

- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL INDICATING LOCATION, FRAMING, AND SUPPORT DETAILS OF ALL EQUIPMENT, INCLUDING DIMENSIONS, DETAILS, AND OPERATING AND DESIGN LOADS. NO EQUIPMENT SHALL BE SET IN PLACE WITHOUT SUCH APPROVAL.

### STEEL JOISTS

- GRADE OF STEEL, DESIGN, FABRICATION, AND ERECTION OF K-SERIES STEEL JOISTS SHALL CONFORM TO "STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS, K-SERIES" AND "RECOMMENDED CODE OF STANDARD PRACTICE FOR STEEL JOISTS", BOTH ADOPTED BY STEEL JOIST INSTITUTE.
- GRADE OF STEEL, DESIGN, FABRICATION, AND ERECTION OF LH-SERIES AND DLH-SERIES STEEL JOISTS SHALL CONFORM TO "STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS, LH-SERIES AND DEEP LONGSPAN STEEL JOISTS, DLH-SERIES, AND "RECOMMENDED CODE OF STANDARD PRACTICE FOR STEEL JOISTS", BOTH ADOPTED BY STEEL JOIST INSTITUTE.
- WELD JOISTS TO STRUCTURAL STEEL SHAPE AND PLATE SUPPORTS WITH 2" OF 1/8" FILLET WELDS EACH SIDE OF JOISTS, UNLESS NOTED OTHERWISE.
- ROOF JOISTS AND THEIR CONNECTIONS SHALL BE DESIGNED FOR A NET UPLIFT LOAD OF 25 LBS. PER SQUARE FOOT. PROVIDE UPLIFT BRIDGING AT FIRST PANEL POINT OF ALL ROOF JOISTS.
- ROOF JOISTS SHALL SUPPORT AN ADDITIONAL 300 LB CONCENTRATED LOAD CONCURRENT WITH LIVE LOAD AT ANY PANEL POINT. THE CONTRACTOR SHALL REINFORCE THE JOIST FOR ANY CONCENTRATED LOAD OF MORE THAN 100 POUNDS PER THE TYPICAL DETAILS.
- ROOF JOIST CONNECTIONS SHALL BE DESIGNED TO TAKE AND TRANSFER 600 LBS. LATERAL FORCE PER CONNECTION. (PERPENDICULAR TO LENGTH OF JOIST)

### LINTELS AT DOORS AND WINDOWS

- FOR ALL OPENINGS IN INTERIOR AND EXTERIOR CMU WALLS UP TO 6'-4" WIDE, CMU LINTEL BEAMS WITH (2)- #5 BARS AND 8" MINIMUM END BEARING SHALL BE USED, UNLESS OTHERWISE NOTED.
- FOR ALL OPENINGS IN INTERIOR AND EXTERIOR BRICK WALLS, PROVIDE LINTEL ANGLES FOR EACH 4 INCH WALL THICKNESS AS FOLLOWS: (LINTELS CONSISTING OF MORE THAN ONE ANGLE SHALL BE BOLTED OR WELDED TOGETHER)
 

SPANS UP TO 5'-0"	L4" x 3 1/2" x 5/16" WITH 6" END BEARING
SPANS 5'-1" TO 7'-0"	L5" x 3 1/2" x 5/16" WITH 8" END BEARING
SPANS 7'-1" TO 8'-0"	L6" x 4" x 3/8" WITH 10" END BEARING
SPANS 8'-1" AND LARGER	W8x24 & 5/16" PLATE WELDED TOGETHER WITH 10" END BEARING
- ALL STEEL LINTELS EXPOSED TO WEATHER SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.

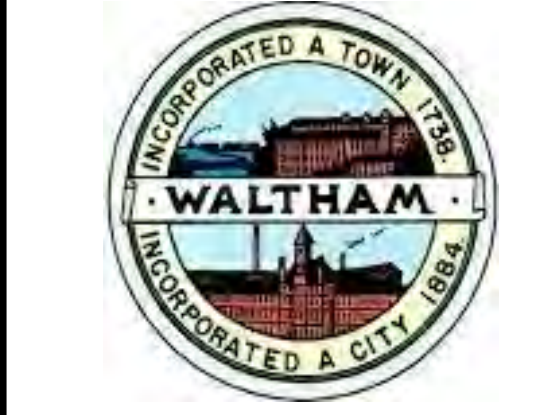
### POST INSTALLED ANCHORS

- POST-INSTALLED ANCHORS SHALL BE OF THE TYPE AND SIZE SHOWN ON THE DRAWINGS, OR APPROVED EQUAL.
- INSTALL ANCHORS ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS, PAYING SPECIAL ATTENTION TO CLEANING OF HOLES TO ASSURE DEVELOPMENT OF ANCHOR STRENGTH.
- CONTRACTOR SHALL ARRANGE FOR SITE VISITS BY THE ANCHOR MANUFACTURER BEFORE AND PERIODICALLY DURING CONSTRUCTION TO REVIEW INSTALLATION PRACTICES.
- USE HILTI RE-500 FOR ALL POST-INSTALLED ANCHORS IN CONCRETE/SOLID CMU AND HILTI HIT-HY-70 IN OLLOW CMU, UNLESS NOTED OTHERWISE. DO NOT LOAD OR DISTURB POST-INSTALLED ANCHORS UNTIL EPOXY GROUT IS FULLY CURED.
- EMBED ANCHORS TO THE PROPER "STANDARD" EMBEDMENT DEPTH AS PUBLISHED BY THE MANUFACTURER'S LITERATURE EXCEPT AS SHOWN OTHERWISE ON THE DRAWINGS.
- EMBED REBAR DOWELS TO THE FOLLOWING DEPTHS UNLESS SHOWN OTHERWISE ON THE DRAWINGS:
 

BAR SIZE	MINIMUM EMBEDMENT DEPTH
#4	6"
#5	9"
#6	9 1/2"
- POST-INSTALLED ANCHORS SHALL BE FIELD TESTED AS FOLLOWS:
  - BOLTS: LOAD TEST TO 150% OF ALLOWABLE CAPACITY
  - REBARS: LOAD TEST TO 150% OF YIELD STRENGTH
  - LOAD TEST 10% OF POST-INSTALLED ANCHORS IN LOCATIONS DIRECTED BY THE ENGINEER.

REVISIONS		
Number	Description	Date

ISSUED FOR BID



**WALTHAM POLICE STATION RENOVATION**  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

### GENERAL NOTES

PROJECT NUMBER: 19401.01  
 DESIGNED BY: JS  
 DRAWN BY: KC  
 CHECKED BY: JS  
 DATE: July-Aug, 2016  
 SCALE: 12" = 1'-0"  
 SHEET NUMBER:

S001



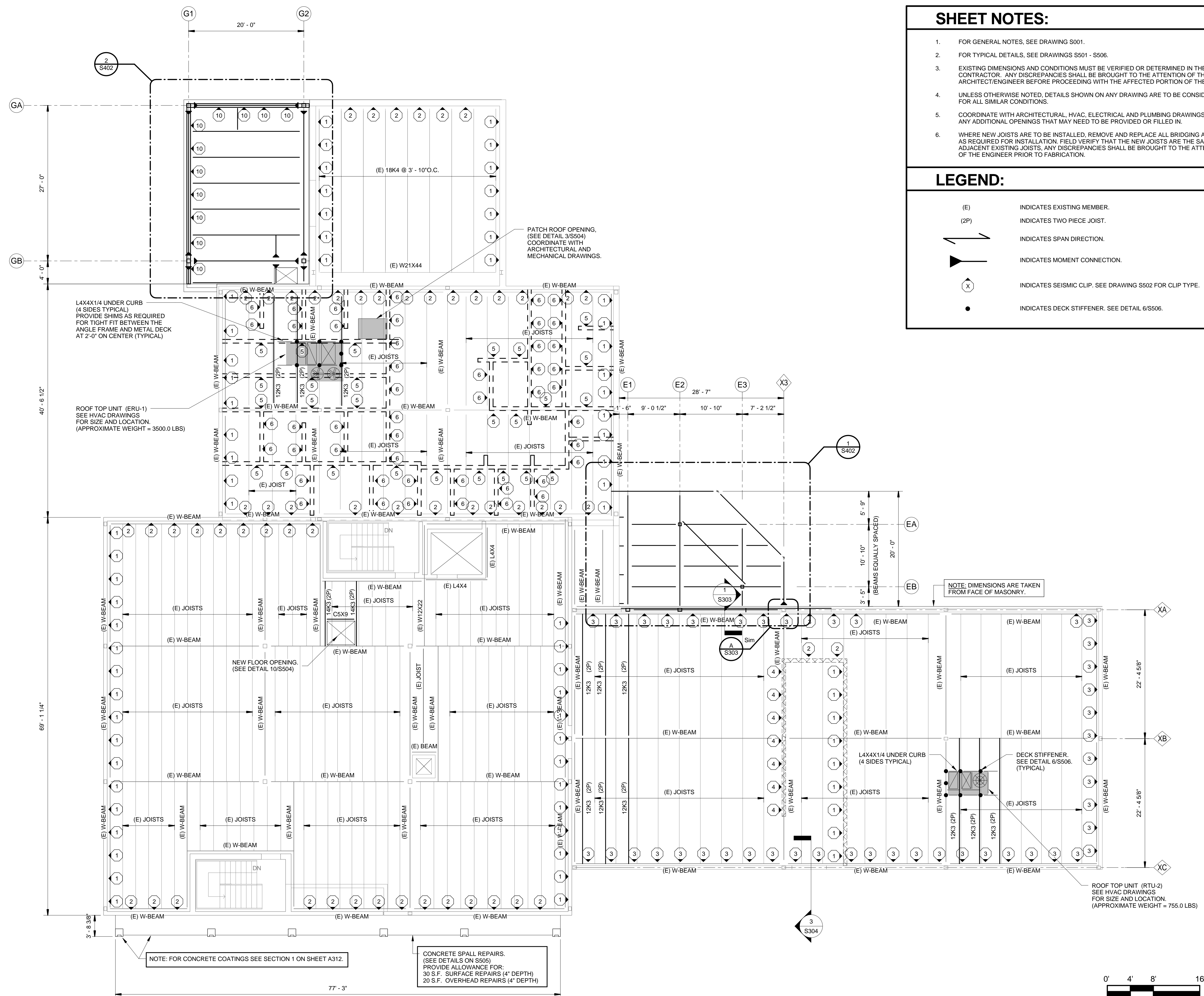








PROJECT FILE: C:\Users\Wjg\Documents\19401\Waltham Police Station Structural\_MRF.dwg  
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 REVIEWED BY: CIVIL: ARCH: STRU: PLUM: FIRE: MECH: ELEC:



**SHEET NOTES:**

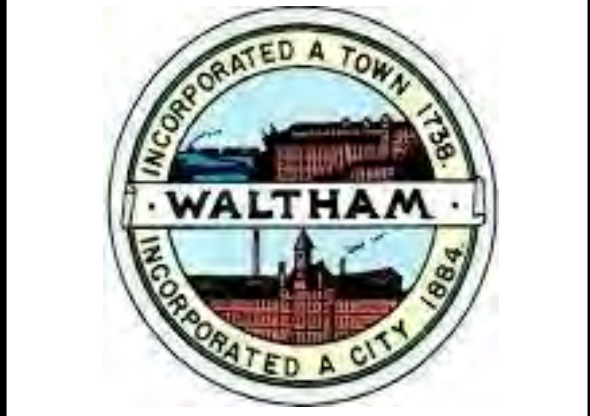
1. FOR GENERAL NOTES, SEE DRAWING S001.
2. FOR TYPICAL DETAILS, SEE DRAWINGS S501 - S506.
3. EXISTING DIMENSIONS AND CONDITIONS MUST BE VERIFIED OR DETERMINED IN THE FIELD BY THE CONTRACTOR. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PORTION OF THE WORK.
4. UNLESS OTHERWISE NOTED, DETAILS SHOWN ON ANY DRAWING ARE TO BE CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS.
5. COORDINATE WITH ARCHITECTURAL, HVAC, ELECTRICAL AND PLUMBING DRAWINGS FOR ANY ADDITIONAL OPENINGS THAT MAY NEED TO BE PROVIDED OR FILLED IN.
6. WHERE NEW JOISTS ARE TO BE INSTALLED, REMOVE AND REPLACE ALL BRIDGING AND OR BRACING AS REQUIRED FOR INSTALLATION. FIELD VERIFY THAT THE NEW JOISTS ARE THE SAME DEPTH AS ADJACENT EXISTING JOISTS; ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO FABRICATION.

**LEGEND:**

- (E) INDICATES EXISTING MEMBER.
- (2P) INDICATES TWO PIECE JOIST.
- ↔ INDICATES SPAN DIRECTION.
- ▶ INDICATES MOMENT CONNECTION.
- ⊗ INDICATES SEISMIC CLIP. SEE DRAWING S502 FOR CLIP TYPE.
- INDICATES DECK STIFFENER. SEE DETAIL 6/S506.

REVISIONS		
Number	Description	Date

ISSUED FOR BID



**WALTHAM POLICE STATION RENOVATION**

155 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS

**SECOND FLOOR FRAMING PLAN**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: JS  
 DRAWN BY: KC  
 CHECKED BY: JS  
 DATE: July-Aug. 2016  
 SCALE: As indicated  
 SHEET NUMBER:

**S103**



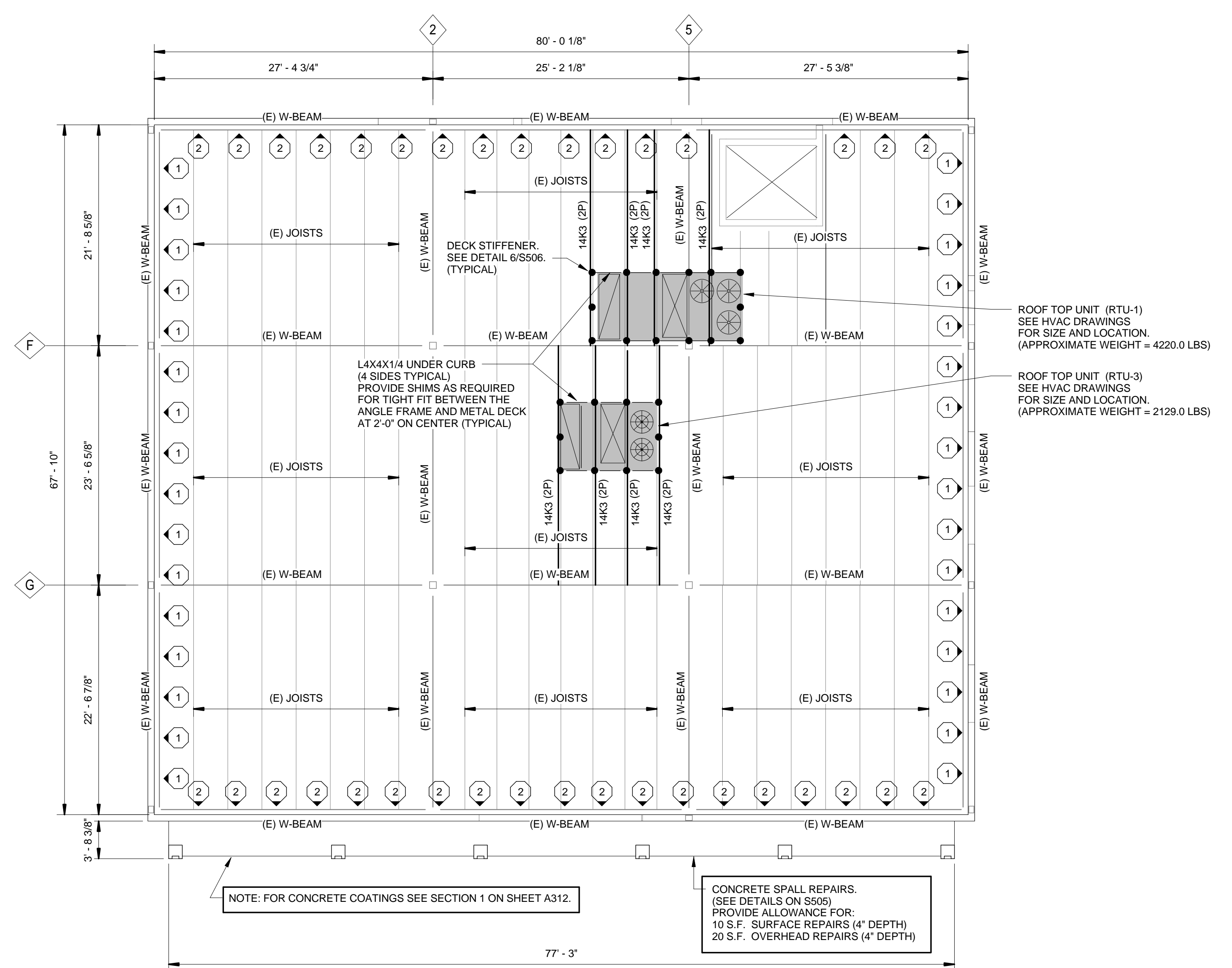
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 REVIEWED BY: CIVIL: ARCH: STRU: PLUM: FIRE: MECH: ELEC:

**SHEET NOTES:**

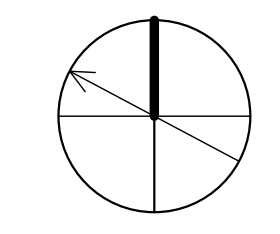
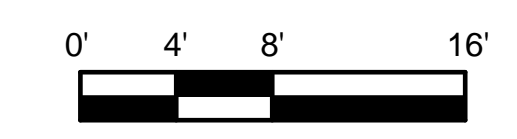
1. FOR GENERAL NOTES, SEE DRAWING S001.
2. FOR TYPICAL DETAILS, SEE DRAWINGS S501 - S506.
3. EXISTING DIMENSIONS AND CONDITIONS MUST BE VERIFIED OR DETERMINED IN THE FIELD BY THE CONTRACTOR. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PORTION OF THE WORK.
4. UNLESS OTHERWISE NOTED, DETAILS SHOWN ON ANY DRAWING ARE TO BE CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS.
5. COORDINATE WITH ARCHITECTURAL, HVAC, ELECTRICAL AND PLUMBING DRAWINGS FOR ANY ADDITIONAL OPENINGS THAT MAY NEED TO BE PROVIDED OR FILLED IN.
6. WHERE NEW JOISTS ARE TO BE INSTALLED, REMOVE AND REPLACE ALL BRIDGING AND OR BRACING AS REQUIRED FOR INSTALLATION. FIELD VERIFY THAT THE NEW JOISTS ARE THE SAME DEPTH AS ADJACENT EXISTING JOISTS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO FABRICATION.

**LEGEND:**

- (E) INDICATES EXISTING MEMBER.
- (2P) INDICATES TWO PIECE JOIST.
- ↔ INDICATES SPAN DIRECTION.
- (X) INDICATES SEISMIC CLIP. SEE DRAWING S502 FOR CLIP TYPE.
- INDICATES DECK STIFFENER. SEE DETAIL 6/S506.



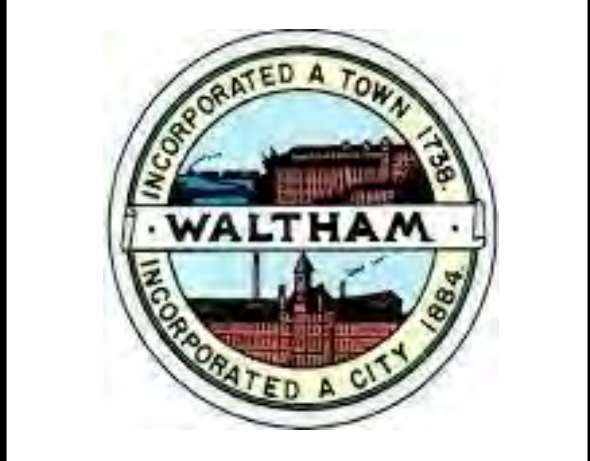
**1 ROOF FRAMING PLAN**  
SCALE: 1/8" = 1'-0"



**CDR MAGUIRE**  
Architects / Engineers / Planners  
211 Congress Street, 11th Floor  
Boston, Massachusetts 02110  
TEL: (617) 778-1440  
www.cdrmagine.com

REVISIONS		
Number	Description	Date

ISSUED FOR BID



**WALTHAM POLICE STATION RENOVATION**  
155 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS

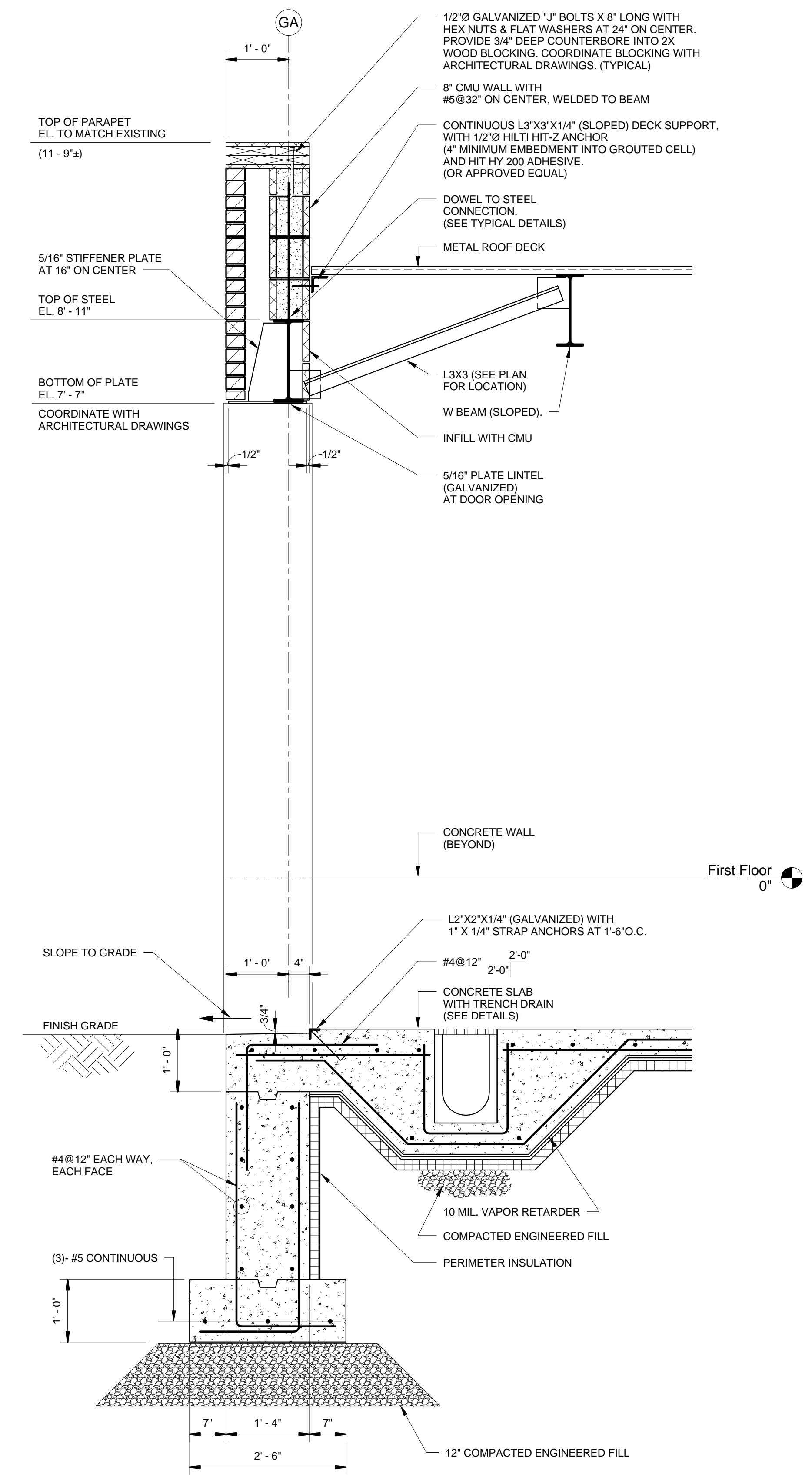
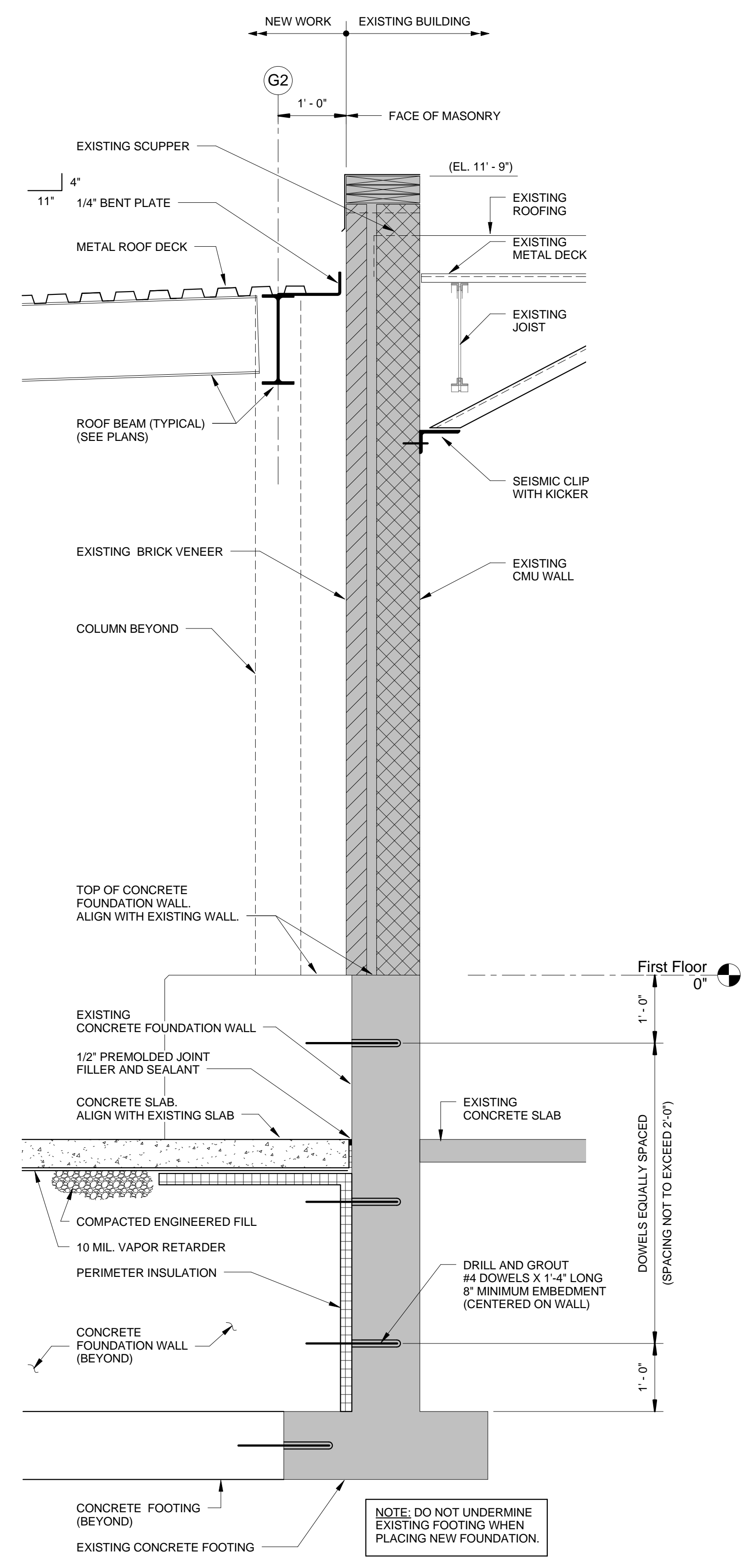
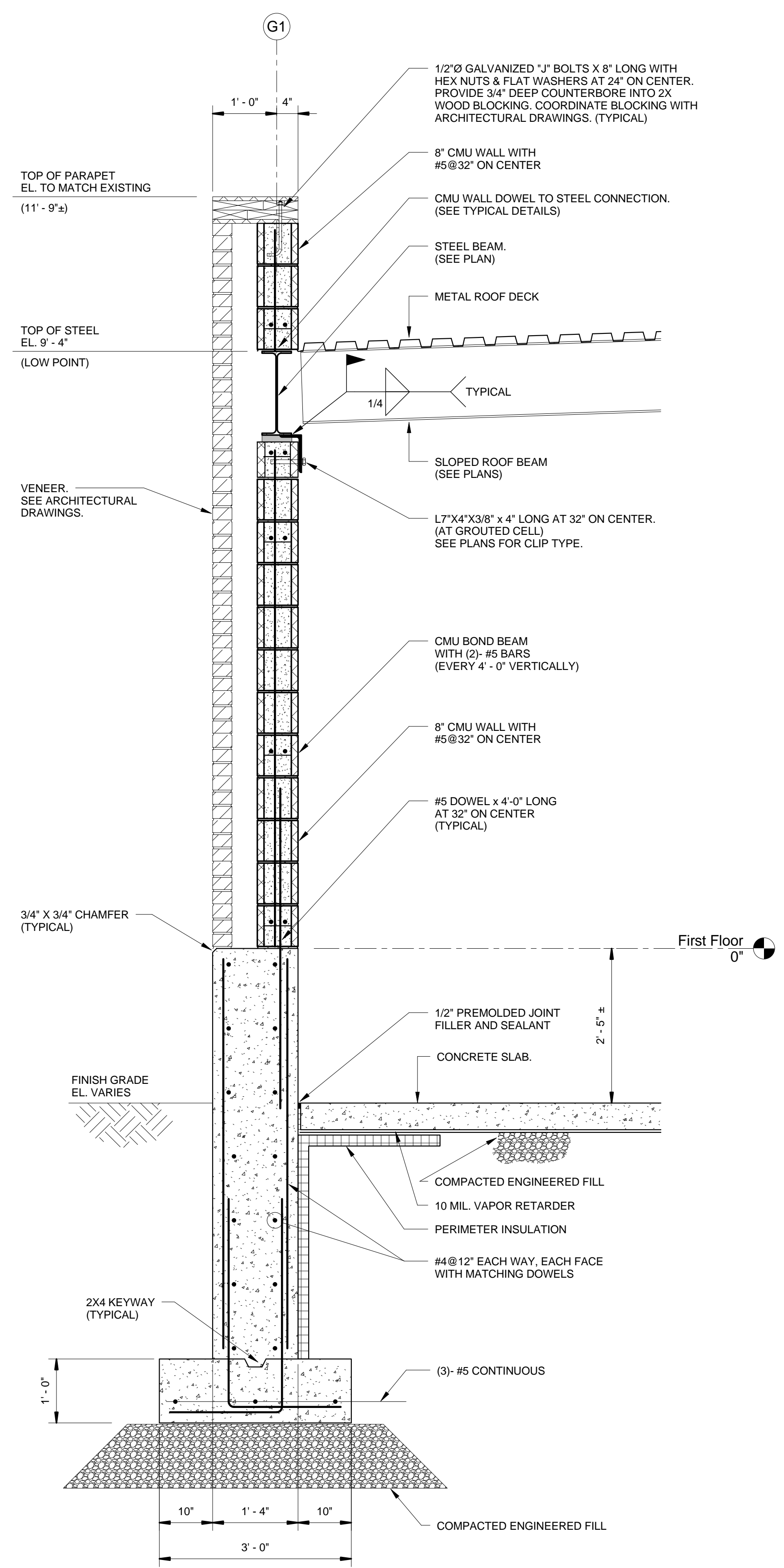
**ROOF FRAMING PLAN**

PROJECT NUMBER: 19401.01  
DESIGNED BY: JS  
DRAWN BY: KC  
CHECKED BY: JS  
DATE:  
SCALE: 2016 As Indicated  
SHEET NUMBER:

**S104**

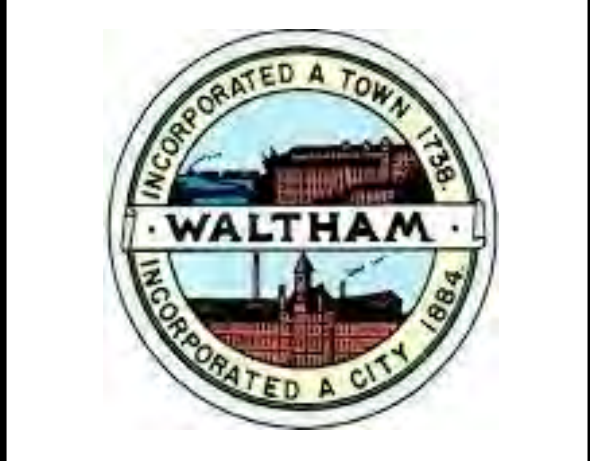


ELEC. MECH. FIRE. PLUMB. ARCH. STRUC. CIVIL. REVIEWED BY: DATE: 7/14/2016 1:53:31 PM PLOTTED: 7/14/2016 1:53:31 PM PROJECT FILE: C:\Users\magnif\Documents\19401\Waltham Police Station\STRUCTURAL\Magnif.dwg



REVISIONS		
Number	Description	Date

ISSUED FOR BID



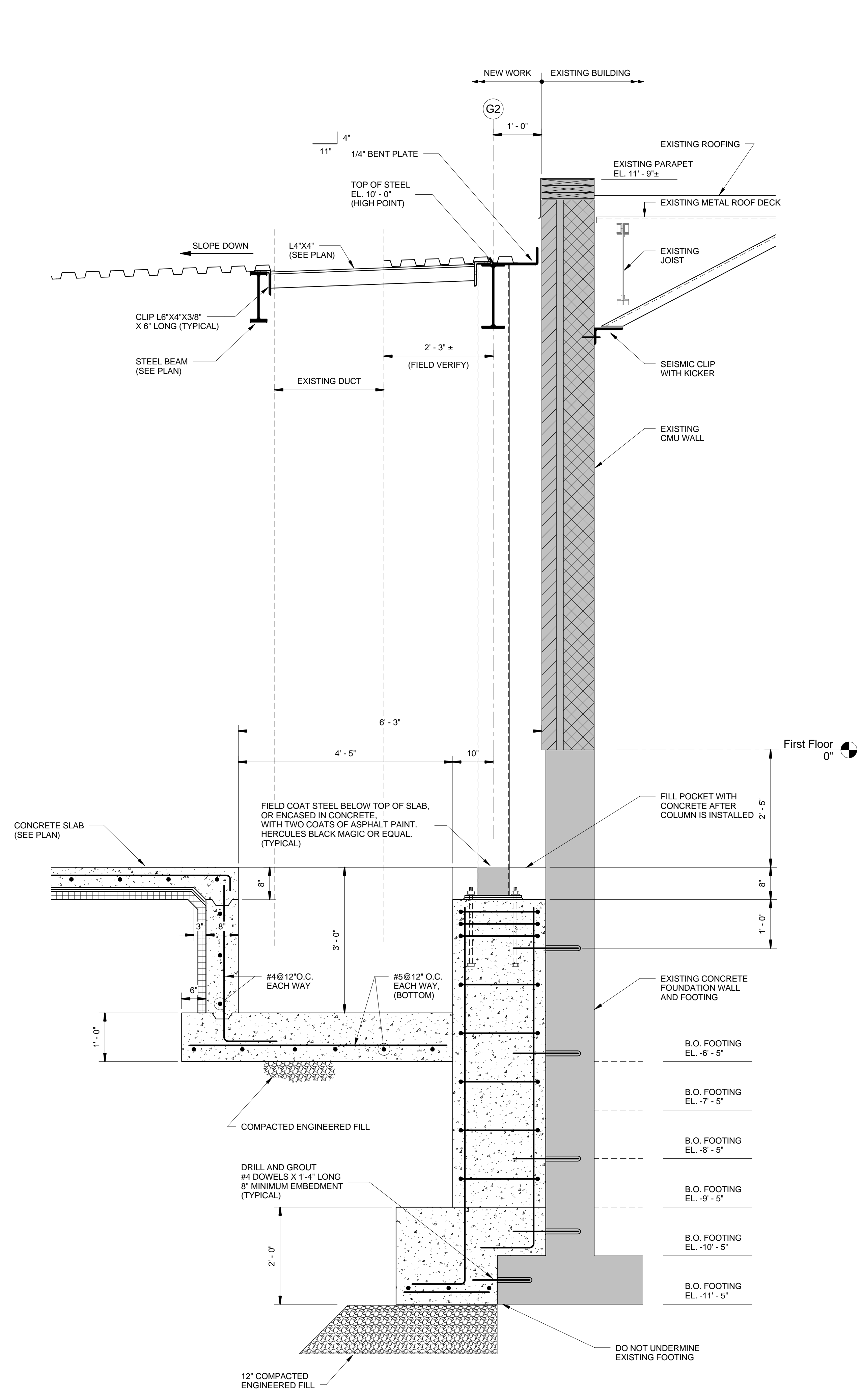
**WALTHAM POLICE STATION RENOVATION**  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**SECTION AND DETAILS**  
 PROJECT NUMBER: 19401.01  
 DESIGNED BY: JS  
 DRAWN BY: KC  
 CHECKED BY: JS  
 DATE: July-Aug. 2016  
 SCALE: 3/4" = 1'-0"

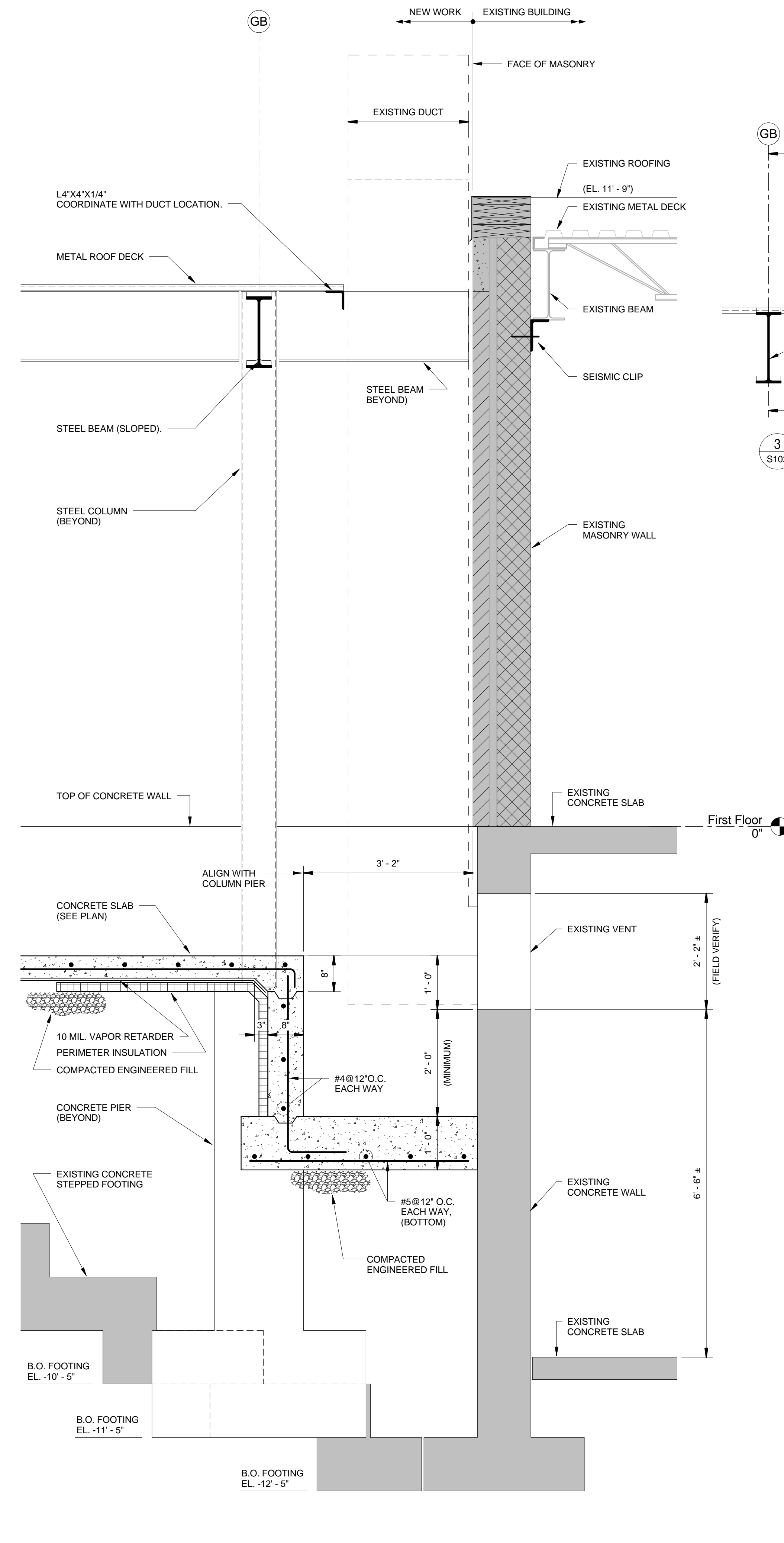
SHEET NUMBER:  
**S301**  
 SHEET 13 OF 157



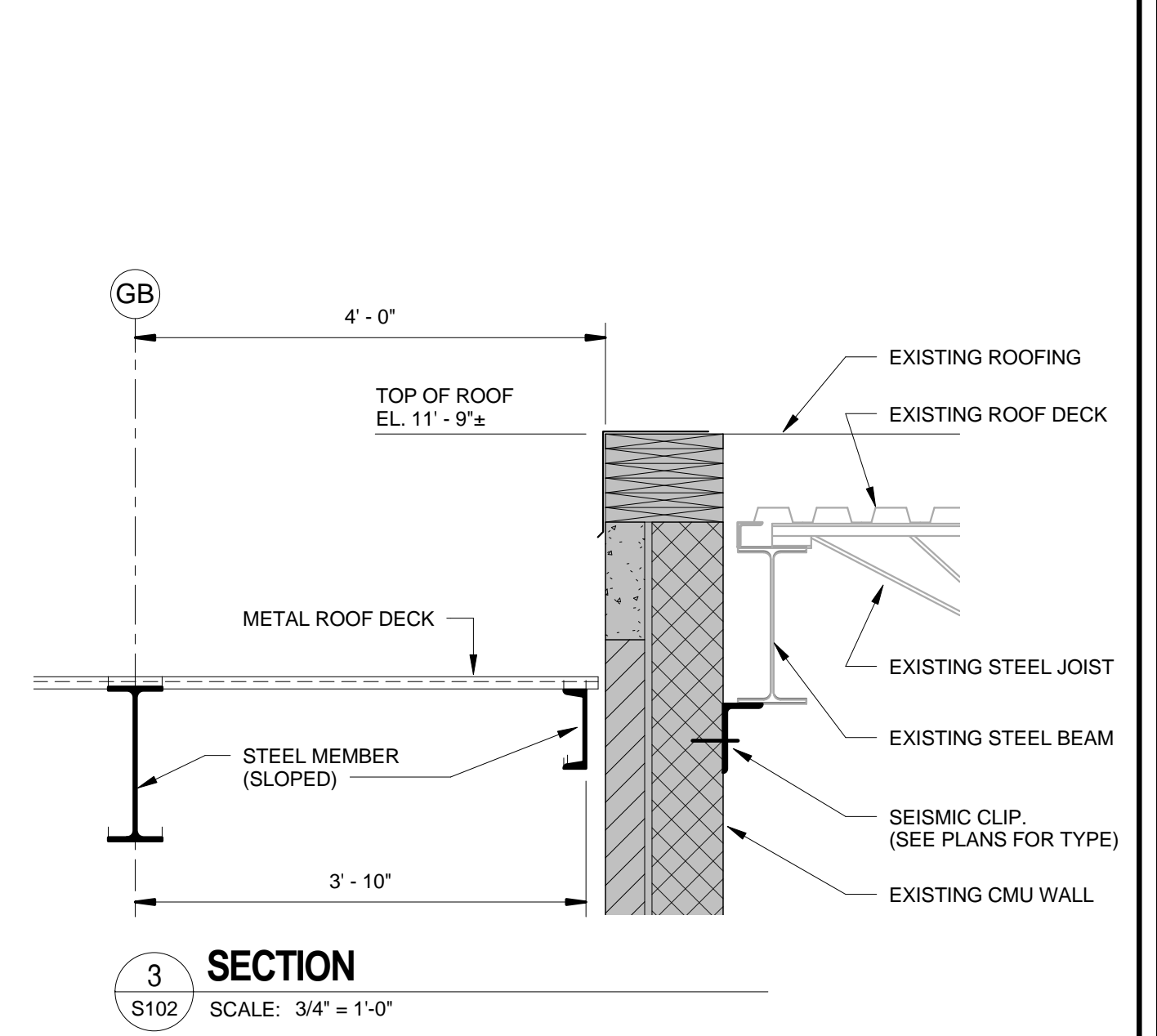
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**1 SECTION**  
S101 SCALE: 3/4" = 1'-0"



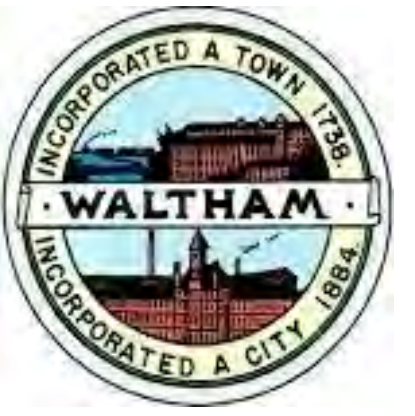
**2 SECTION**  
S101 SCALE: 3/4" = 1'-0"



**3 SECTION**  
S102 SCALE: 3/4" = 1'-0"

REVISIONS		
Number	Description	Date

**ISSUED FOR BID**



**WALTHAM POLICE STATION RENOVATION**

155 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS

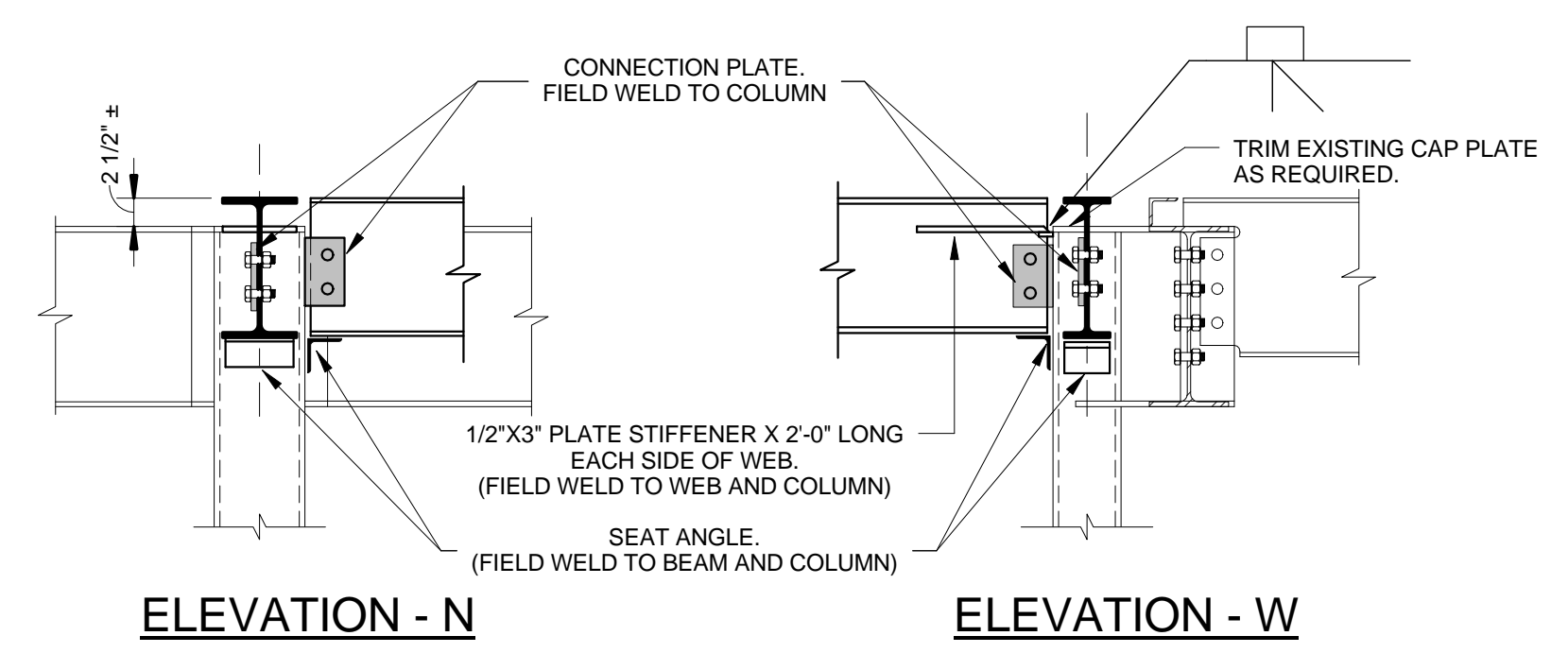
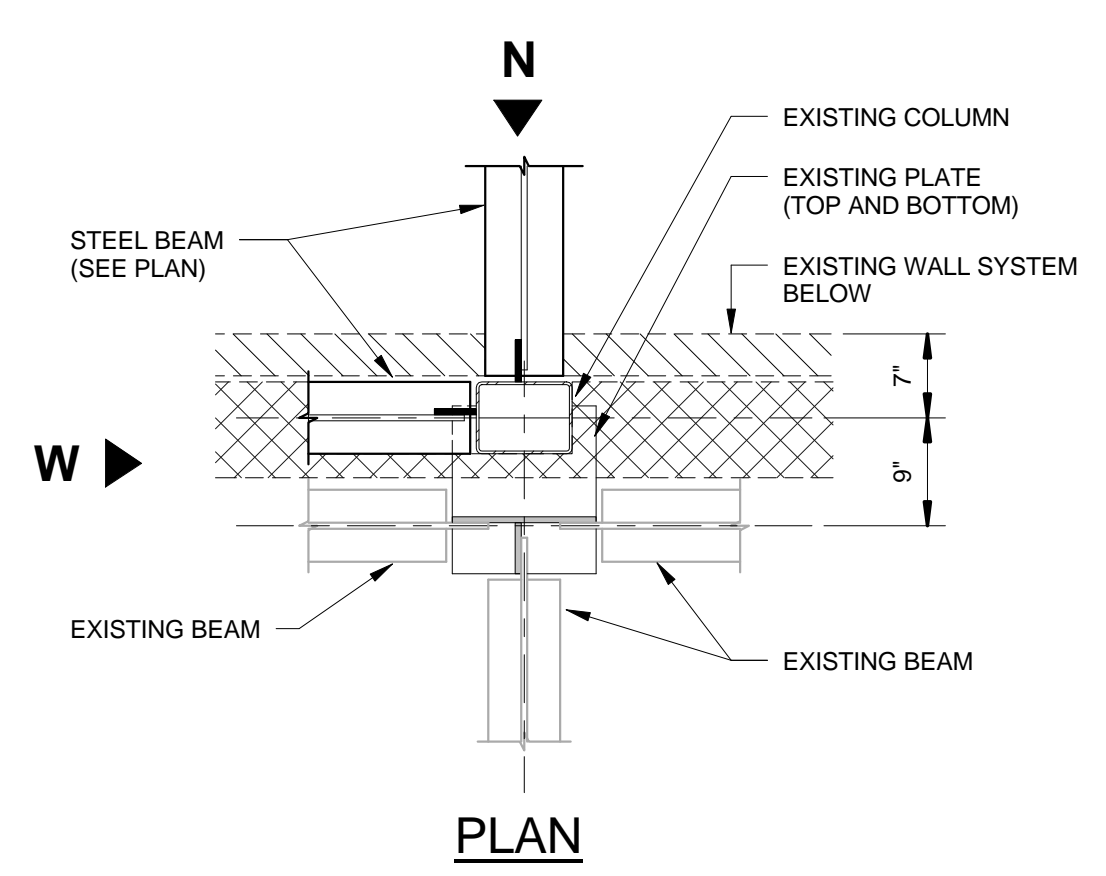
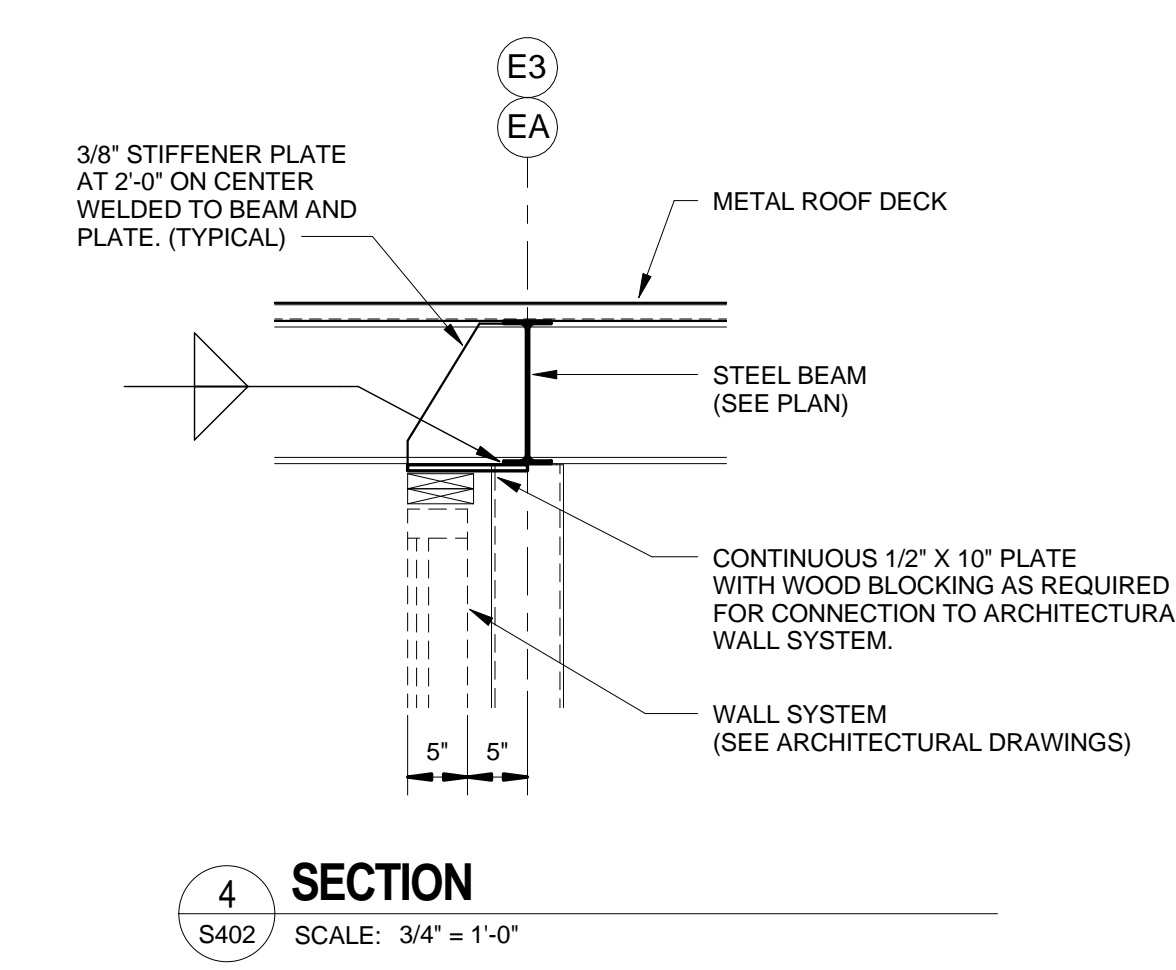
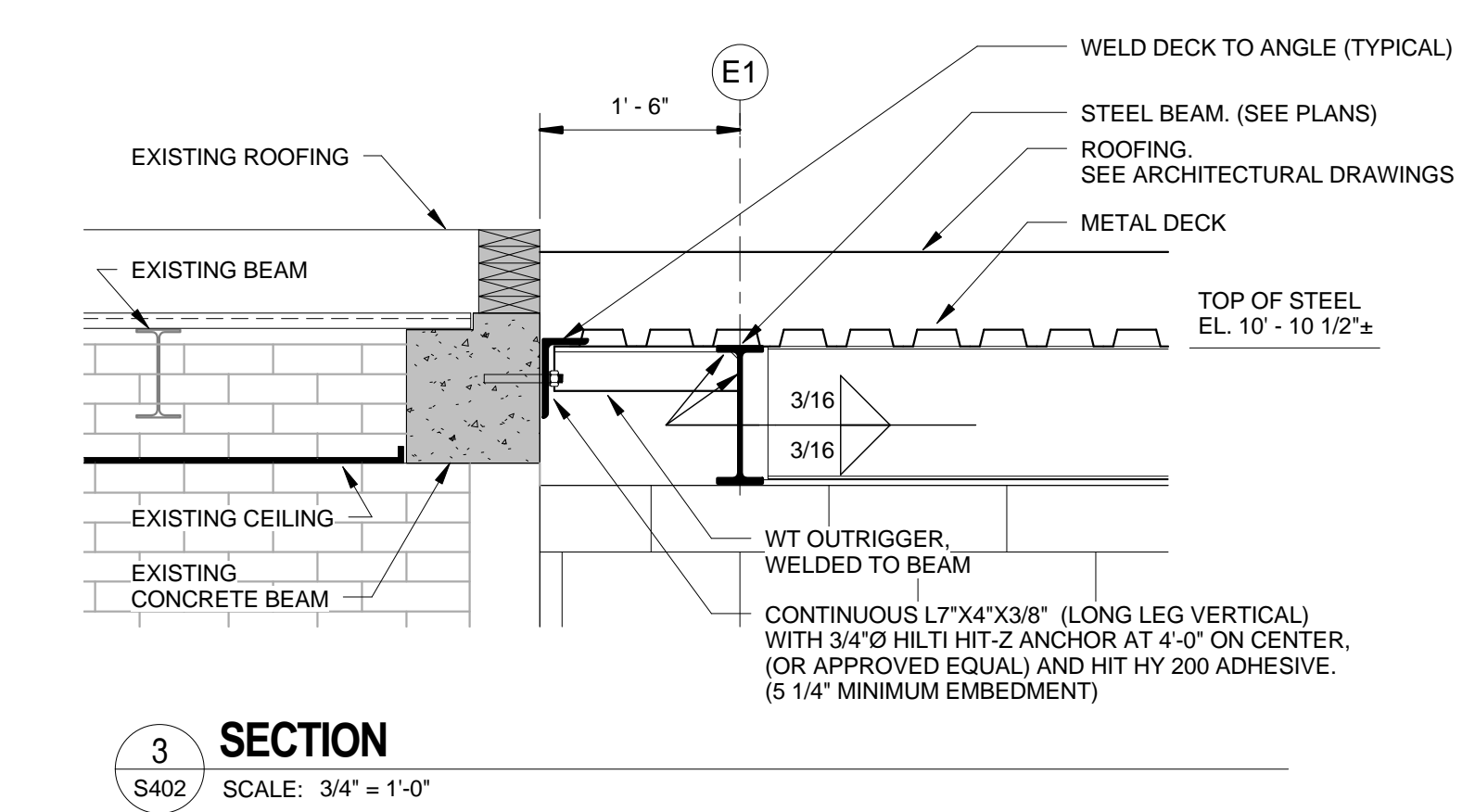
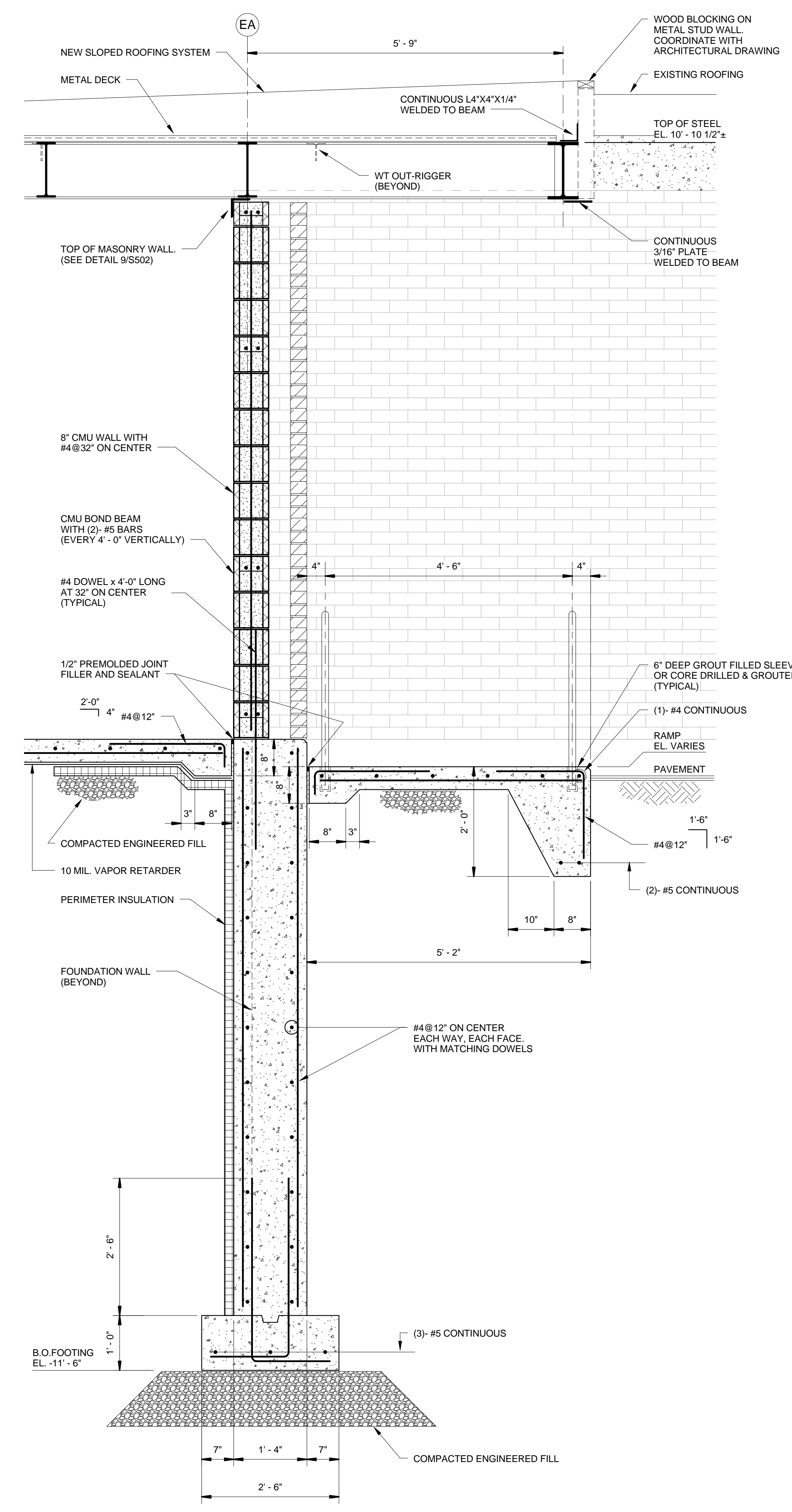
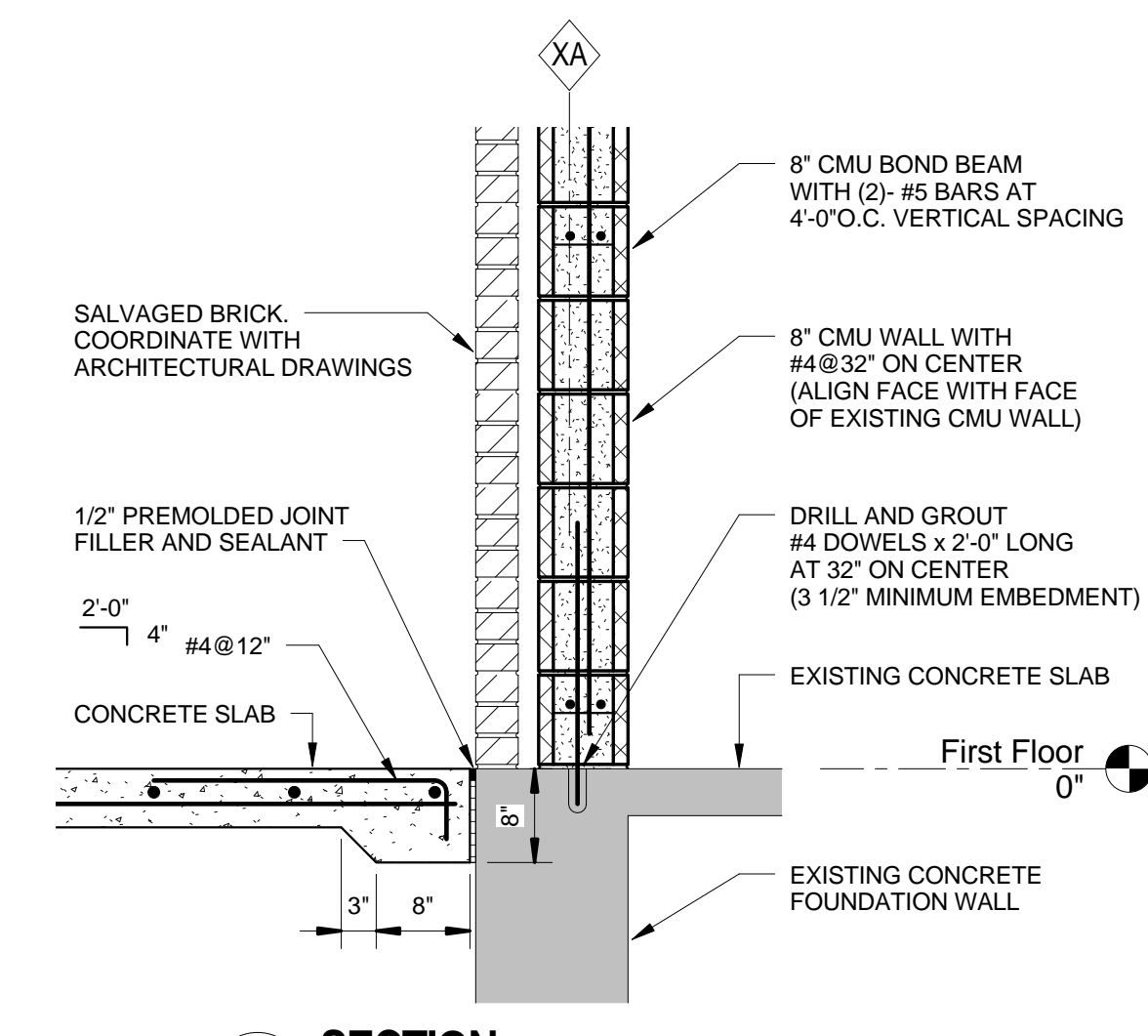
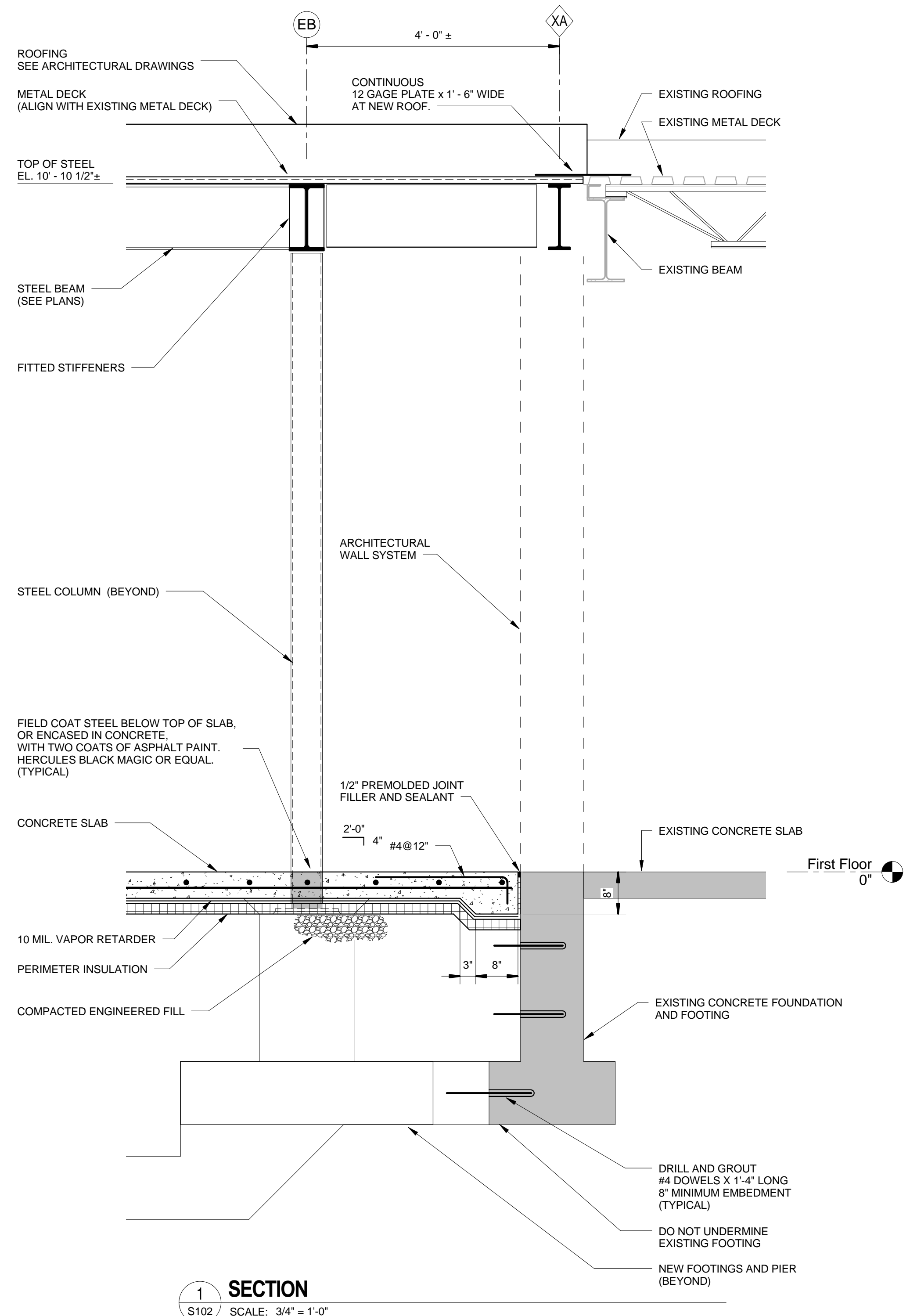
**SECTIONS AND DETAILS**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: JS  
 DRAWN BY: KC  
 CHECKED BY: JS  
 DATE: July-Aug. 2016  
 SCALE: 3/4" = 1'-0"  
 SHEET NUMBER:

**S302**



ELEC: \_\_\_\_\_  
 MECH: \_\_\_\_\_  
 FIRE: \_\_\_\_\_  
 PLUM: \_\_\_\_\_  
 STRU: \_\_\_\_\_  
 ARCH: \_\_\_\_\_  
 CIVIL: \_\_\_\_\_  
 REVIEWED BY: \_\_\_\_\_  
 PLOTTED: 7/14/2016 11:53:31 AM  
 PROJECT FILE: C:\Users\Wjgoff\Documents\19401\Waltham Police Station\STRUCTURAL\Wjgoff.dwt

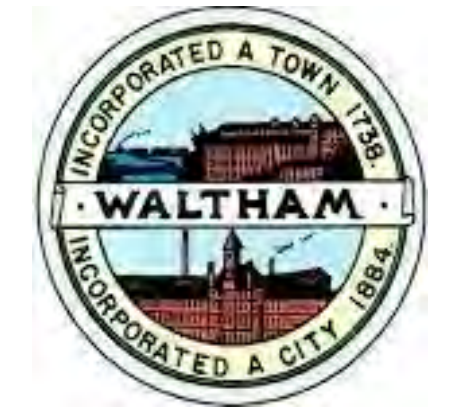


NOTE: FIELD VERIFY EXISTING CONDITIONS AFTER DEMOLITION, TO VERIFY CONNECTIONS CAN BE MADE. (PRIOR TO FABRICATION)



REVISIONS		
Number	Description	Date

**ISSUED FOR BID**



**WALTHAM POLICE STATION RENOVATION**  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

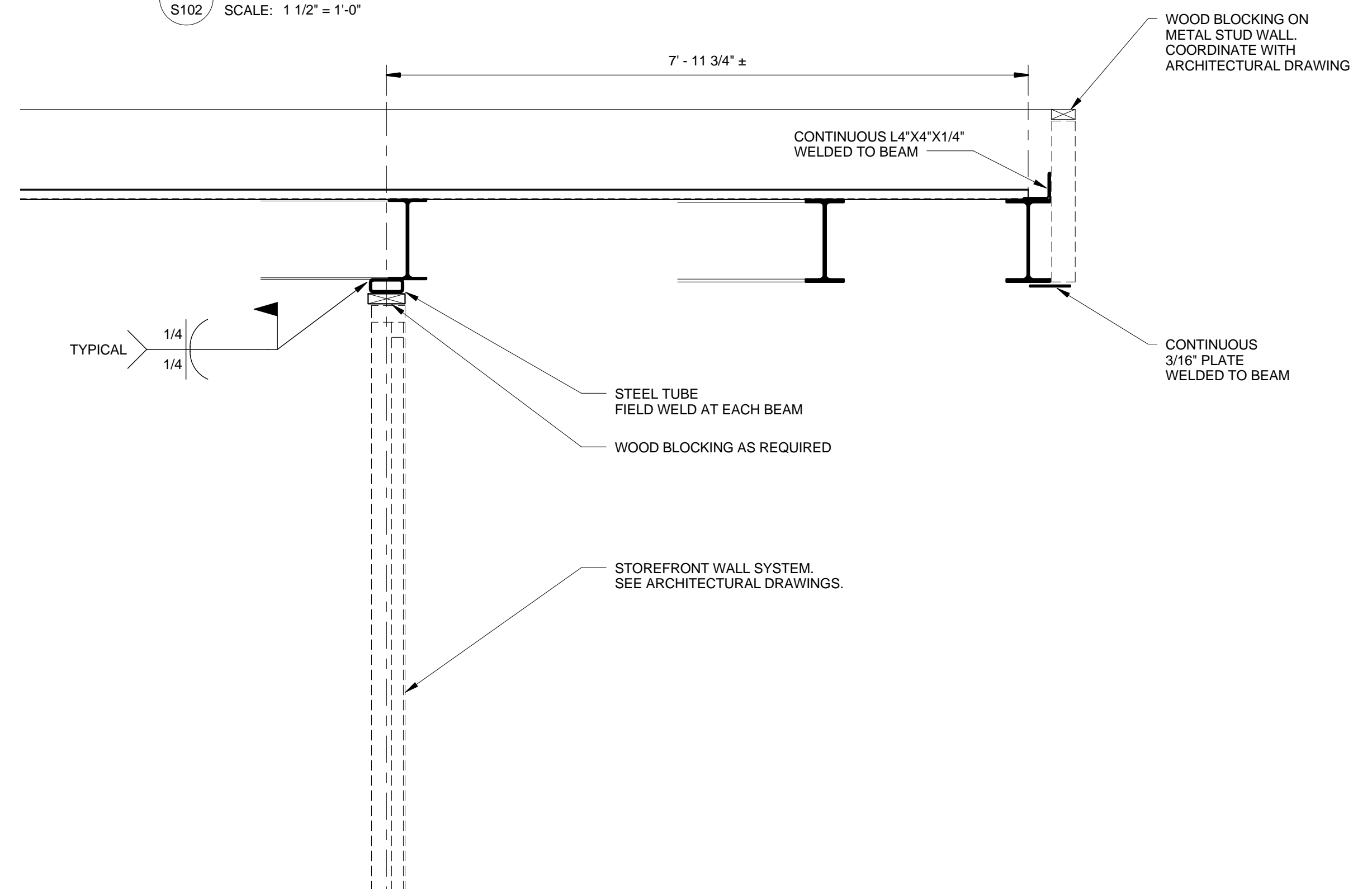
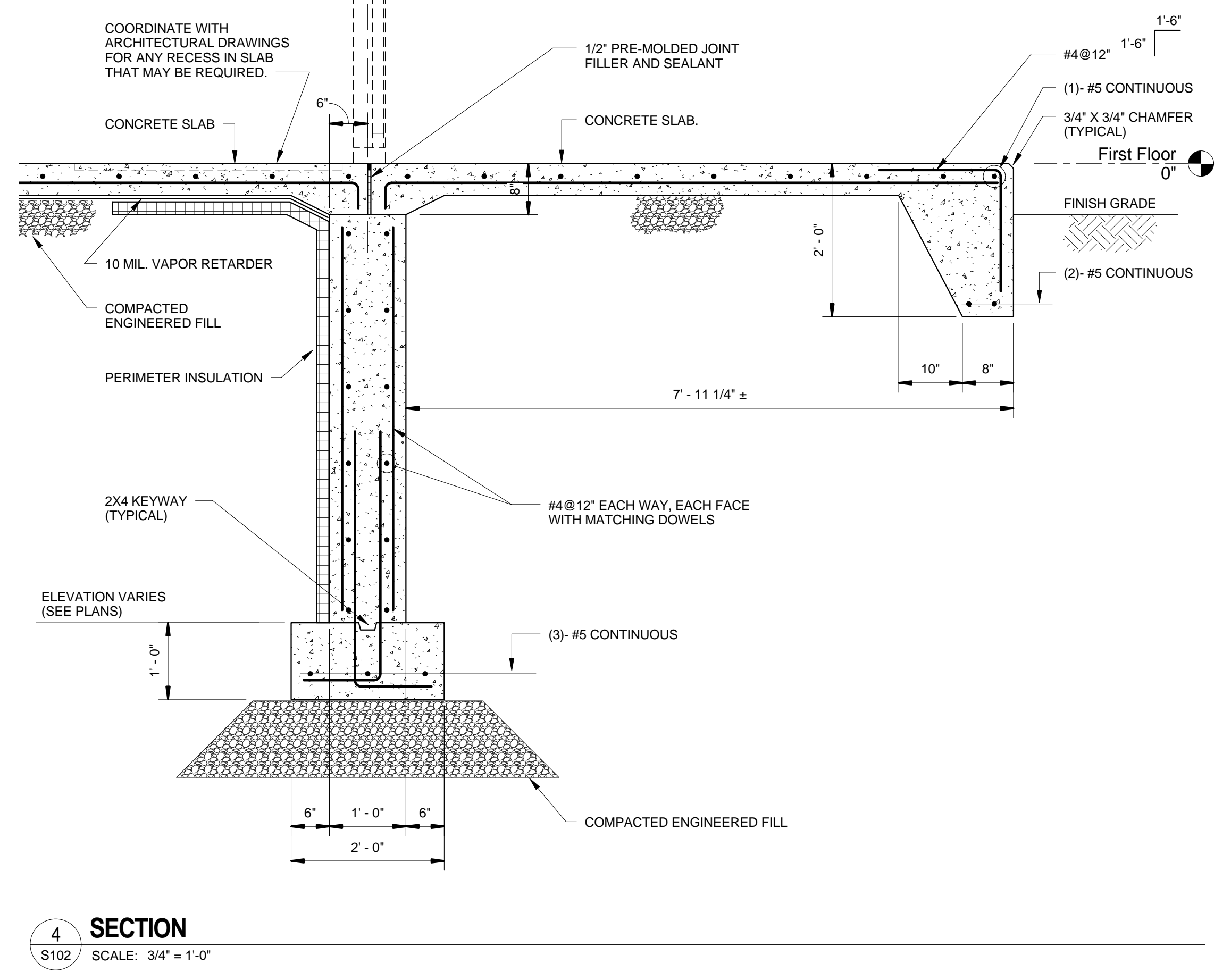
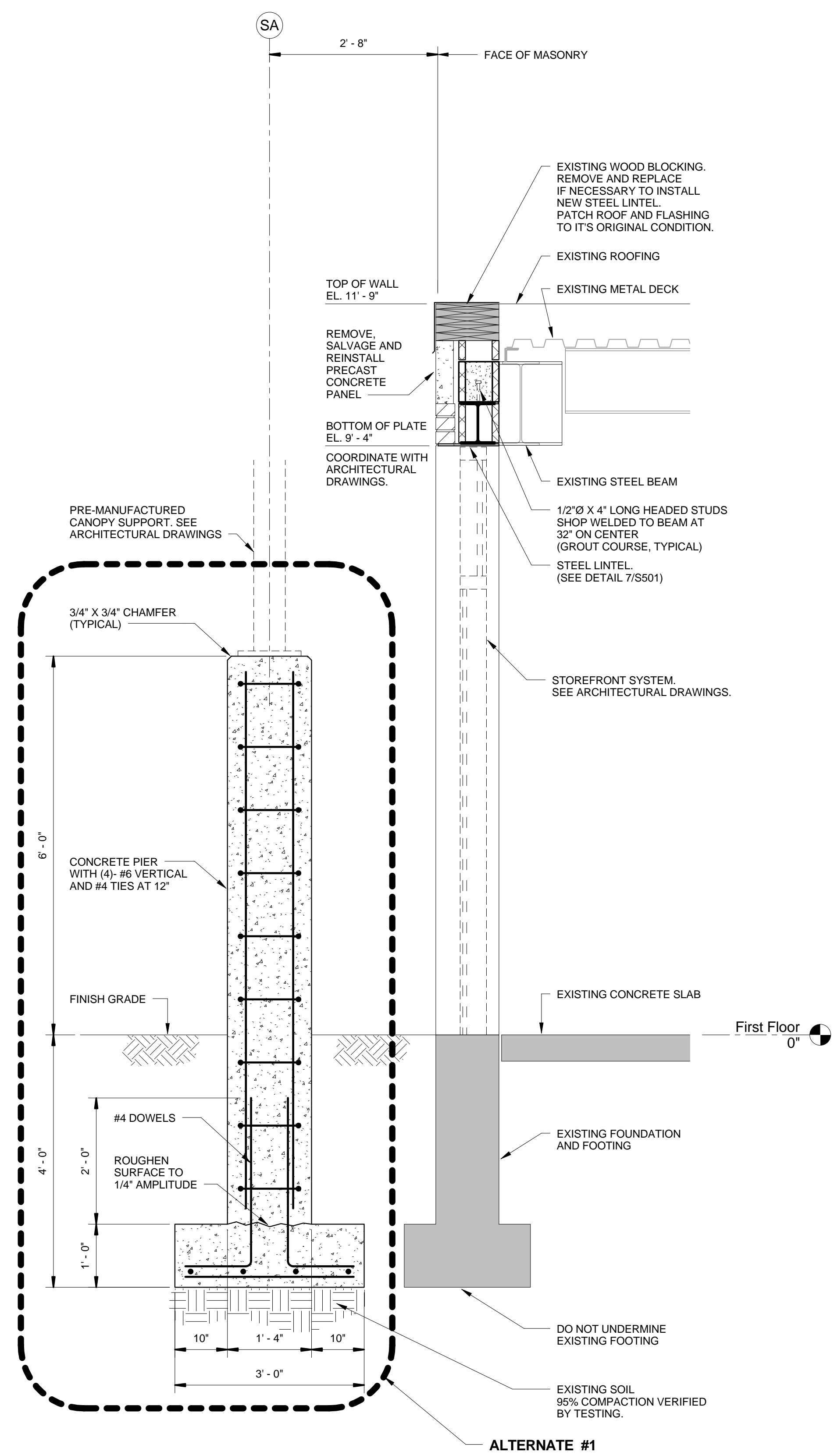
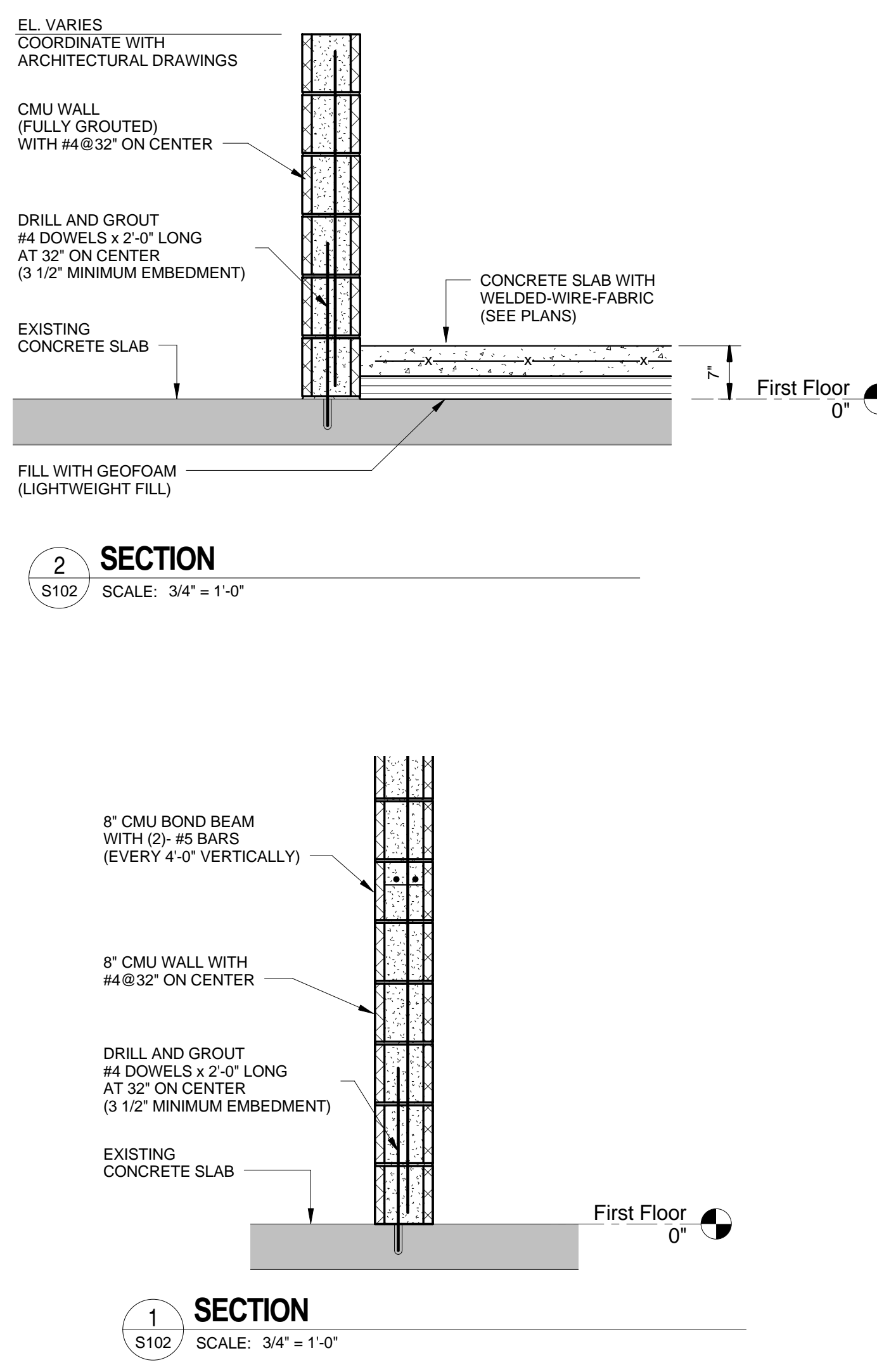
**SECTIONS AND DETAILS**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: JS  
 DRAWN BY: KC  
 CHECKED BY: JS  
 DATE: July-Aug. 2016  
 SCALE: 3/4" = 1'-0"

SHEET NUMBER:  
**S303**



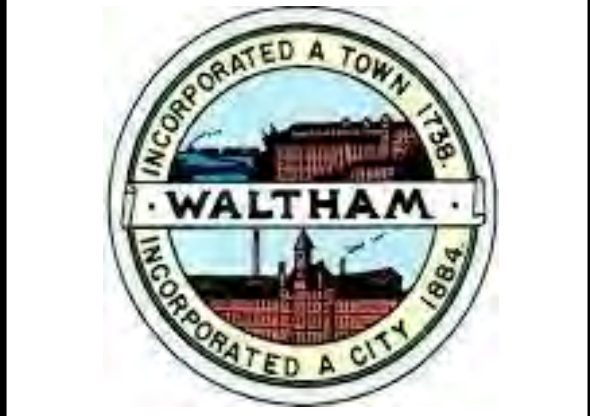
ELEC: \_\_\_\_\_ MECH: \_\_\_\_\_ FIRE: \_\_\_\_\_ PLUM: \_\_\_\_\_ STRUC: \_\_\_\_\_ ARCH: \_\_\_\_\_ CIVIL: \_\_\_\_\_  
 REVIEWED BY: \_\_\_\_\_  
 PLOTTED: 7/14/2016 11:34:38 AM  
 PROJECT FILE: C:\Users\WJ\Documents\1401 Waltham Police Station Structural\_MRF.dwg



**SHEET NOTES:**  
ALTERNATE #1 - SEE ARCHITECTURAL DRAWINGS.

REVISIONS		
Number	Description	Date

ISSUED FOR BID



**WALTHAM POLICE STATION RENOVATION**

155 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS

**SECTIONS AND DETAILS**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: JS  
 DRAWN BY: KC  
 CHECKED BY: JS  
 DATE: July-Aug. 2016  
 SCALE: As indicated

SHEET NUMBER:  
**S304**







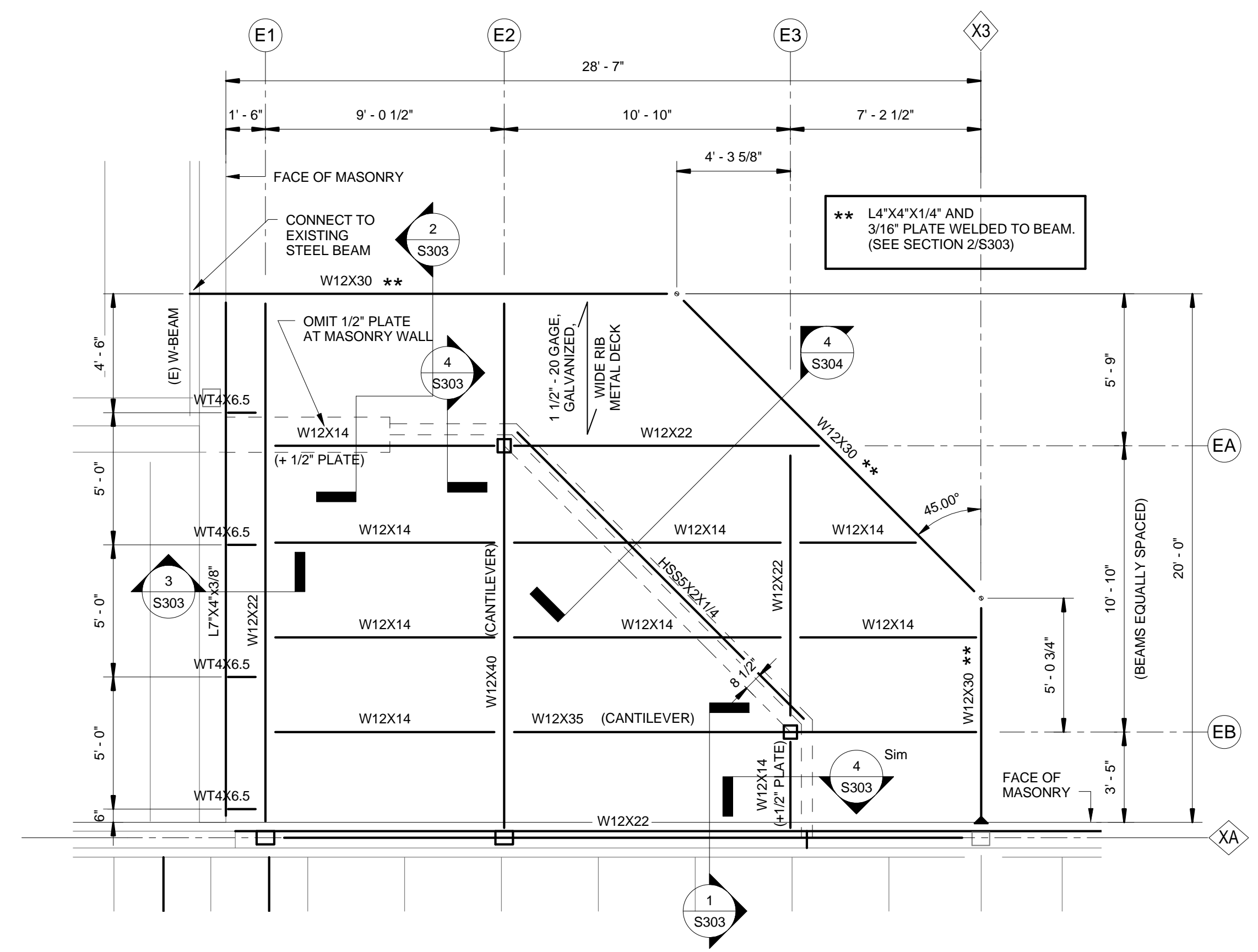
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 REVIEWED BY: CIVIL: ARCH: STRU: PLUM: MECH: ELEC:

**SHEET NOTES:**

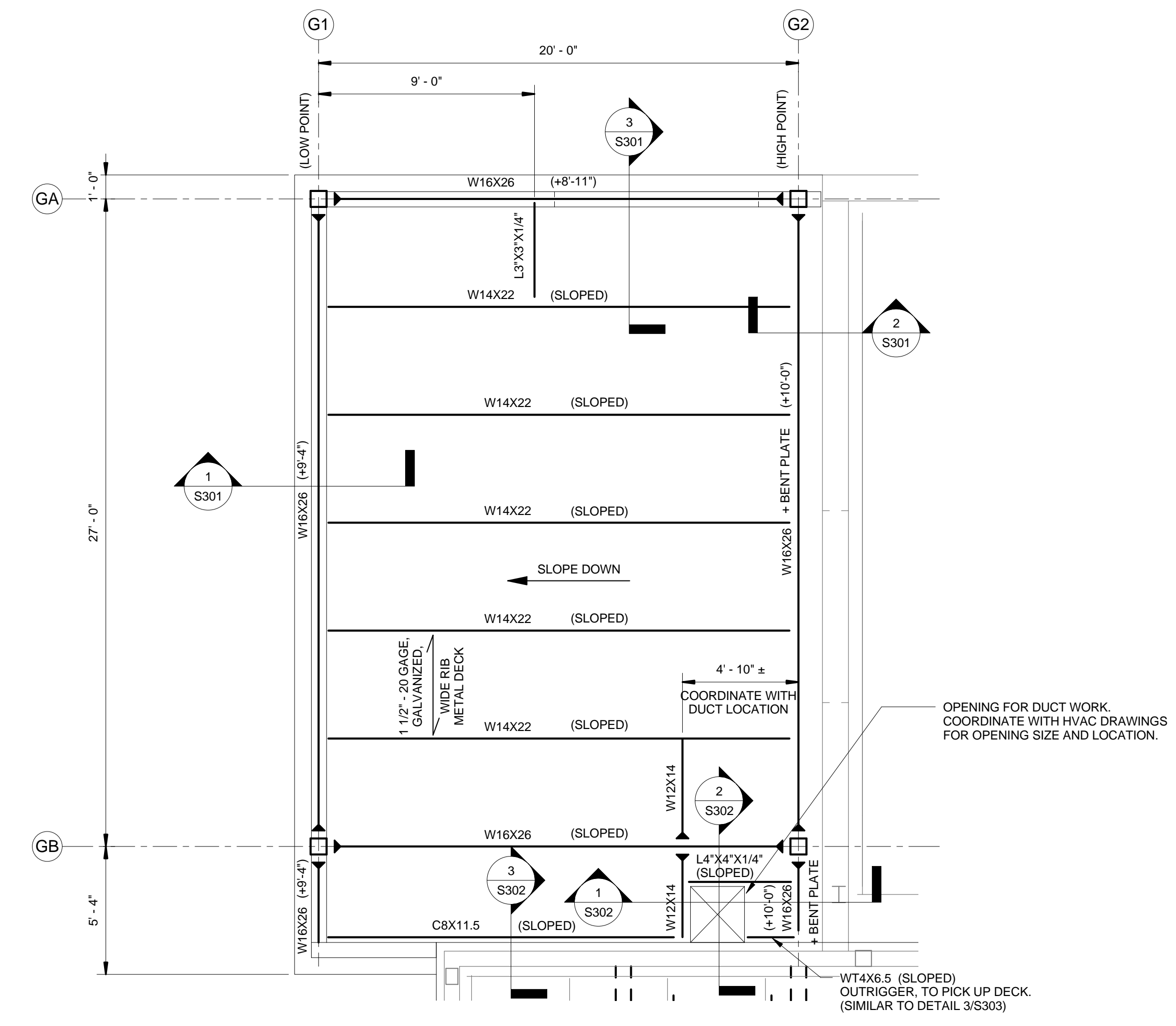
- FOR GENERAL NOTES, SEE DRAWING S001.
- FOR TYPICAL DETAILS, SEE DRAWINGS S501 - S506.
- EXISTING DIMENSIONS AND CONDITIONS MUST BE VERIFIED OR DETERMINED IN THE FIELD BY THE CONTRACTOR. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PORTION OF THE WORK.
- UNLESS OTHERWISE NOTED, DETAILS SHOWN ON ANY DRAWING ARE TO BE CONSIDERED TYPICAL FOR ALL SIMILAR CONDITIONS.
- COORDINATE WITH ARCHITECTURAL, HVAC, ELECTRICAL AND PLUMBING DRAWINGS FOR ANY ADDITIONAL OPENINGS THAT MAY NEED TO BE PROVIDED OR FILLED IN.
- WHERE NEW JOISTS ARE TO BE INSTALLED, REMOVE AND REPLACE ALL BRIDGING AND OR BRACING AS REQUIRED FOR INSTALLATION. FIELD VERIFY THAT THE NEW JOISTS ARE THE SAME DEPTH AS ADJACENT EXISTING JOISTS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO FABRICATION.

**LEGEND:**

- (E) INDICATES EXISTING MEMBER.
- (2P) INDICATES TWO PIECE JOIST.
- INDICATES SPAN DIRECTION.
- INDICATES MOMENT CONNECTION.
- INDICATES SEISMIC CLIP. SEE DRAWING S502 FOR CLIP TYPE.
- INDICATES DECK STIFFENER. SEE DETAIL 6/S506.



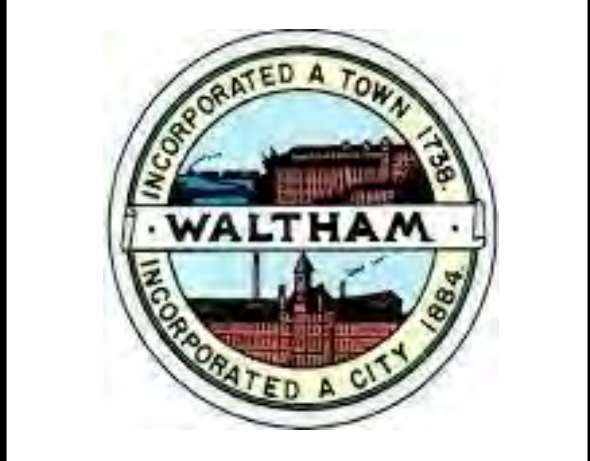
**1 ROOF FRAMING PLAN (Staff Entry)**  
SCALE: 1/4" = 1'-0"



**2 ROOF FRAMING PLAN (Motorcycle/Bike Storage)**  
SCALE: 1/4" = 1'-0"

REVISIONS		
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WALTHAM POLICE STATION RENOVATION

155 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS

**ENLARGED FRAMING PLANS**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: JS  
 DRAWN BY: KC  
 CHECKED BY: JS  
 DATE:  
 SCALE: 2016 As  
 SHEET NUMBER:

**S402**



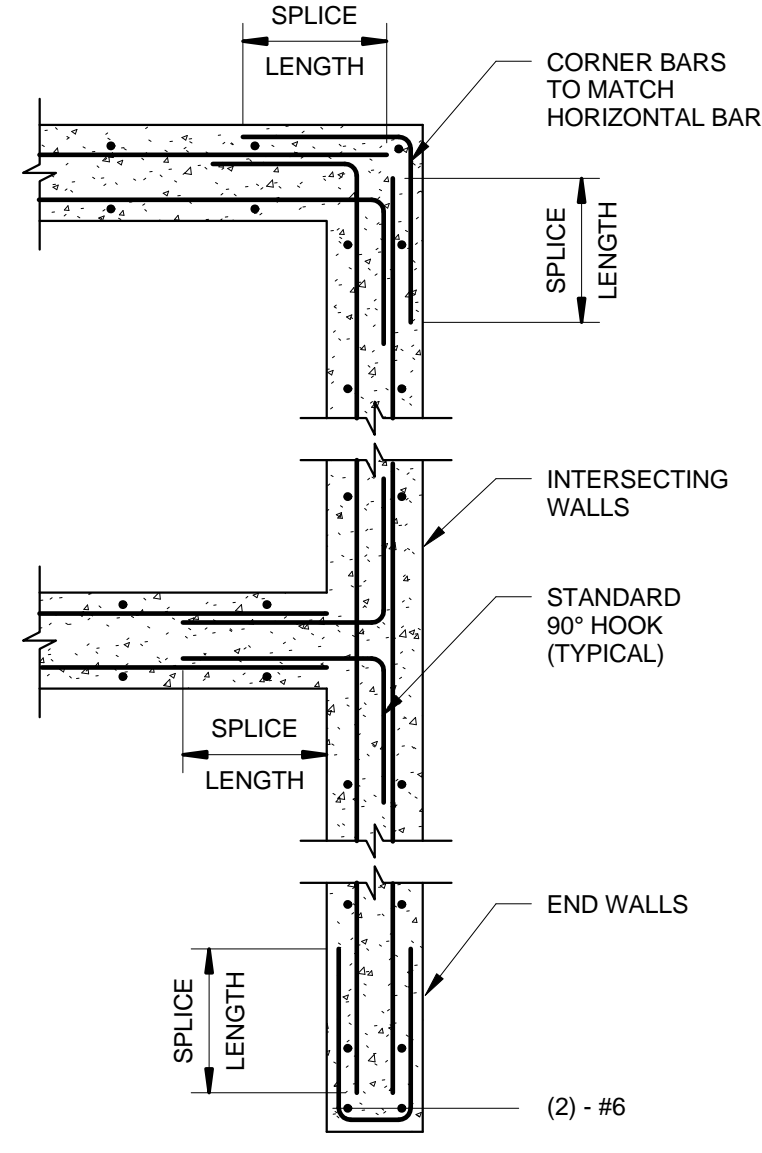




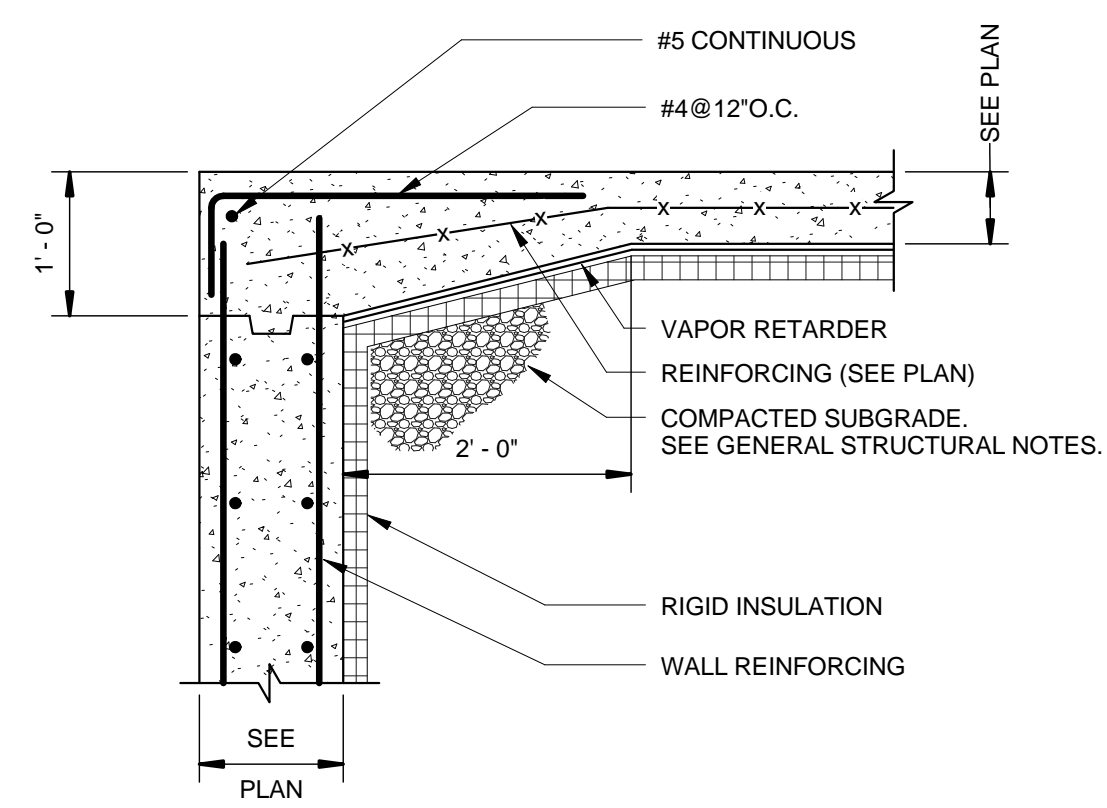




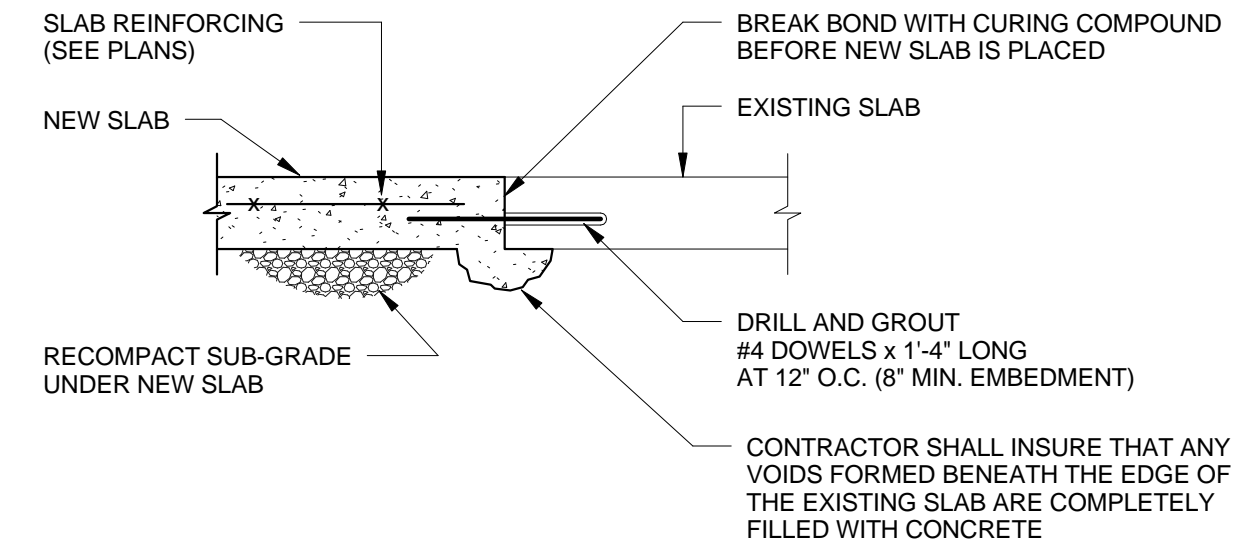
REVIEWED BY: CIVIL ARCH: STRUC: PLUM: FIRE: MECH: ELEC:



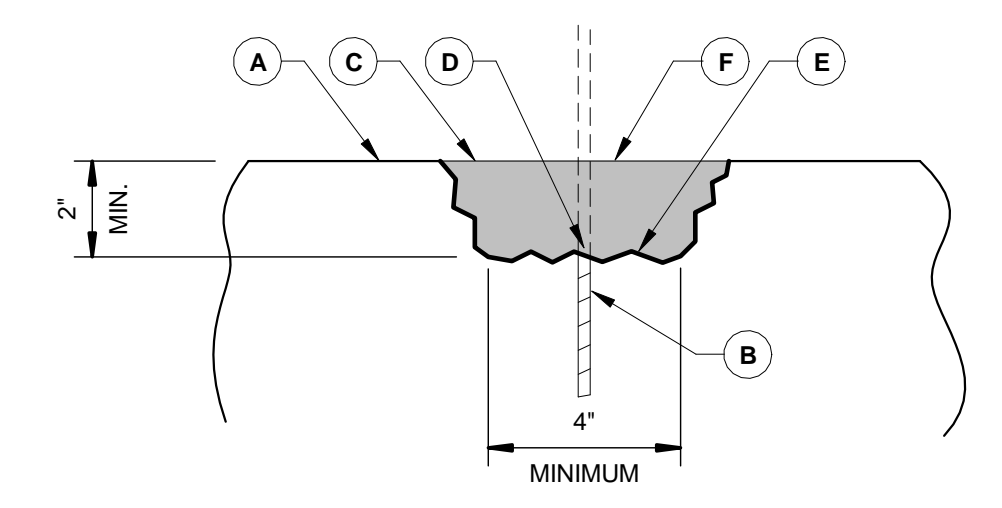
**1 WALL REINFORCING DETAIL**  
SCALE: 3/4" = 1'-0"



**2 TYPICAL SECTION AT DOOR SILL**  
SCALE: 3/4" = 1'-0"

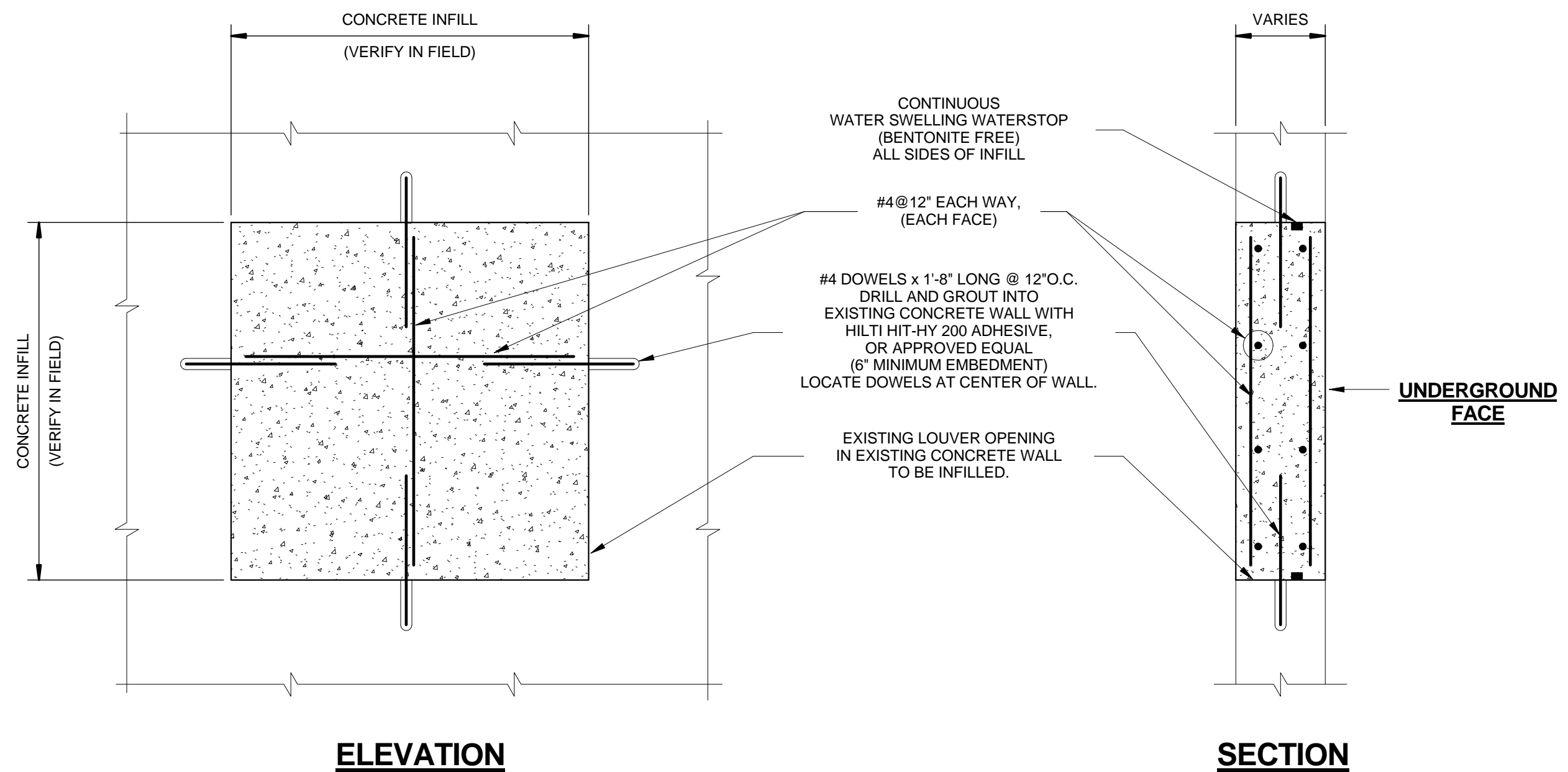


**3 NEW SLAB TO EXISTING SLAB DETAIL**  
SCALE: 3/4" = 1'-0"

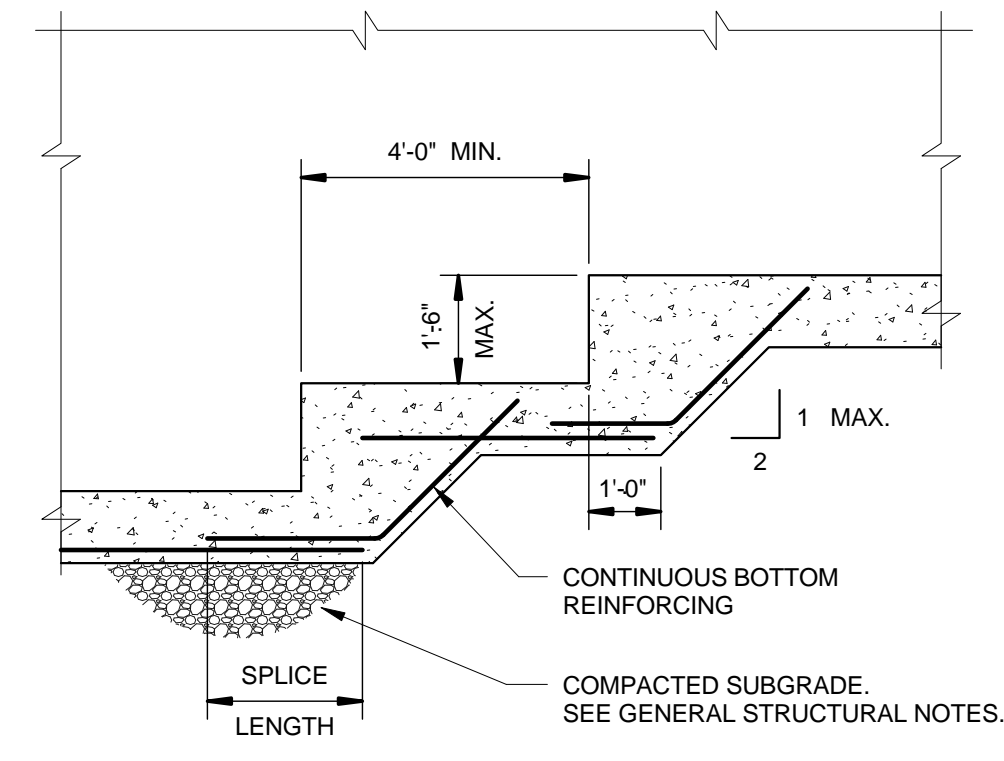


- A EXISTING CONCRETE SURFACE.
- B EXISTING REINFORCING.
- C CHIP POCKET IN EXISTING CONCRETE.
- D CUT REINFORCING AT BOTTOM OF RECESS.
- E COAT WITH CORROSION-PROTECTION EPOXY BONDING AGENT (Sika Armatex 110 EpoCem) OR APPROVE EQUAL.
- F FILL HOLE WITH PATCHING MORTAR (SikaRepair 223) OR APPROVED EQUAL.

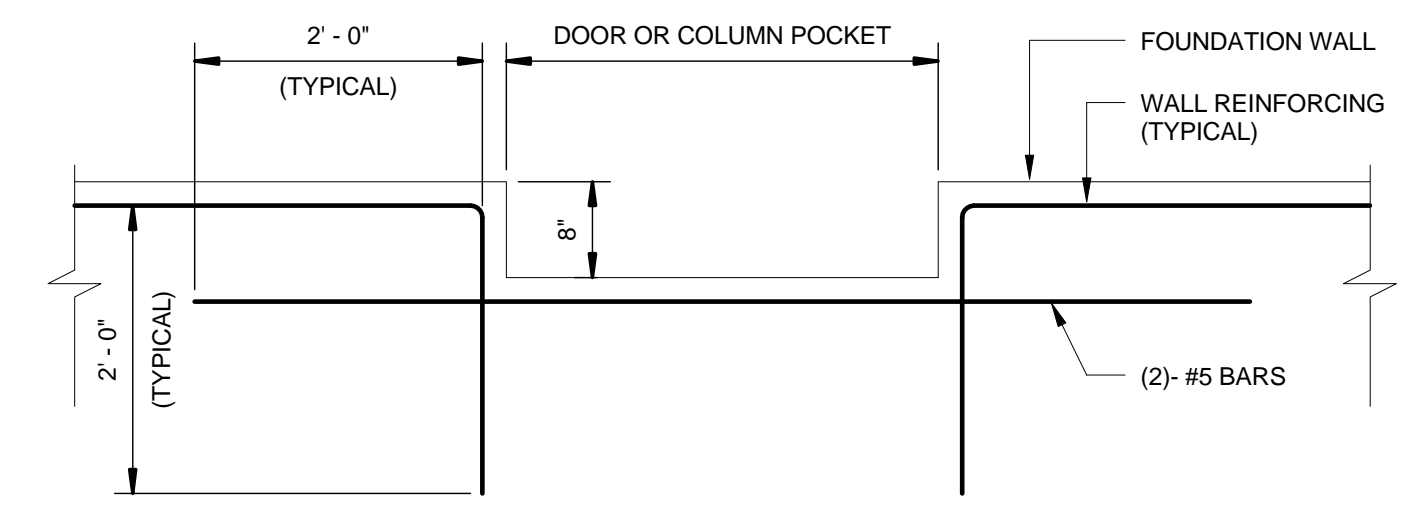
**4 TYPICAL REINFORCING PATCH DETAIL**  
SCALE: 3" = 1'-0"



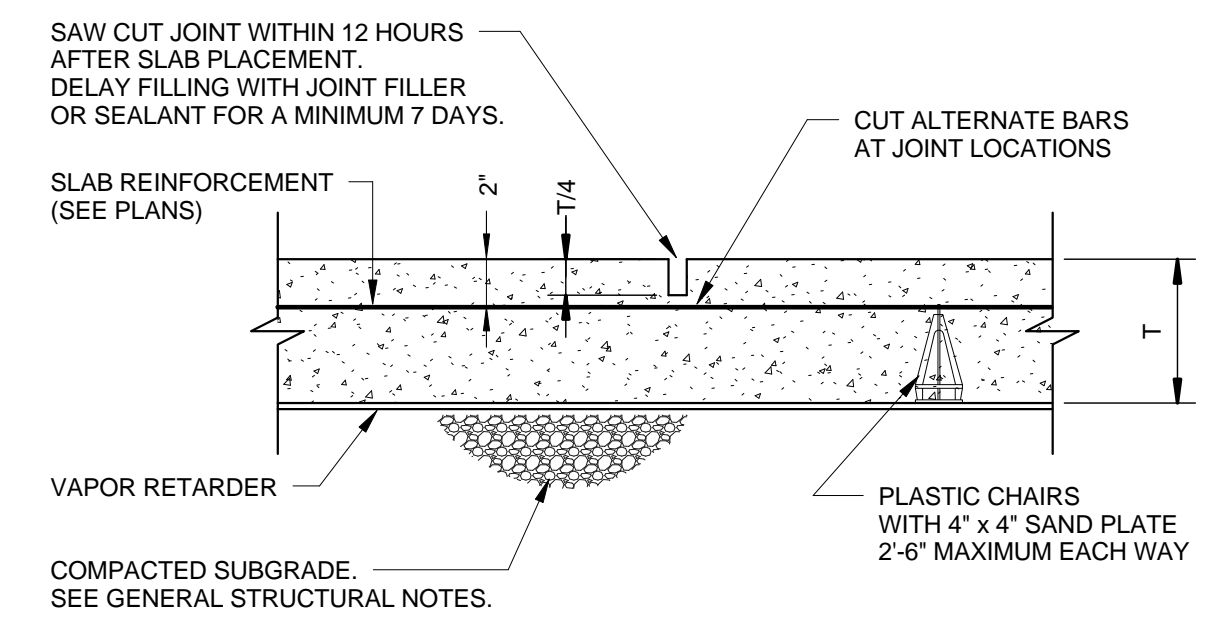
**5 CONCRETE INFILL DETAIL**  
SCALE: 3/4" = 1'-0"



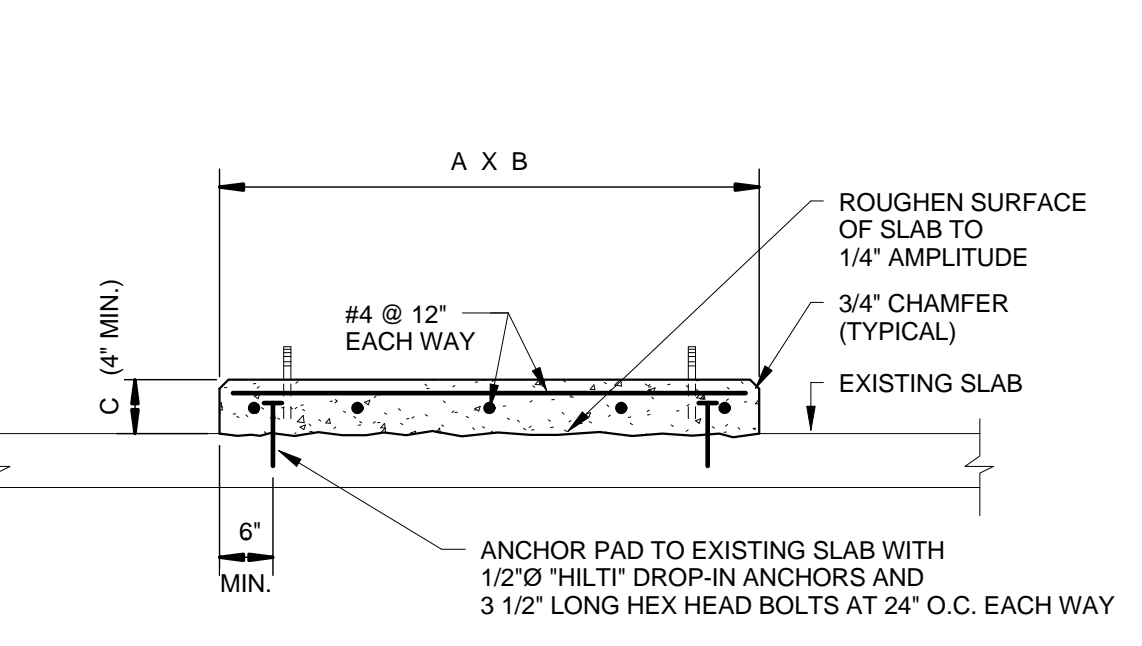
**6 STEPPED FOOTING DETAIL**  
SCALE: N.T.S.



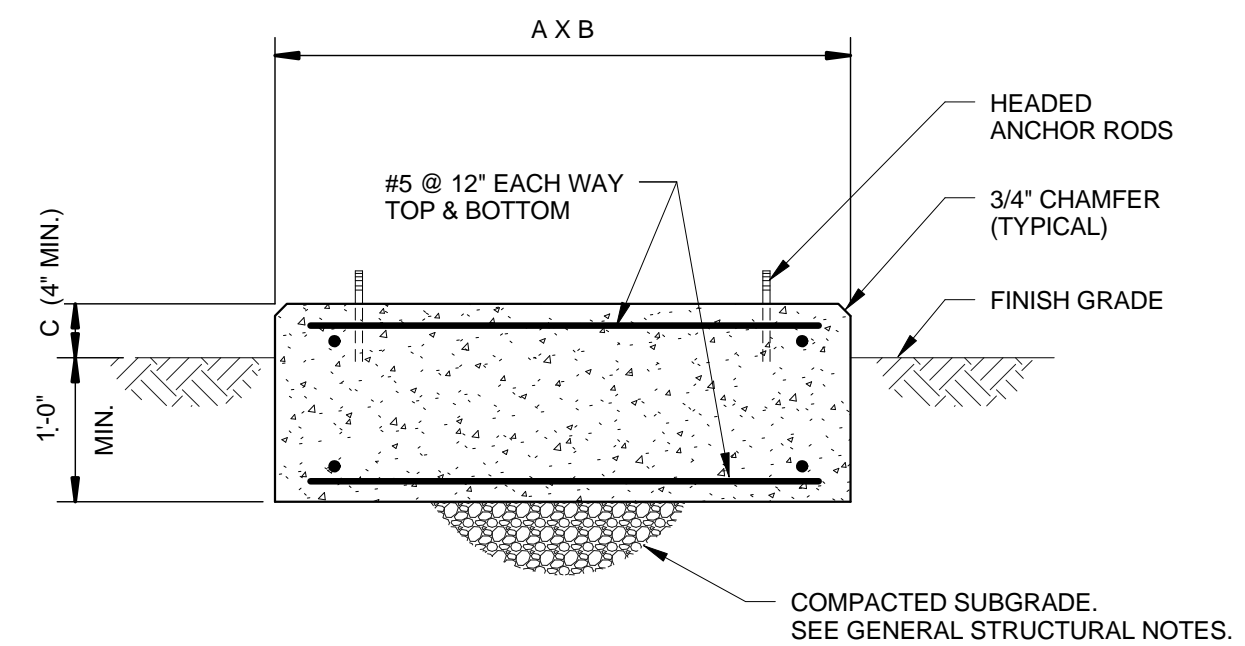
**7 TYPICAL ELEVATION AT DOORS AND COLUMN POCKET**  
SCALE: 3/4" = 1'-0"



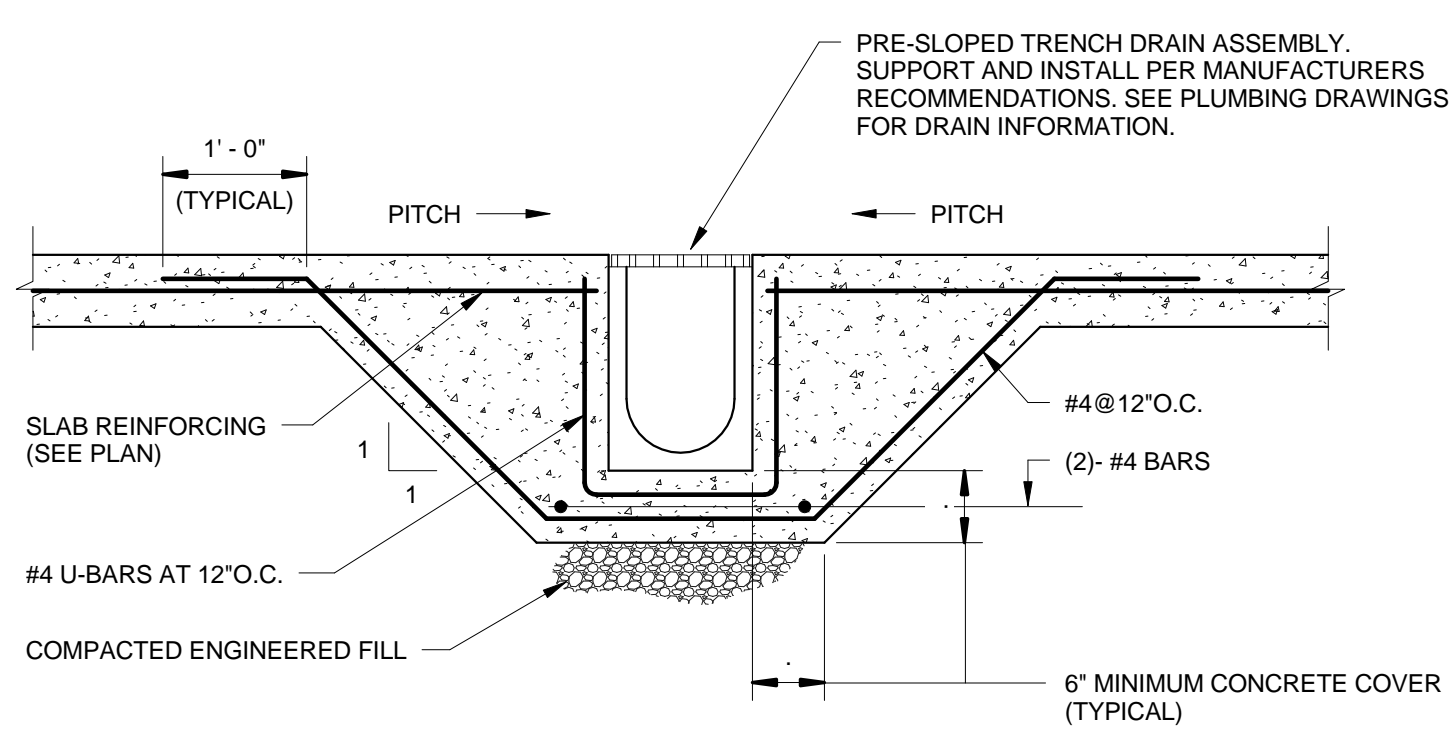
**11 CONTRACTION JOINT DETAIL**  
SCALE: 3/4" = 1'-0"



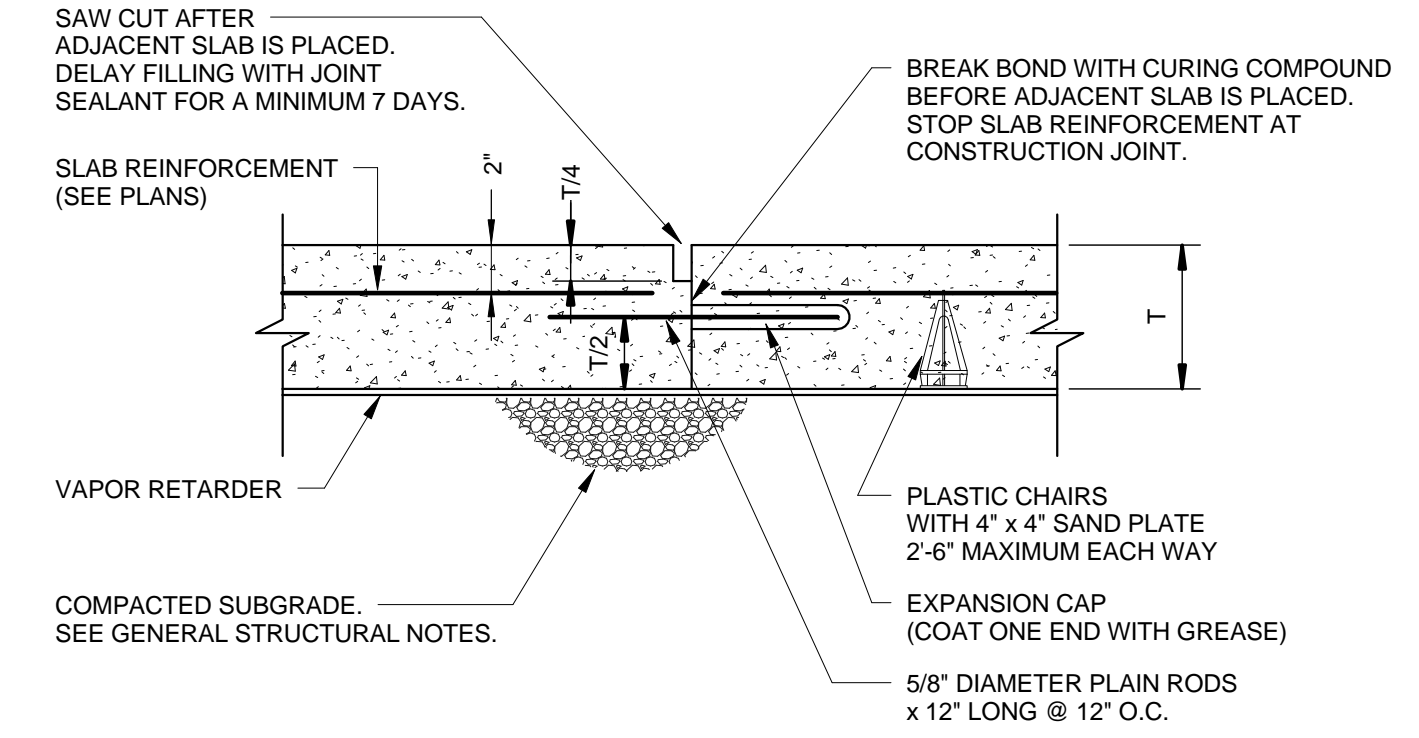
**8 EQUIPMENT PAD ON EXISTING SLAB DETAIL**  
SCALE: 3/4" = 1'-0"



**9 EXTERIOR EQUIPMENT PAD DETAIL**  
SCALE: 3/4" = 1'-0"



**10 TRENCH DRAIN DETAIL**  
SCALE: 3/4" = 1'-0"



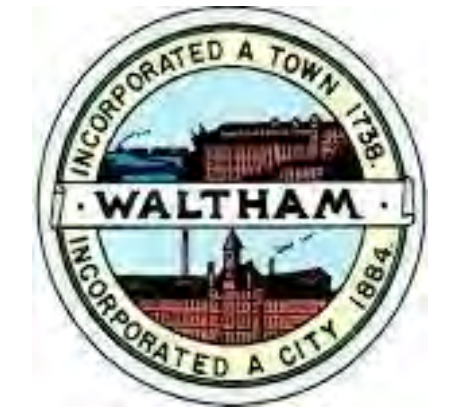
**12 CONSTRUCTION JOINT DETAIL**  
SCALE: 3/4" = 1'-0"

NOTE: LOCATION, SIZE OF PAD (A, B & C DIMENSIONS) AND ANCHOR RODS AS REQUIRED BY EQUIPMENT MANUFACTURER. DRILLED IN EPOXY ANCHORS MAY BE SUBSTITUTED AT CONTRACTOR'S OPTION. (ANCHOR RODS TO BE SUPPLIED BY MISCELLANEOUS METAL SUB-CONTRACTOR AND INSTALLED BY CONCRETE CONTRACTOR)

NOTE: LOCATION, SIZE OF PAD (A, B & C DIMENSIONS) AND ANCHOR BOLTS AS REQUIRED BY EQUIPMENT MANUFACTURER. DRILLED IN EPOXY ANCHORS MAY BE SUBSTITUTED AT CONTRACTOR'S OPTION. (ANCHOR BOLTS TO BE SUPPLIED BY MISCELLANEOUS METAL SUB-CONTRACTOR AND INSTALLED BY CONCRETE CONTRACTOR)

REVISIONS		
Number	Description	Date

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**WALTHAM POLICE STATION RENOVATION**

155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

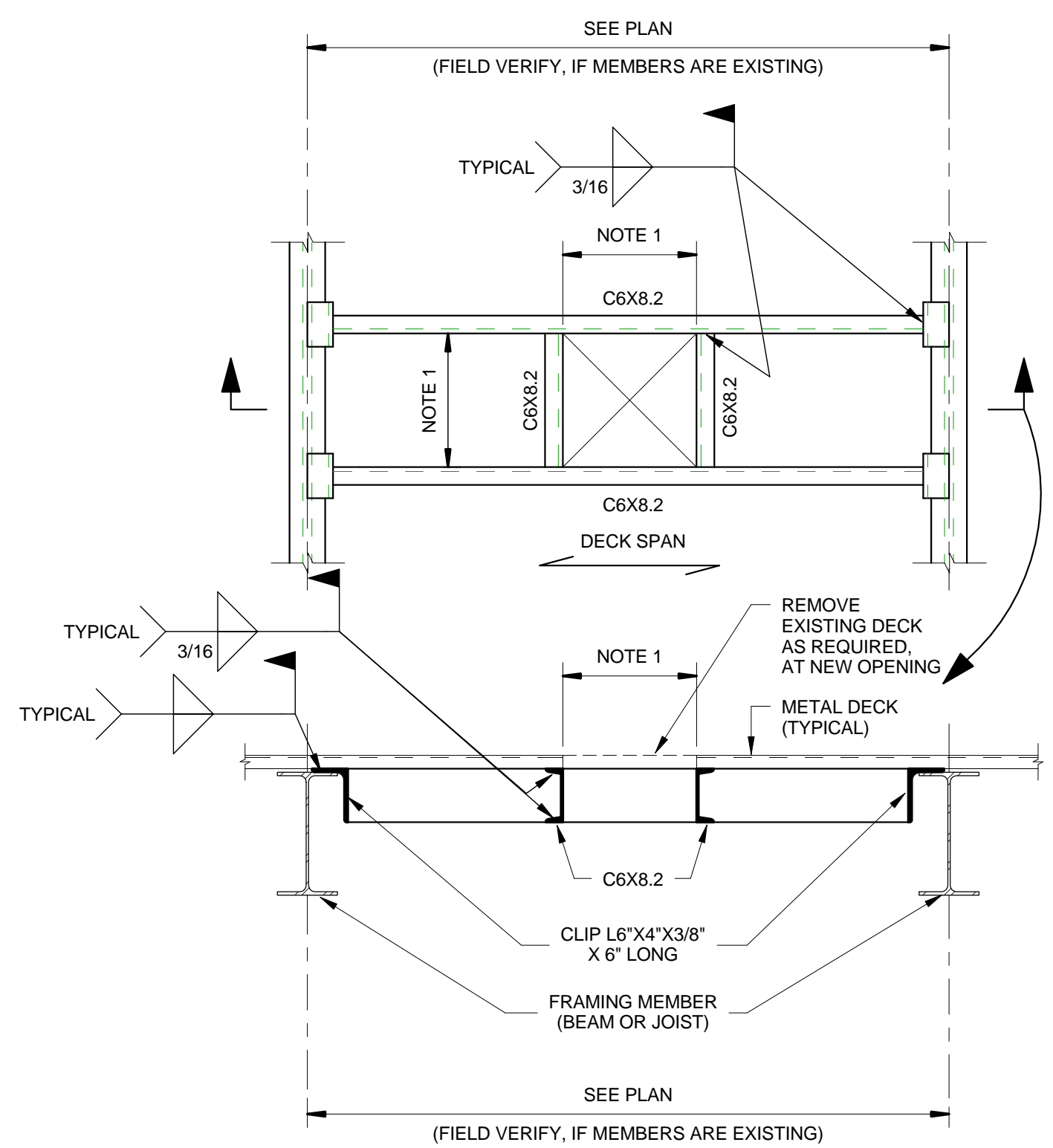
TYPICAL DETAILS

PROJECT NUMBER: 19401.01  
 DESIGNED BY: JS  
 DRAWN BY: KC  
 CHECKED BY: JS  
 DATE: July-Aug. 2016  
 SCALE: As indicated

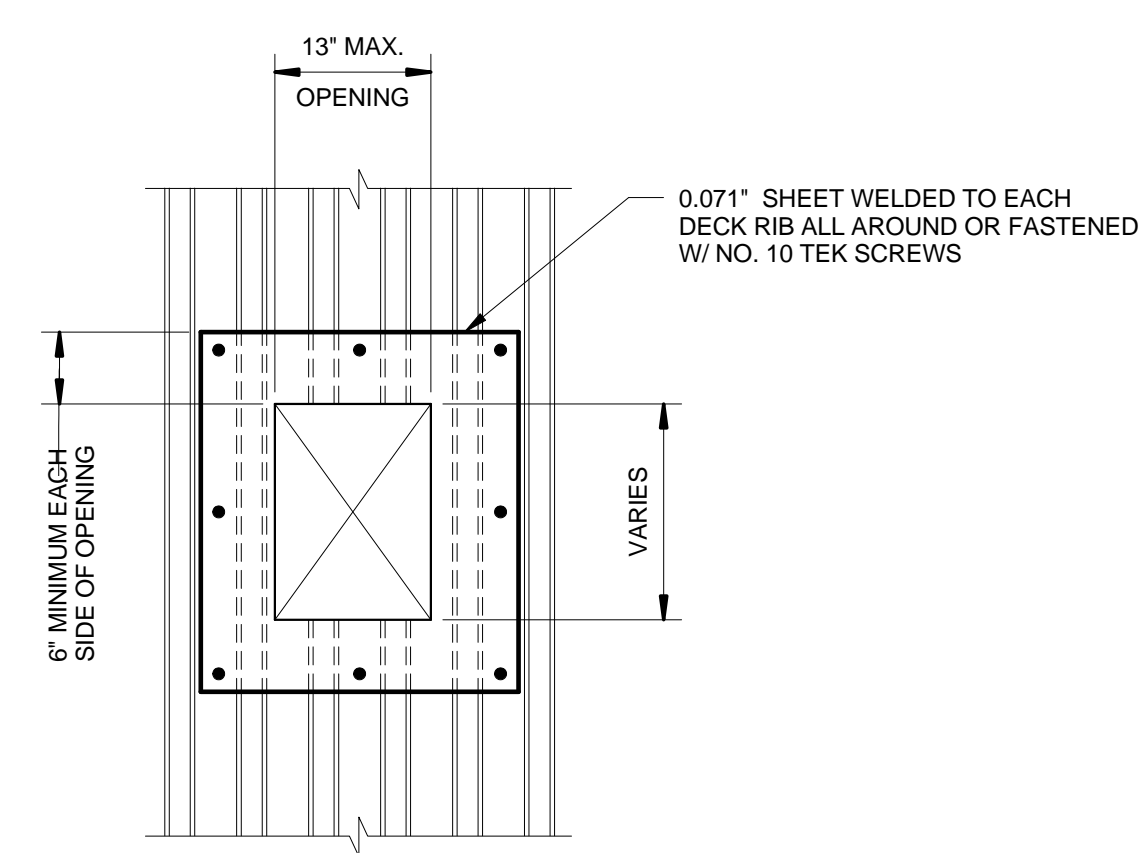
SHEET NUMBER:  
S503



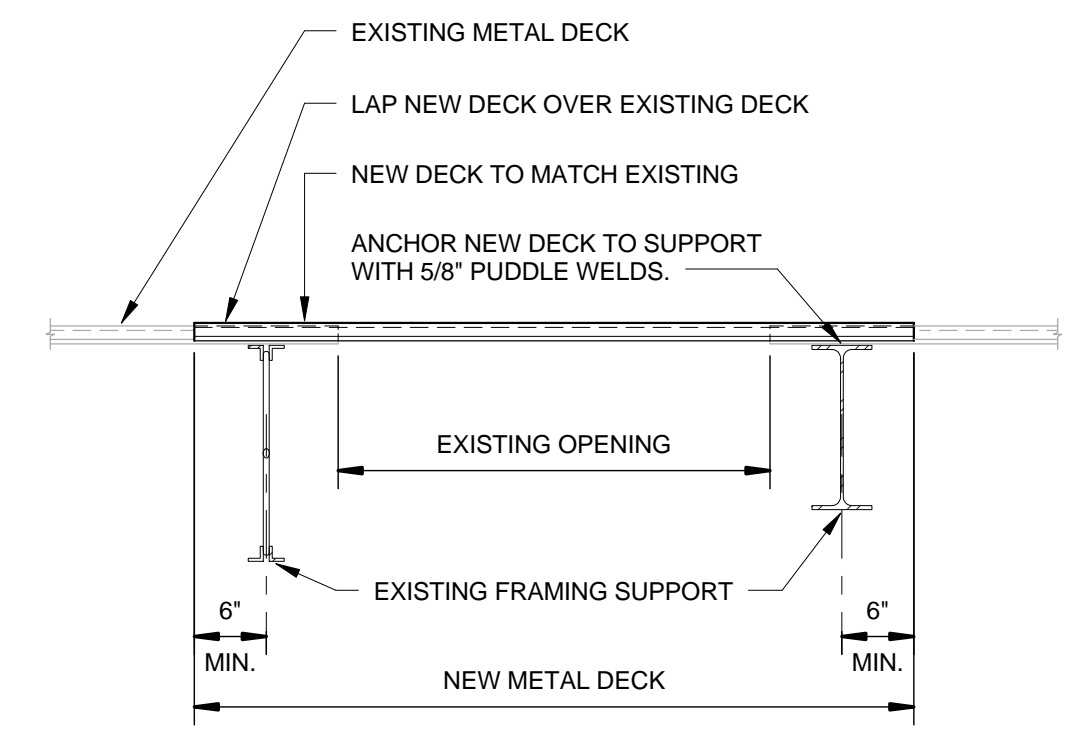
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 MECH: \_\_\_\_\_  
 FIRE: \_\_\_\_\_  
 PLUM: \_\_\_\_\_  
 STRU: \_\_\_\_\_  
 ARCH: \_\_\_\_\_  
 REVIEW BY: CIVIL: \_\_\_\_\_  
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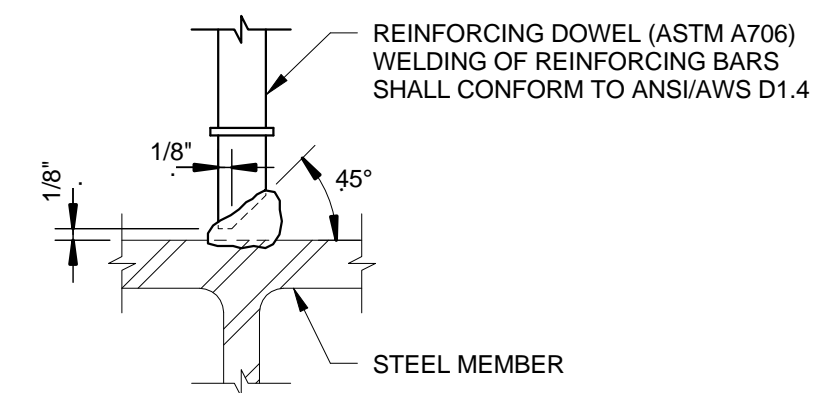
**1 TYPICAL OPENING IN ROOF FRAMING**  
SCALE: 3/4" = 1'-0"



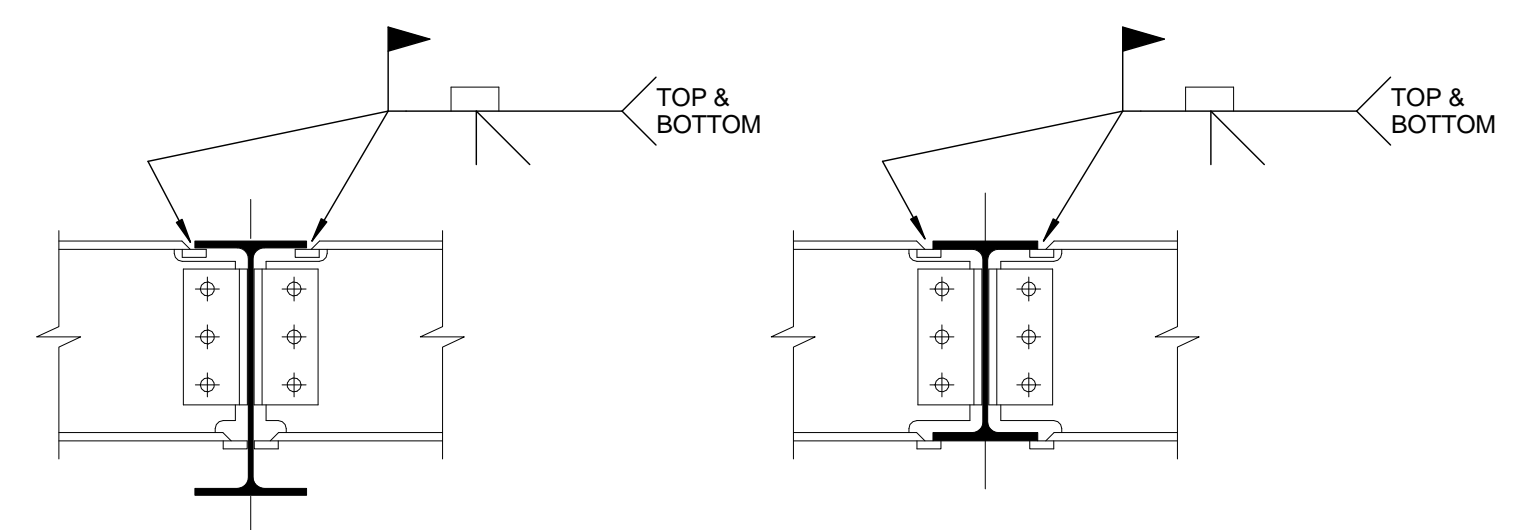
**2 METAL DECK PENETRATION DETAIL**  
SCALE: 3/4" = 1'-0"



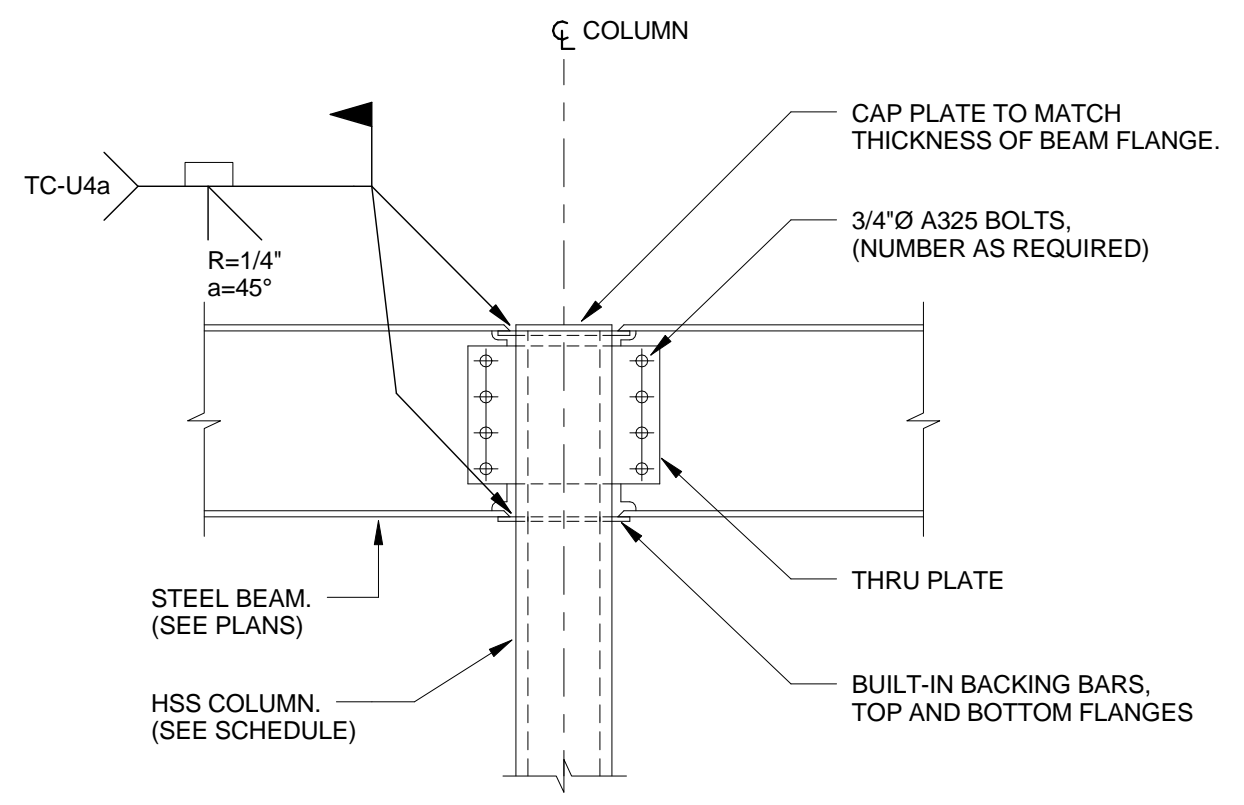
**3 NEW DECK OVER EXISTING OPENING DETAIL**  
SCALE: 3/4" = 1'-0"



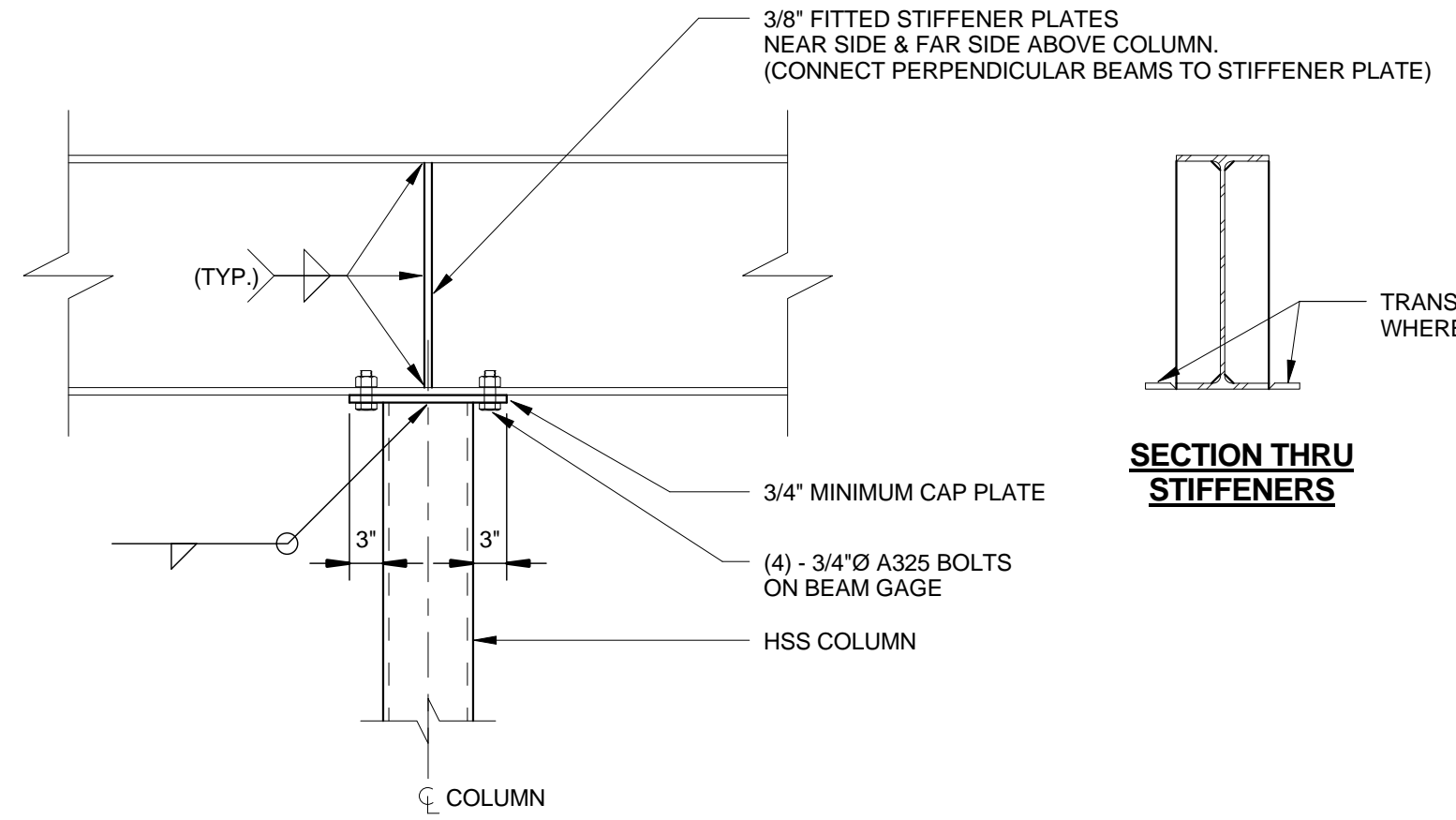
**4 DOWEL WELDED TO STEEL MEMBER**  
SCALE: N.T.S.



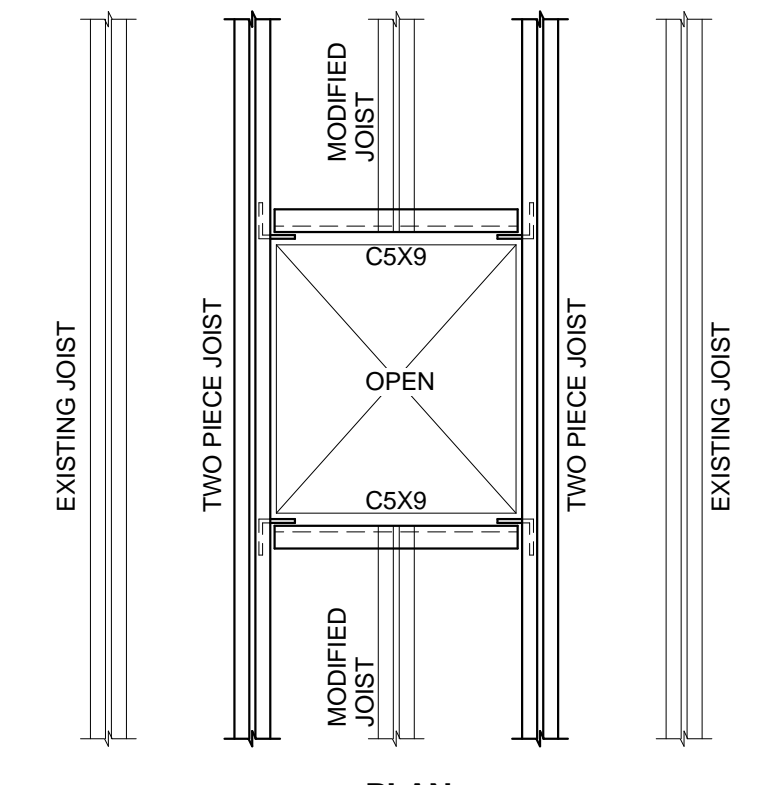
**5 MOMENT CONNECTION - BEAM TO BEAM**  
SCALE: 1" = 1'-0"



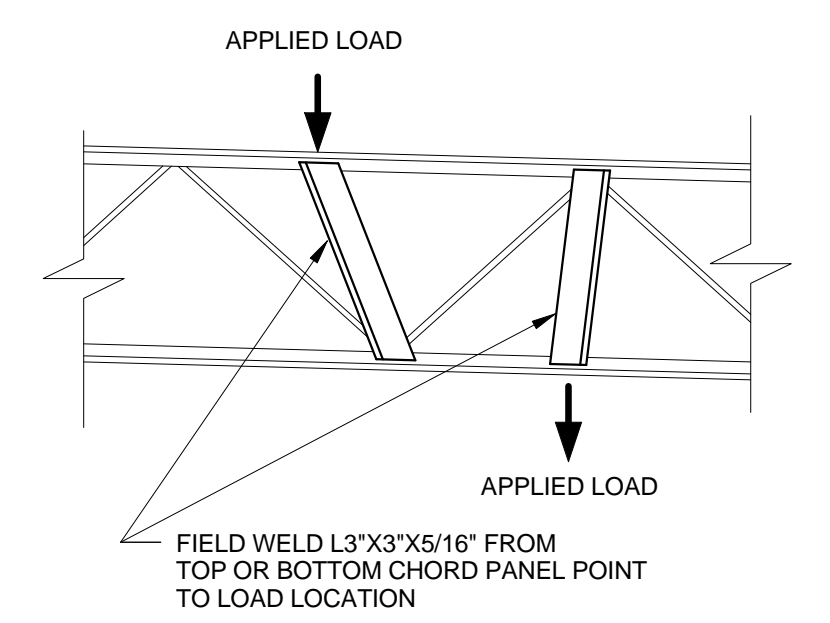
**6 MOMENT CONNECTION - BEAM TO COLUMN**  
SCALE: 3/4" = 1'-0"



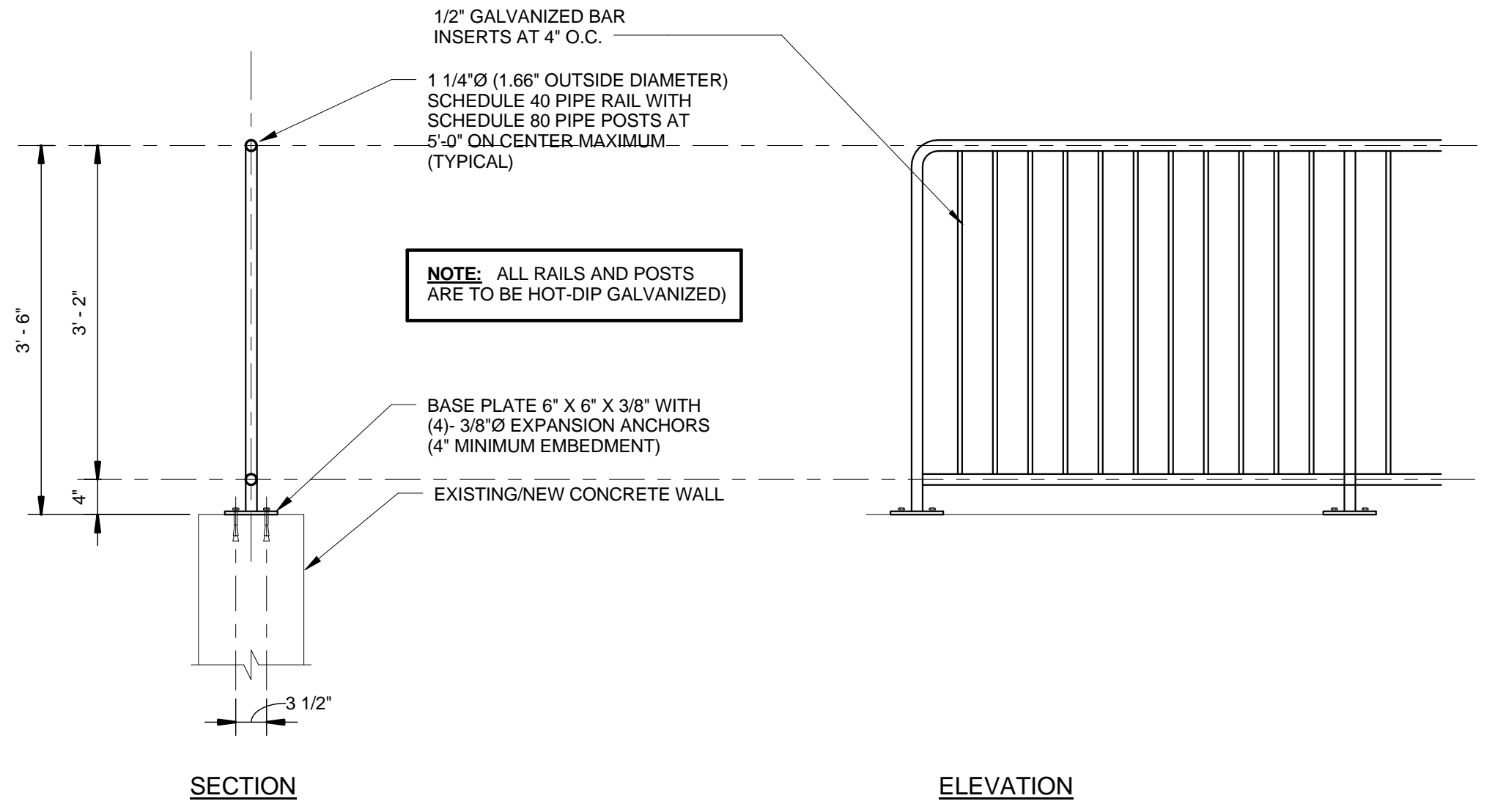
**7 COLUMN UNDER CANTILEVERED BEAM**  
SCALE: 3/4" = 1'-0"



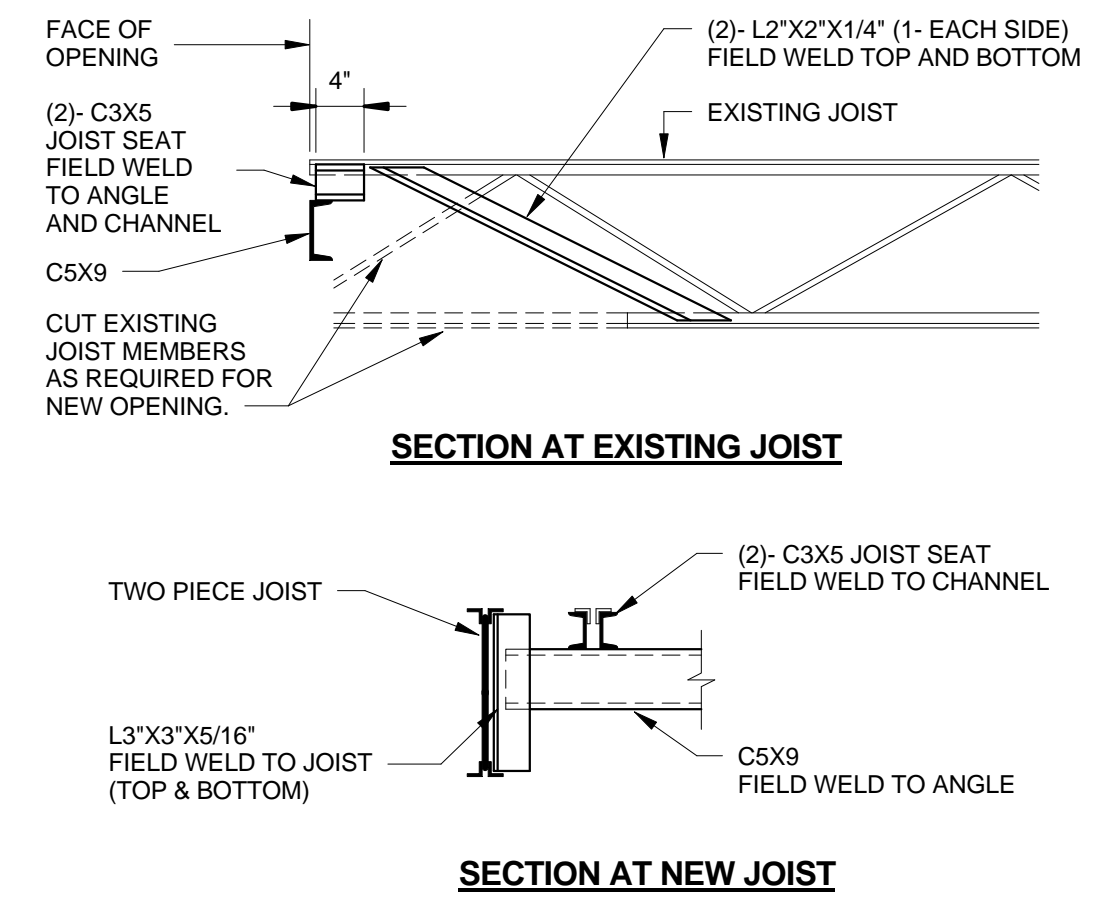
**10 TYPICAL JOIST MODIFICATION DETAIL**  
SCALE: 3/4" = 1'-0" (AT NEW FLOOR OPENINGS)



**8 JOIST MODIFICATION AT CONCENTRATED LOAD**  
SCALE: 3/4" = 1'-0"



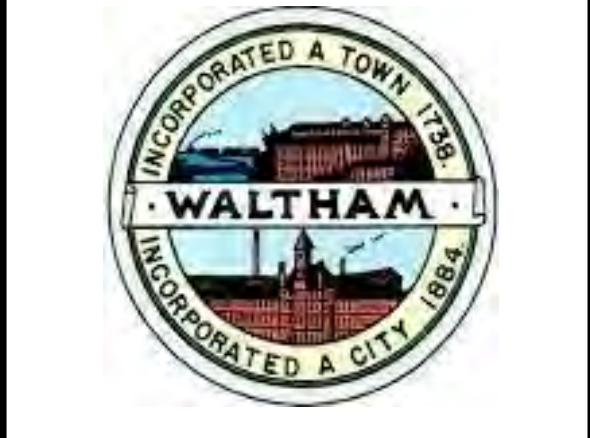
**9 TYPICAL GUARDRAIL DETAIL**  
SCALE: 3/4" = 1'-0"



**10 TYPICAL JOIST MODIFICATION DETAIL**  
SCALE: 3/4" = 1'-0" (AT NEW FLOOR OPENINGS)

REVISIONS		
Number	Description	Date

ISSUED FOR BID



WALTHAM POLICE STATION RENOVATION

155 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS

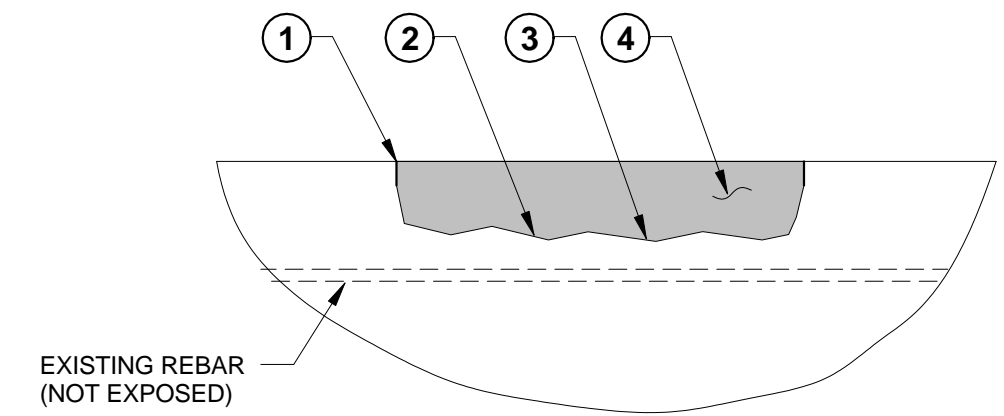
TYPICAL DETAILS

PROJECT NUMBER: 19401.01  
DESIGNED BY: JS  
DRAWN BY: KC  
CHECKED BY: JS  
DATE: July-Aug. 2016  
SCALE: As indicated

SHEET NUMBER:  
**S504**



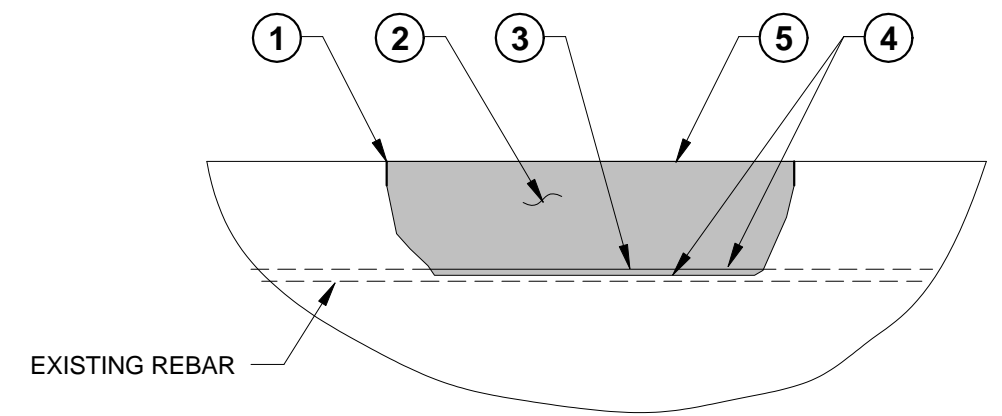
ELEC. MECH. FIRE. PLUM. STRUC. ARCH. CIVIL. REVIEWED BY: DATE: 7/14/2016 10:34:03 AM PROJECT FILE: C:\Users\mlogoff\Documents\19401\Waltham Police Station\STRUCTURAL\_MRO\04.dwg



- 1 SAW CUT TO 1/2" MAXIMUM DEPTH AROUND PERIMETER OF DETERIORATED CONCRETE TO BE REMOVED.
- 2 REMOVE ALL LOOSE AND DETERIORATED CONCRETE BY MECHANICAL MEANS.
- 3 REMOVE ADDITIONAL CONCRETE, AS NECESSARY, TO PROVIDE A DEPTH OF AT LEAST 1-INCH OVER ENTIRE REMOVAL AREA. APPLY SikaQuick Slurry, OR APPROVED EQUAL, TO EXPOSED SUBSTRATE.
- 4 POUR SikaQuick 1000, OR APPROVED EQUAL, INTO REPAIR AREA.

**NOTES:**  
1. INSTALL ALL MATERIALS IN ACCORDANCE WITH MANUFACTURER'S PRINTED RECOMMENDATIONS.

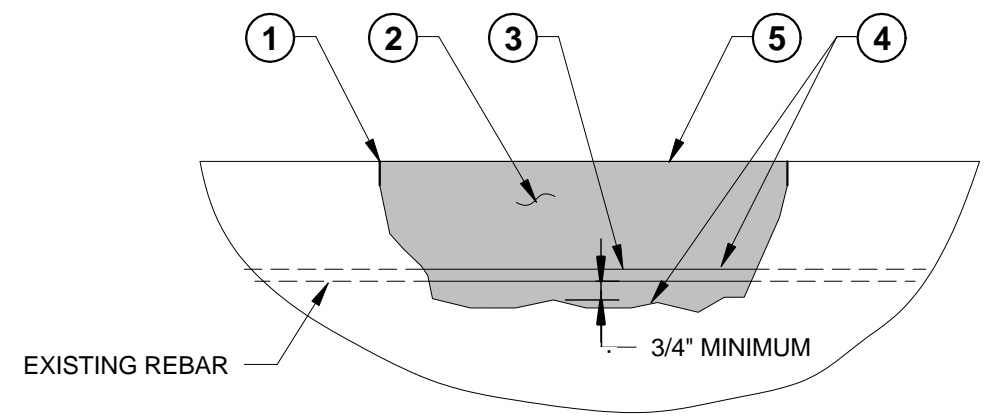
**REINFORCEMENT NOT EXPOSED**



- 1 SAW CUT TO 1/2" MAXIMUM DEPTH AROUND PERIMETER OF DETERIORATED CONCRETE TO BE REMOVED.
- 2 REMOVE ALL LOOSE AND DETERIORATED CONCRETE BY MECHANICAL MEANS.
- 3 MECHANICALLY CLEAN REINFORCING STEEL TO REMOVE ALL CONTAMINANTS AND RUST; APPLY Sika Armatex 110 EpoCem, OR APPROVED EQUAL, TO ALL EXPOSED REINFORCING BARS (1ST COAT).
- 4 APPLY SikaQuick 1000 SLURRY, OR APPROVED EQUAL, TO EXPOSED SUBSTRATE AND APPLY Sika Armatex 110 EpoCem, OR APPROVED EQUAL, TO EXPOSED REINFORCING BARS (2ND COAT).
- 5 POUR SikaQuick 1000, OR APPROVED EQUAL, INTO REPAIR AREA.

**NOTES:**  
1. INSTALL ALL MATERIALS IN ACCORDANCE WITH MANUFACTURER'S PRINTED RECOMMENDATIONS.

**REINFORCEMENT EXPOSED LESS THAN 1/2 BAR DEPTH**

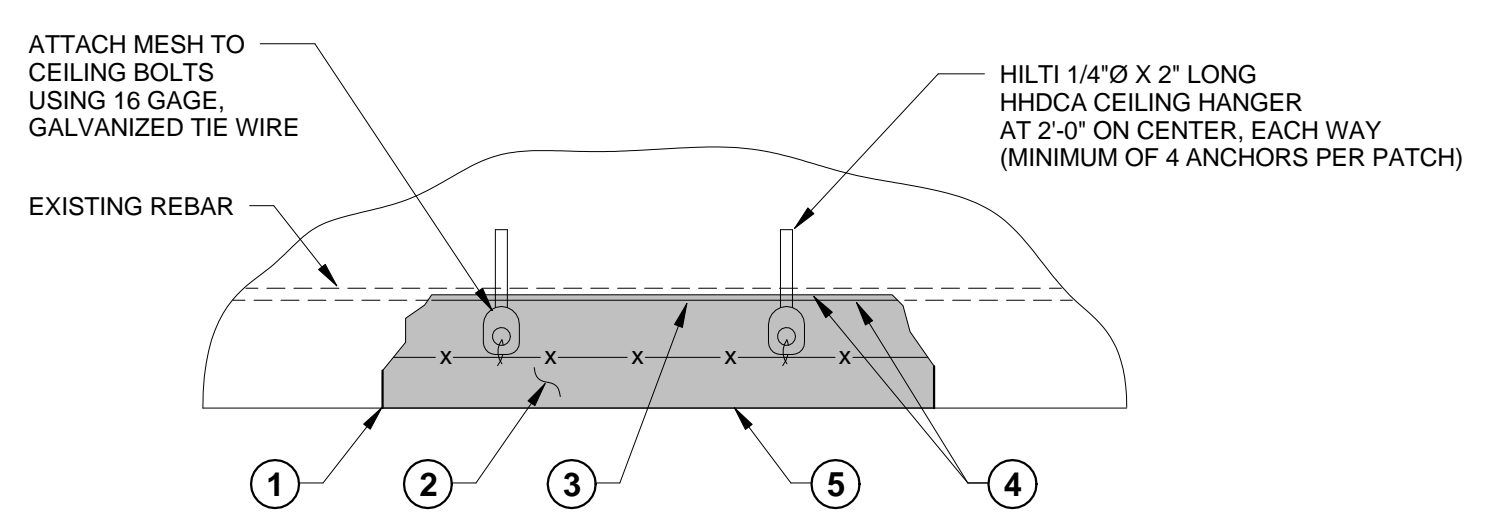


- 1 SAW CUT TO 1/2" MAXIMUM DEPTH AROUND PERIMETER OF DETERIORATED CONCRETE TO BE REMOVED.
- 2 REMOVE ALL LOOSE AND DETERIORATED CONCRETE BY MECHANICAL MEANS.
- 3 IF MORE THAN 1/2 OF THE EXISTING REINFORCING BAR IS EXPOSED CHIP AROUND THE REINFORCING BAR TO OBTAIN A MINIMUM OF 3/4" CLEAR BELOW BAR; APPLY Sika Armatex 110 EpoCem, OR APPROVED EQUAL, TO ALL EXPOSED REINFORCING BARS (1ST COAT).
- 4 APPLY SikaQuick 1000 SLURRY, OR APPROVED EQUAL, TO EXPOSED SUBSTRATE AND APPLY Sika Armatex 110 EpoCem, OR APPROVED EQUAL, TO EXPOSED REINFORCING BARS (2ND COAT).
- 5 POUR SikaQuick 1000, OR APPROVED EQUAL, INTO REPAIR AREA.

**NOTES:**  
1. INSTALL ALL MATERIALS IN ACCORDANCE WITH MANUFACTURER'S PRINTED RECOMMENDATIONS.  
2. IF MORE THAN 25% OF EXISTING REINFORCEMENT IS DETERIORATED, CONTACT ENGINEER BEFORE CONTINUING.

**REINFORCEMENT EXPOSED MORE THAN 1/2 BAR DEPTH**

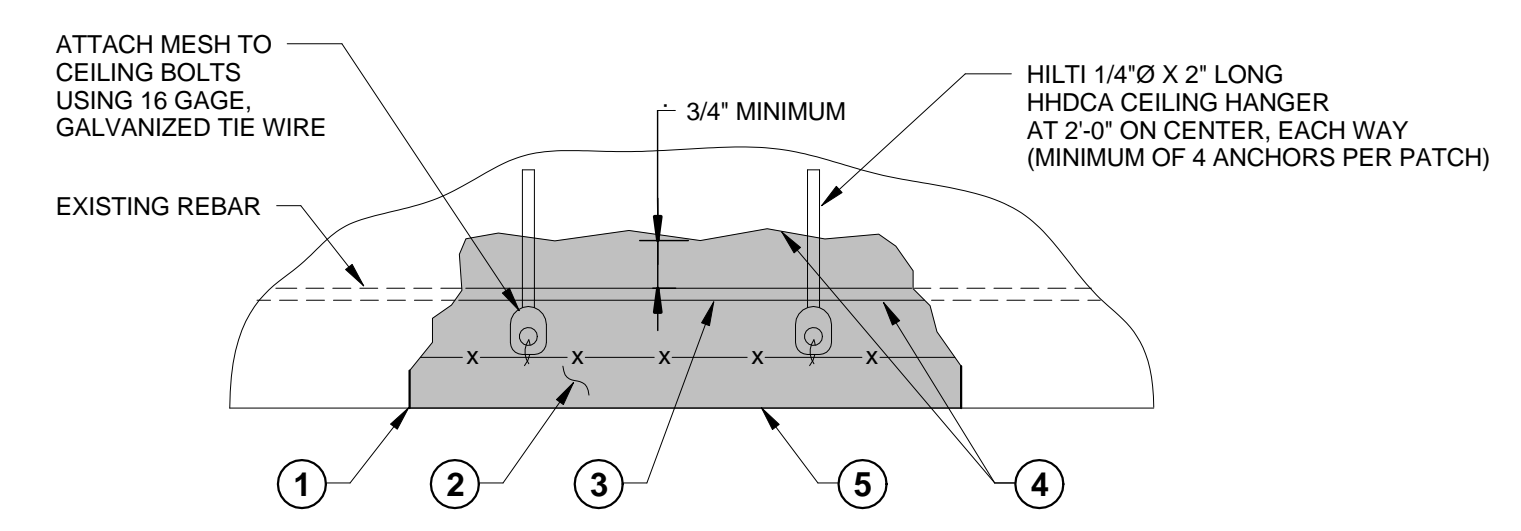
**CONCRETE SURFACE REPAIR DETAIL**



- 1 SAW CUT TO 1/2" MAXIMUM DEPTH AROUND PERIMETER OF DETERIORATED CONCRETE TO BE REMOVED.
- 2 REMOVE ALL LOOSE AND DETERIORATED CONCRETE BY MECHANICAL MEANS.
- 3 MECHANICALLY CLEAN REINFORCING STEEL TO REMOVE ALL CONTAMINANTS AND RUST; APPLY Sika Armatex 110 EpoCem, OR APPROVED EQUAL, TO ALL EXPOSED REINFORCING BARS (1ST COAT).
- 4 APPLY Sika Armatex 110 BONDING BRIDGE, OR APPROVE EQUAL, TO EXPOSED SUBSTRATE AND APPLY Sika Armatex EpoCem, OR APPROVED EQUAL, TO EXPOSED REINFORCING BARS (2ND COAT).
- 5 INSTALL PATCHING MATERIAL SikaTop 123 PLUS, OR APPROVED EQUAL, IN 1 1/2" LIFTS. INSTALL 2"X2" X 16 GAGE MESH IN THE CENTER OF THE FINAL LIFT USING GALVANIZED TIE WIRE & HILTI BOLTS.

**NOTES:**  
1. INSTALL ALL MATERIALS IN ACCORDANCE WITH MANUFACTURER'S PRINTED RECOMMENDATIONS.

**REINFORCEMENT EXPOSED LESS THAN 1/2 BAR DEPTH**



- 1 SAW CUT TO 1/2" MAXIMUM DEPTH AROUND PERIMETER OF DETERIORATED CONCRETE TO BE REMOVED.
- 2 REMOVE ALL LOOSE AND DETERIORATED CONCRETE BY MECHANICAL MEANS.
- 3 IF MORE THAN 1/2 OF THE EXISTING REINFORCING BAR IS EXPOSED CHIP AROUND THE REINFORCING BAR TO OBTAIN A MINIMUM OF 3/4" CLEAR BELOW BAR; APPLY Sika Armatex 110 EpoCem, OR APPROVED EQUAL, TO ALL EXPOSED REINFORCING BARS (1ST COAT).
- 4 APPLY Sika Armatex 110 BONDING BRIDGE, OR APPROVE EQUAL, TO EXPOSED SUBSTRATE AND APPLY Sika Armatex EpoCem, OR APPROVED EQUAL, TO EXPOSED REINFORCING BARS (2ND COAT).
- 5 INSTALL PATCHING MATERIAL SikaTop 123 PLUS, OR APPROVED EQUAL, IN 1 1/2" LIFTS. INSTALL 2"X2" X 16 GAGE MESH IN THE CENTER OF THE FINAL LIFT USING GALVANIZED TIE WIRE & HILTI BOLTS.

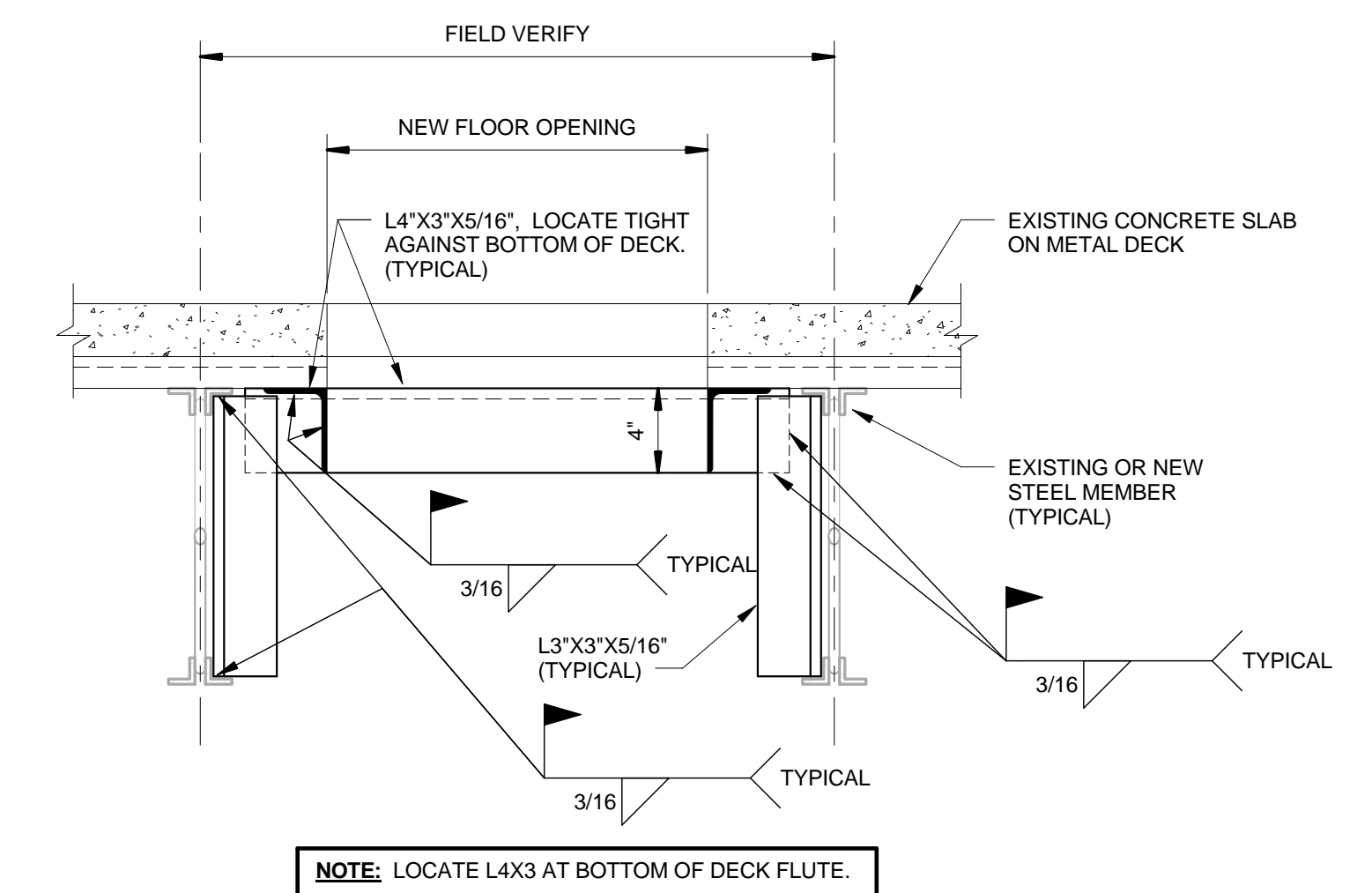
**NOTES:**  
1. INSTALL ALL MATERIALS IN ACCORDANCE WITH MANUFACTURER'S PRINTED RECOMMENDATIONS.  
2. IF MORE THAN 25% OF EXISTING REINFORCEMENT IS DETERIORATED, CONTACT ENGINEER BEFORE CONTINUING.

**REINFORCEMENT EXPOSED MORE THAN 1/2 BAR DEPTH**

**CONCRETE OVERHEAD REPAIR DETAIL**

**1 CONCRETE SPALL REPAIR DETAILS**

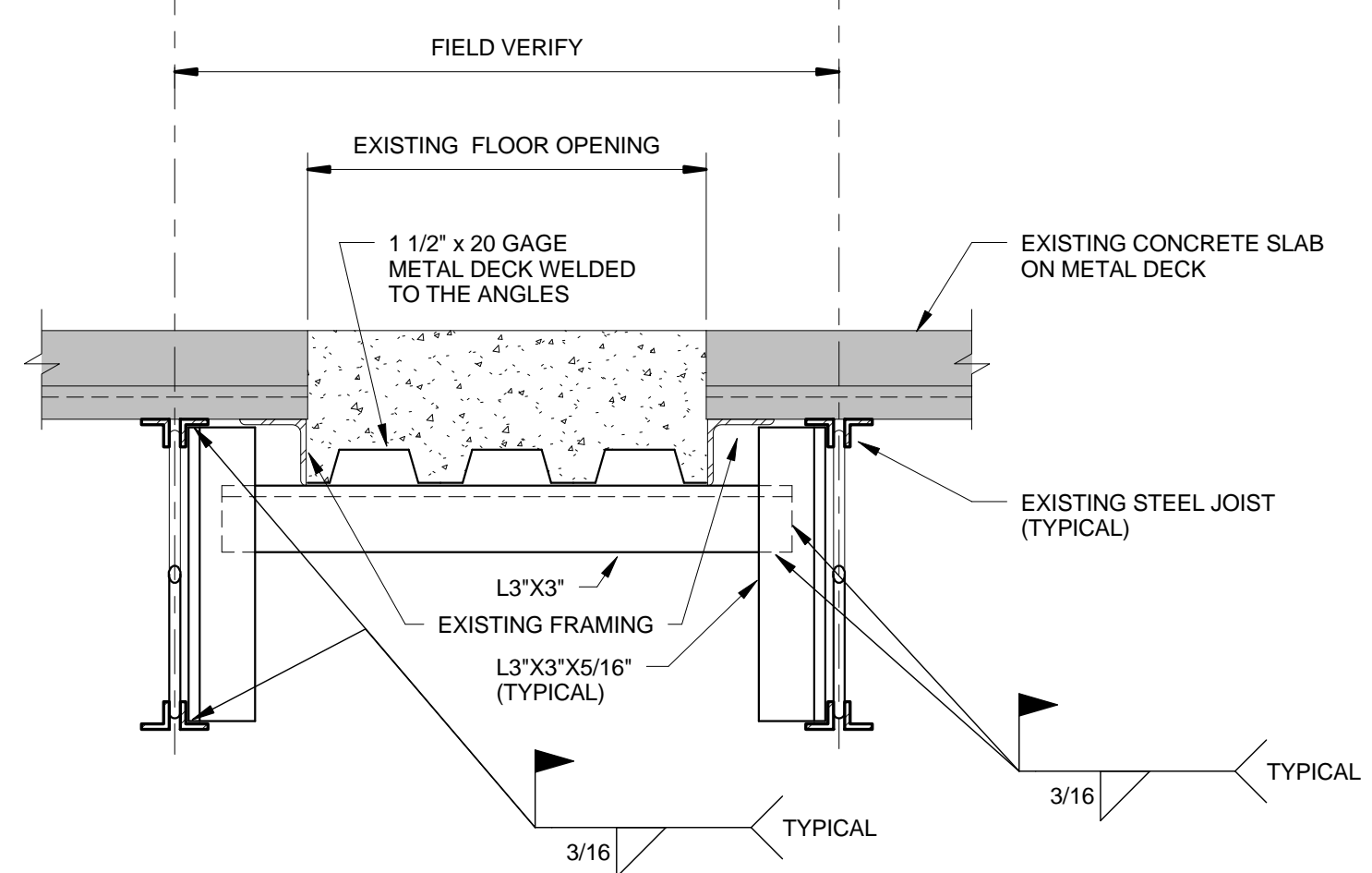
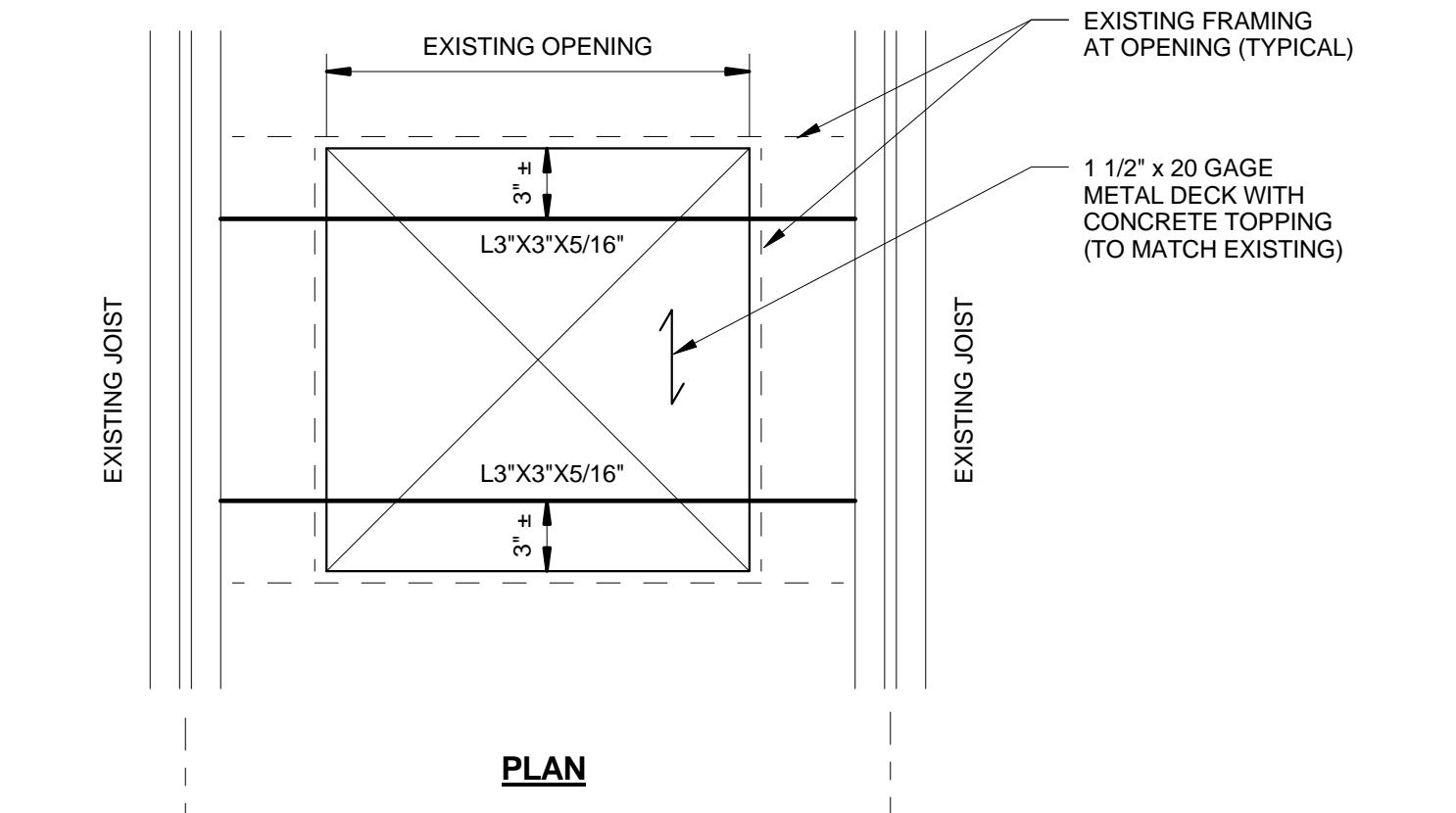
SCALE: 3/4" = 1'-0"



**NOTE:** LOCATE L4X3 AT BOTTOM OF DECK FLUTE.

**2 DETAIL AT NEW CONCRETE FLOOR OPENING**

SCALE: 1 1/2" = 1'-0"



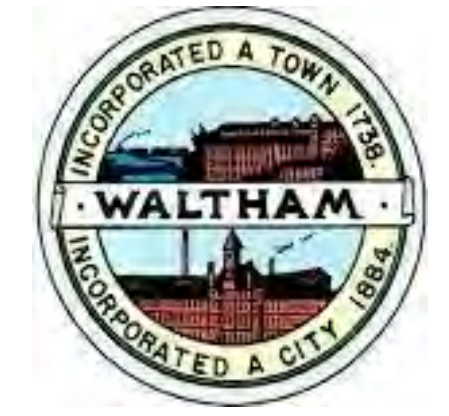
**NOTE:** FIELD VERIFY EXISTING FRAMING AROUND THE OPENING PRIOR TO FABRICATION.

**3 DETAIL AT CONCRETE FLOOR INFILL (LARGE OPENING)**

SCALE: 1 1/2" = 1'-0"

REVISIONS		
Number	Description	Date

**ISSUED FOR BID**



**WALTHAM POLICE STATION RENOVATION**

155 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS

**TYPICAL DETAILS**

PROJECT NUMBER: 19401.01  
DESIGNED BY: JS  
DRAWN BY: KC  
CHECKED BY: JS  
DATE: July-Aug. 2016  
SCALE: As indicated  
SHEET NUMBER:

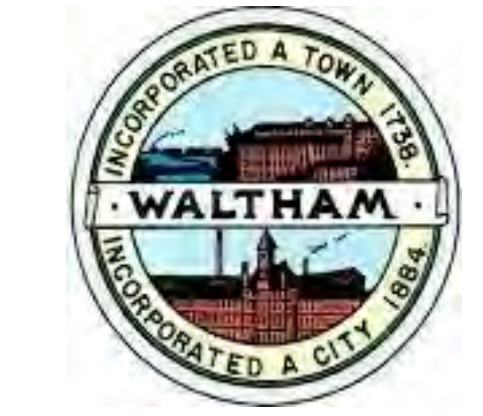
**S505**



ELEC: \_\_\_\_\_ MECH: \_\_\_\_\_ FIRE: \_\_\_\_\_ PLUM: \_\_\_\_\_ ARCH: \_\_\_\_\_ CIVIL: \_\_\_\_\_  
 REVIEWED BY: \_\_\_\_\_  
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REVISIONS		
Number	Description	Date

ISSUED FOR BID



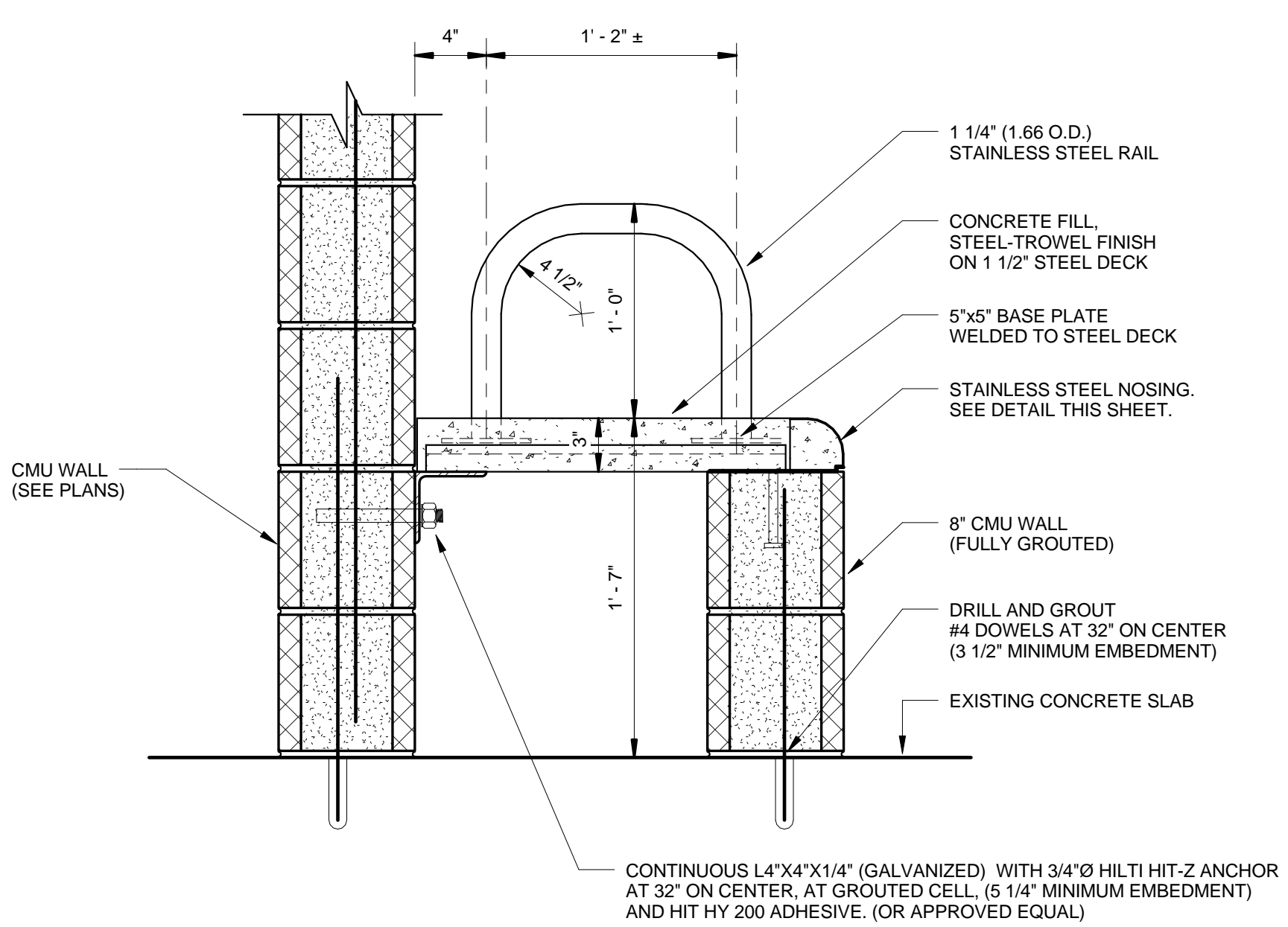
**WALTHAM POLICE  
STATION  
RENOVATION**

155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

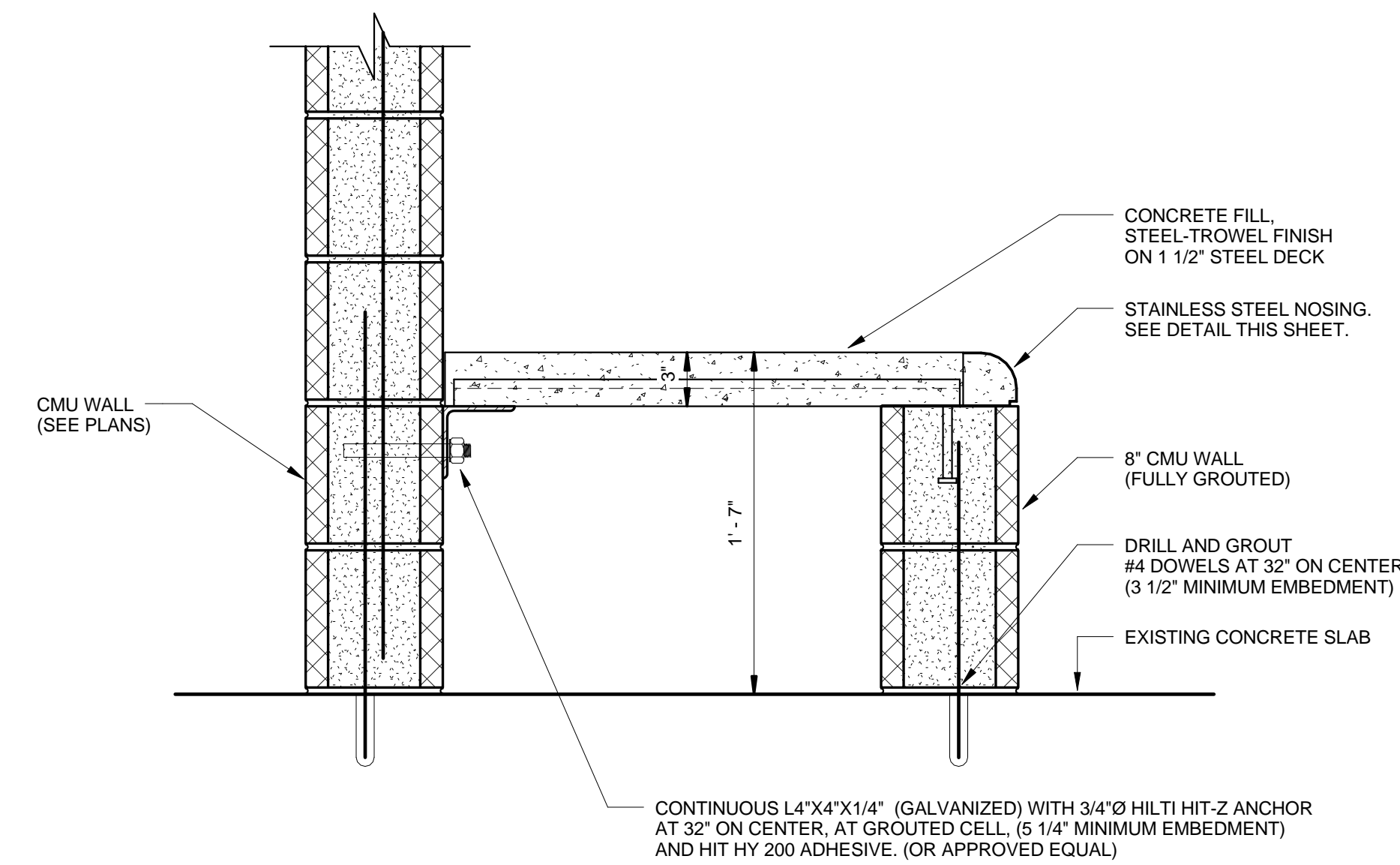
TYPICAL  
DETAILS

PROJECT NUMBER: 19401.01  
 DESIGNED BY: JS  
 DRAWN BY: KC  
 CHECKED BY: JS  
 DATE: July-Aug. 2016  
 SCALE: As indicated  
 SHEET NUMBER:

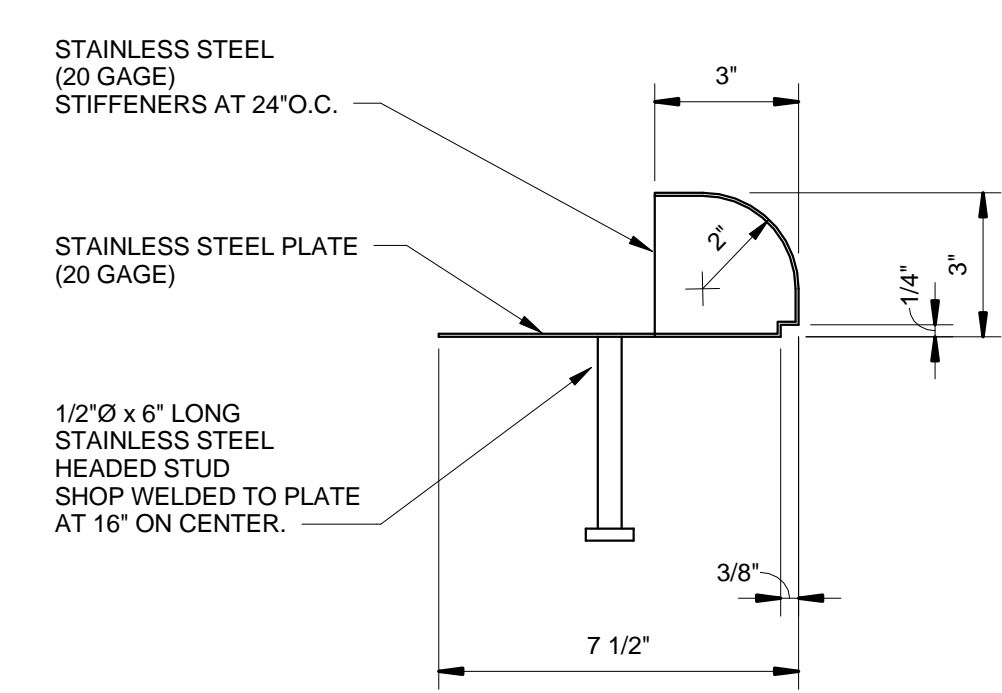
S506



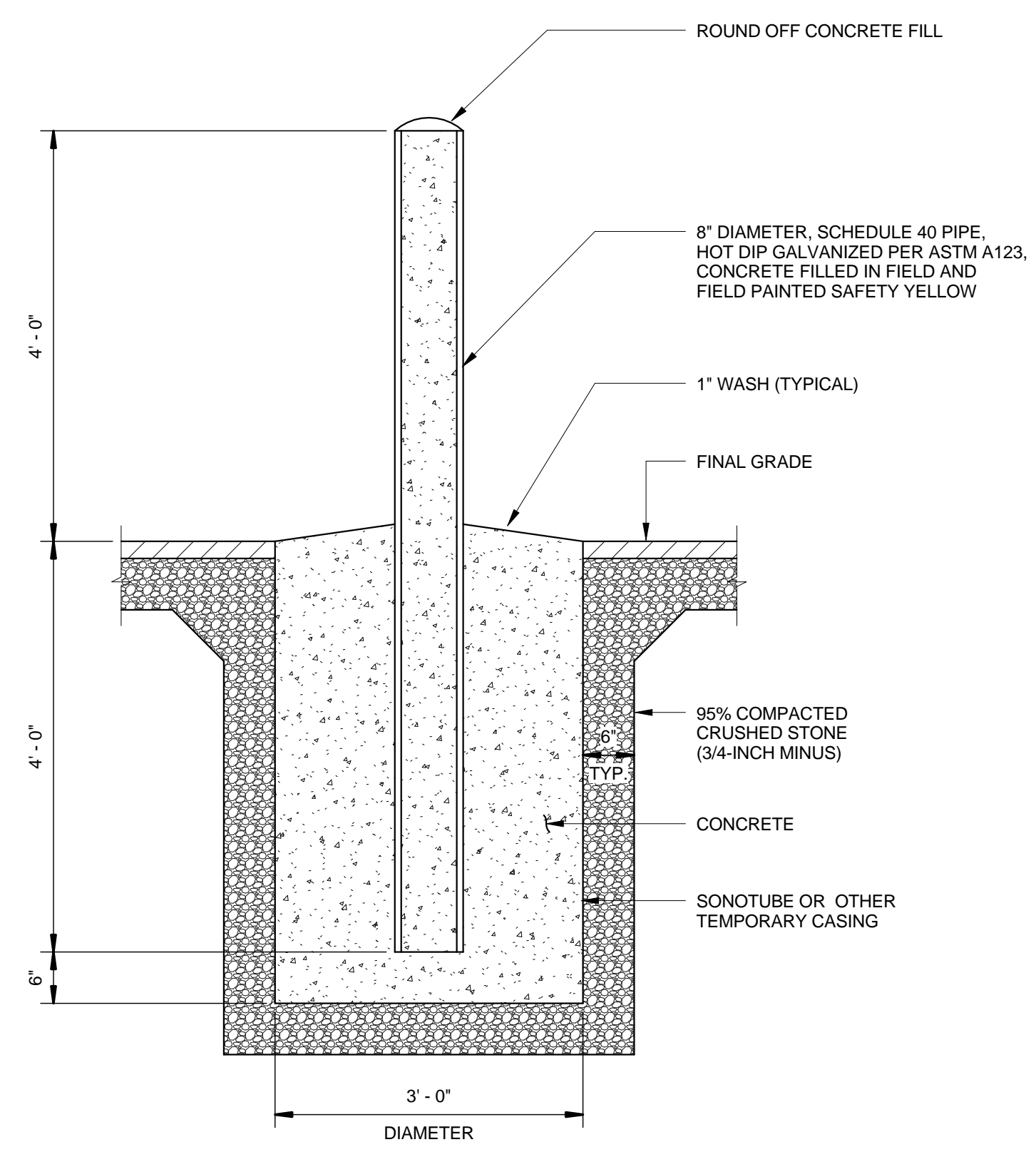
**1** **DETAIL AT BENCH**  
SCALE: 1 1/2" = 1'-0"



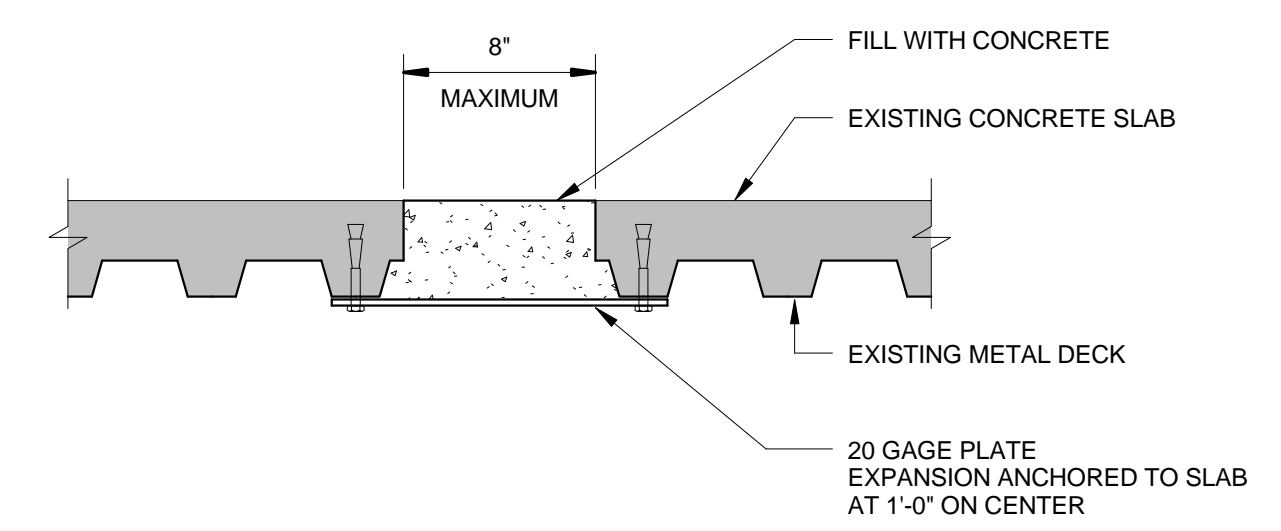
**2** **DETAIL AT BUNK**  
SCALE: 1 1/2" = 1'-0"



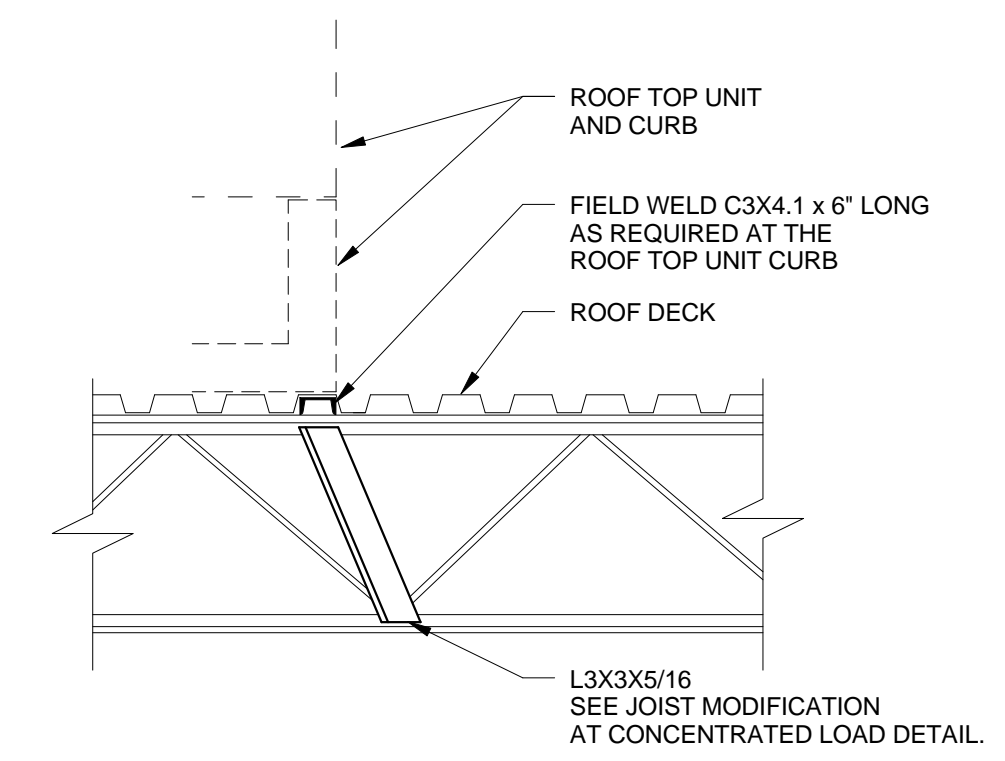
**A** **STAINLESS STEEL NOSING DETAIL**  
SCALE: 3" = 1'-0"



**3** **EXTERIOR BOLLARD DETAIL**  
SCALE: 3/4" = 1'-0"

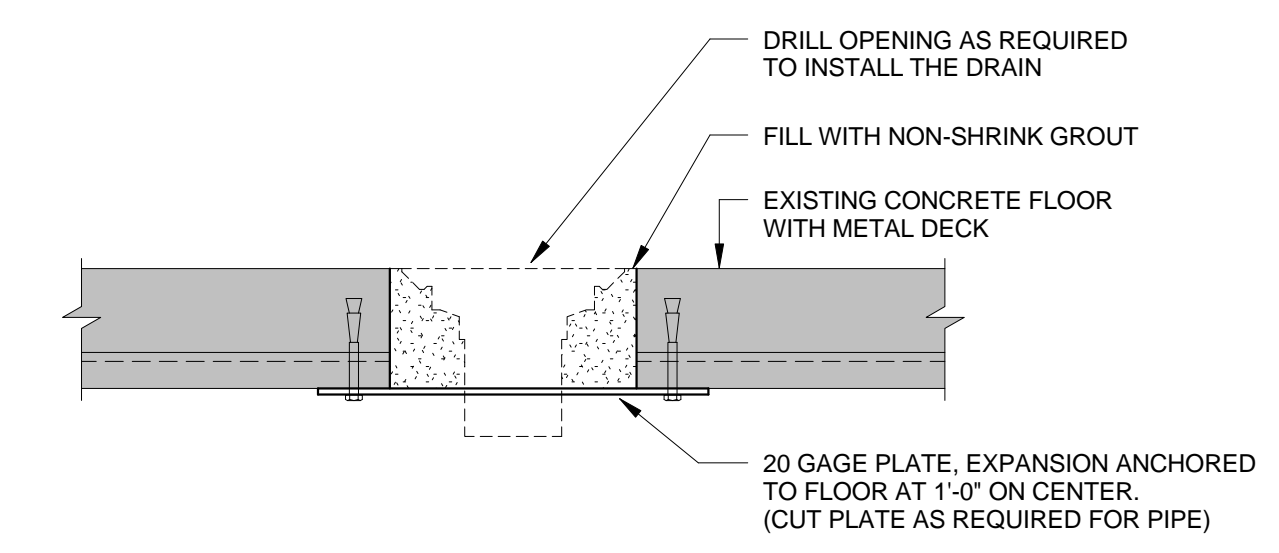


**4** **DETAIL AT CONCRETE FLOOR INFILL (SMALL OPENING)**  
SCALE: 1 1/2" = 1'-0"



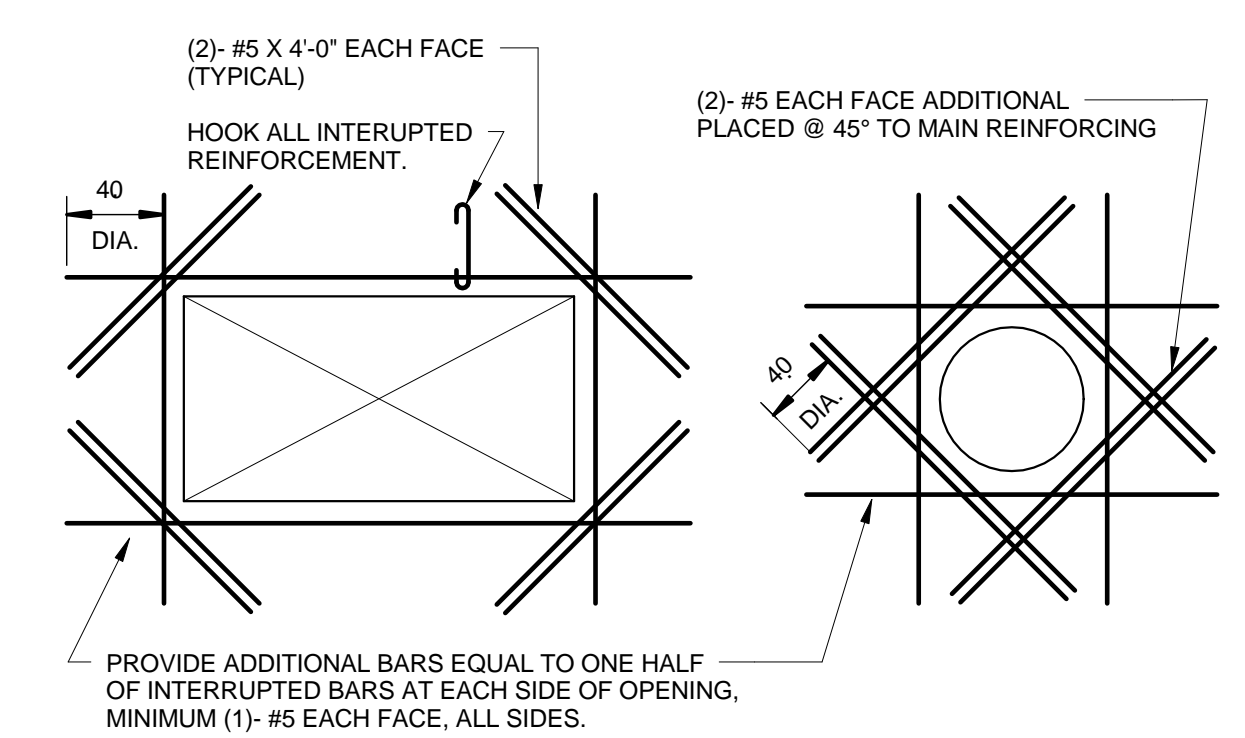
**6** **DECK STIFFENER DETAIL**  
SCALE: 3/4" = 1'-0"

**NOTE:** WHEN ROOF TOP UNIT LOADS DO NOT OCCUR AT A PANEL POINT, STRUTS SHALL BE PROVIDED AND INSTALLED IN THE FIELD TO CARRY THE LOAD TO AN OPPOSITE PANEL POINT AS SHOWN.



**5** **DETAIL AT NEW DRAIN IN EXISTING CONCRETE FLOOR**  
SCALE: 1 1/2" = 1'-0"

**NOTE:** SEE PLUMBING DRAWINGS FOR DRAIN LOCATIONS.



**7** **REINFORCING AT SLAB AND WALL OPENINGS**  
SCALE: 3/4" = 1'-0"

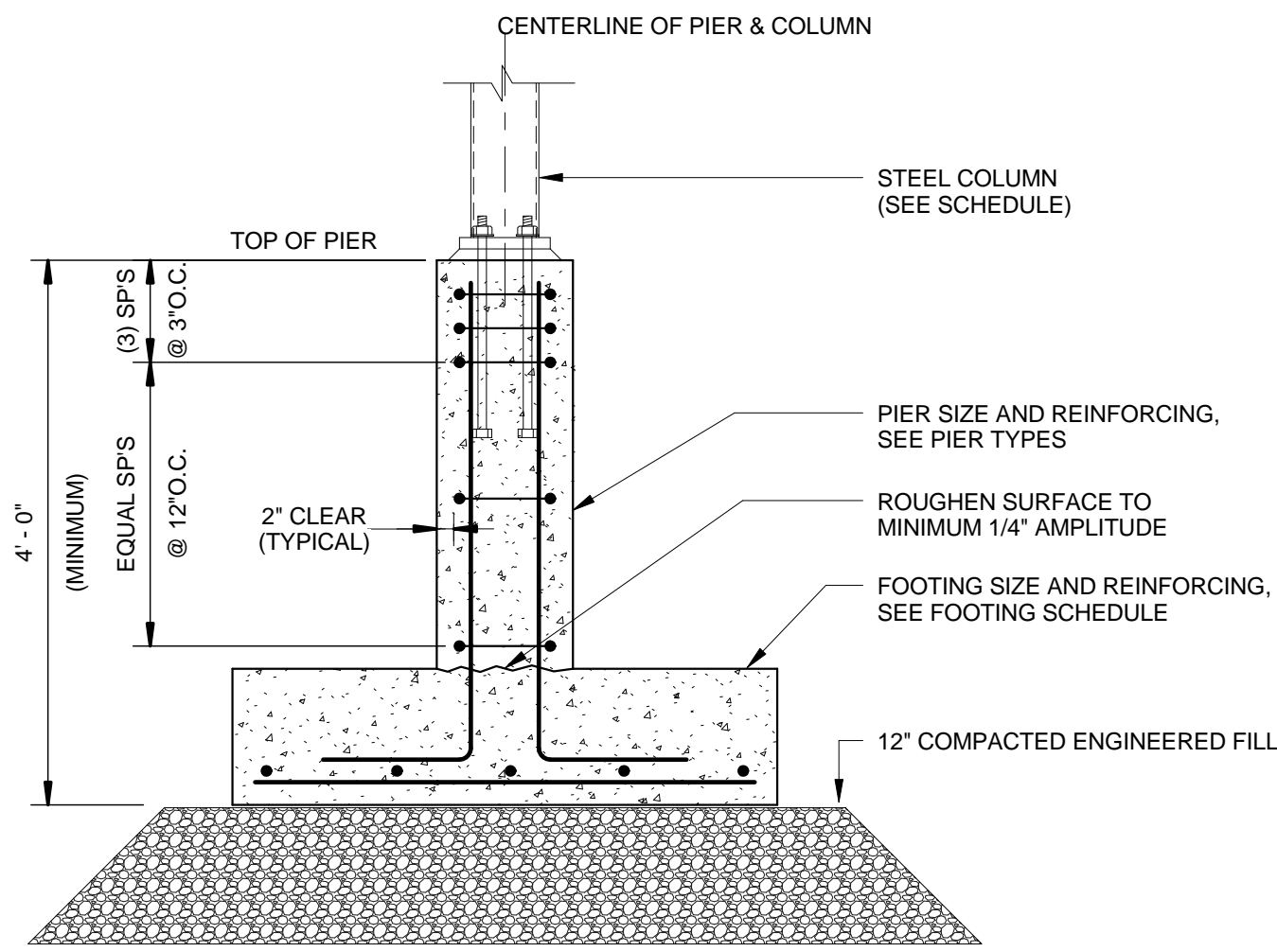
PROVIDE ADDITIONAL BARS EQUAL TO ONE HALF OF INTERRUPTED BARS AT EACH SIDE OF OPENING, MINIMUM (1)-#5 EACH FACE, ALL SIDES.



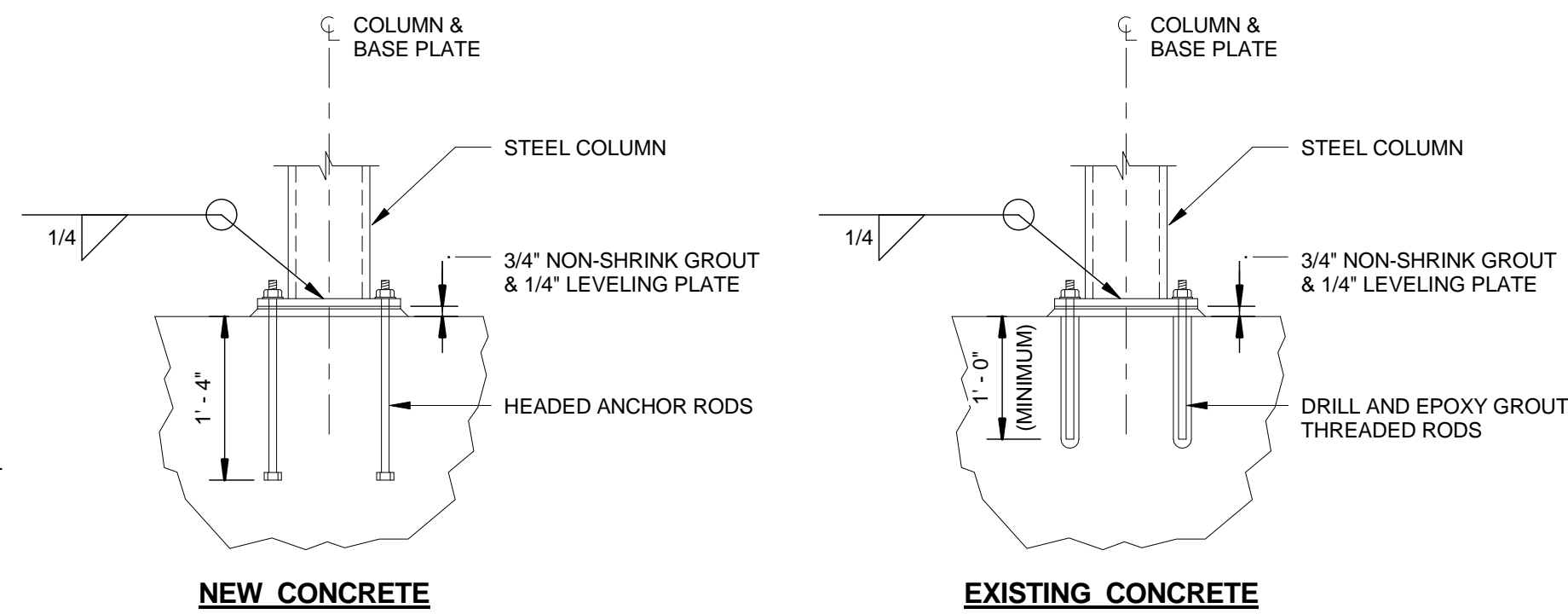
**COLUMN SCHEDULE**

Roof									Roof
24' - 0"									24' - 0"
Second Floor									Second Floor
12' - 8"									12' - 8"
First Floor									First Floor
0'									0'
Bottom of Base Plate Elevation:	1"	-7"	1"	-7"	1"	1"	1"	-3' - 0"	
Base Plate Type:	F	E	F	E	B	C	D	A	
Anchor Rod:	(4)- 3/4" DIA. EPOXY ANCHORS	(4)- 3/4" DIA.	(4)- 3/4" DIA. EPOXY ANCHORS	(4)- 3/4" DIA.	(4)- 3/4" DIA.	(4)- 3/4" DIA.	(4)- 3/4" DIA.	(4)- 3/4" DIA.	
Column Locations	E1-XA	E2-EA	E2-XA	E3-EB	G1-GA	G1-GB	G2-GA	G2-GB	

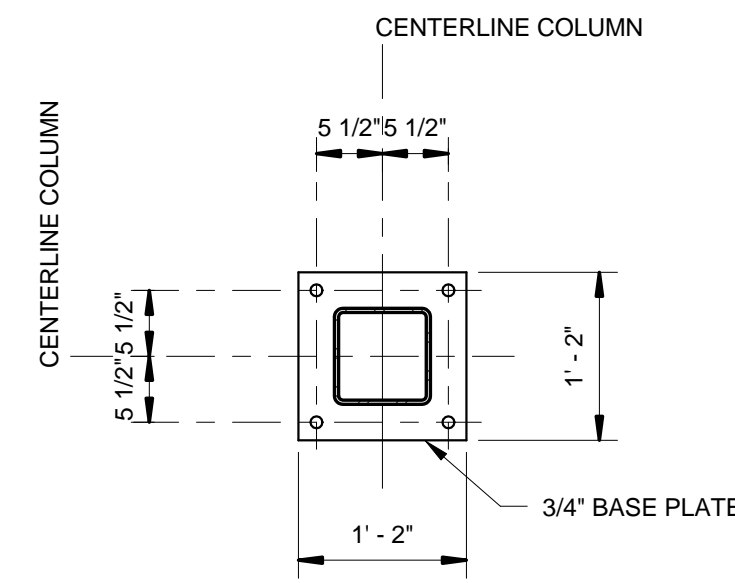
- COLUMN NOTES:**  
 1. ALL COLUMN MATERIAL ASTM A500 GRADE B.  
 2. ALL BASE PLATE MATERIAL ASTM A572 GRADE 50.



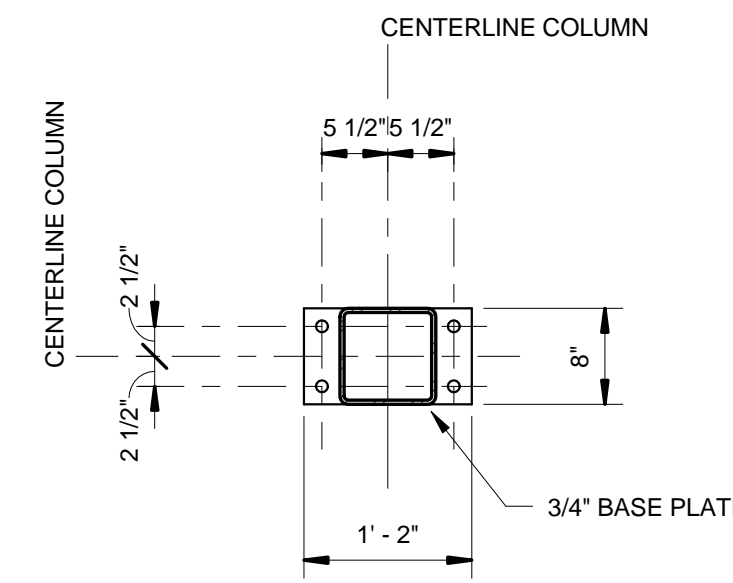
**TYPICAL PIER DETAIL**  
 SCALE: 3/4" = 1'-0"



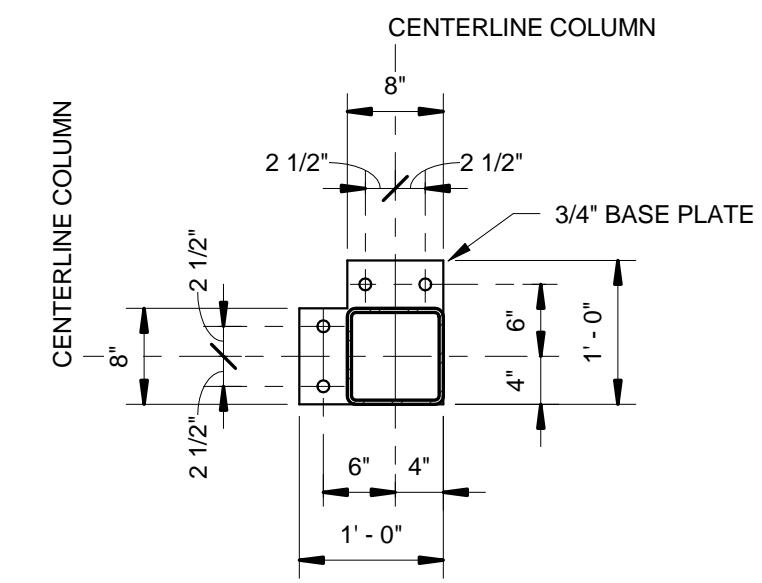
**COLUMN BASE PLATE DETAIL**  
 SCALE: 3/4" = 1'-0"



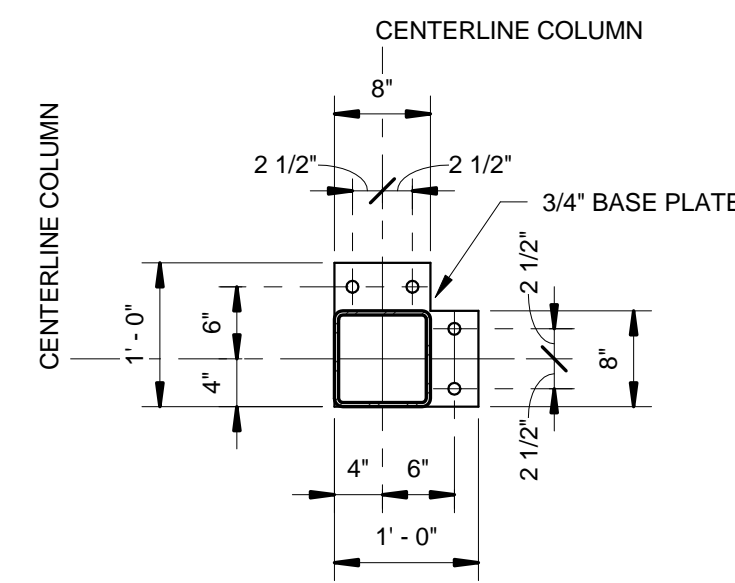
**TYPE - A**



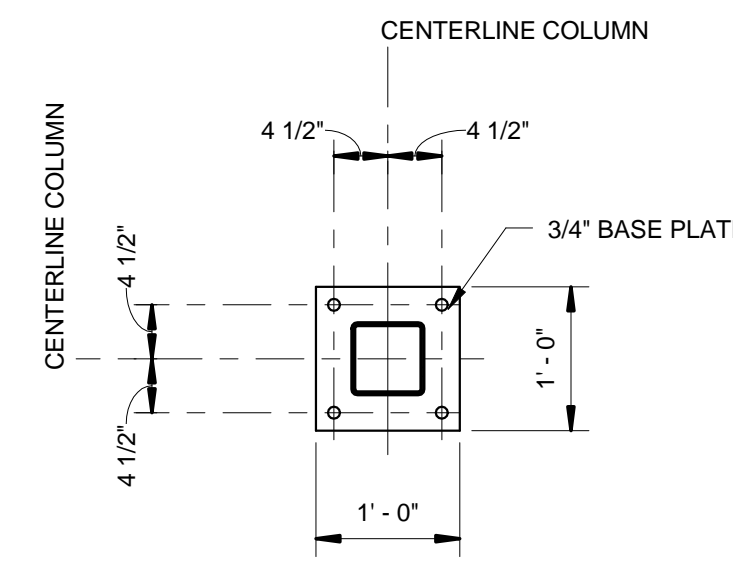
**TYPE - B**



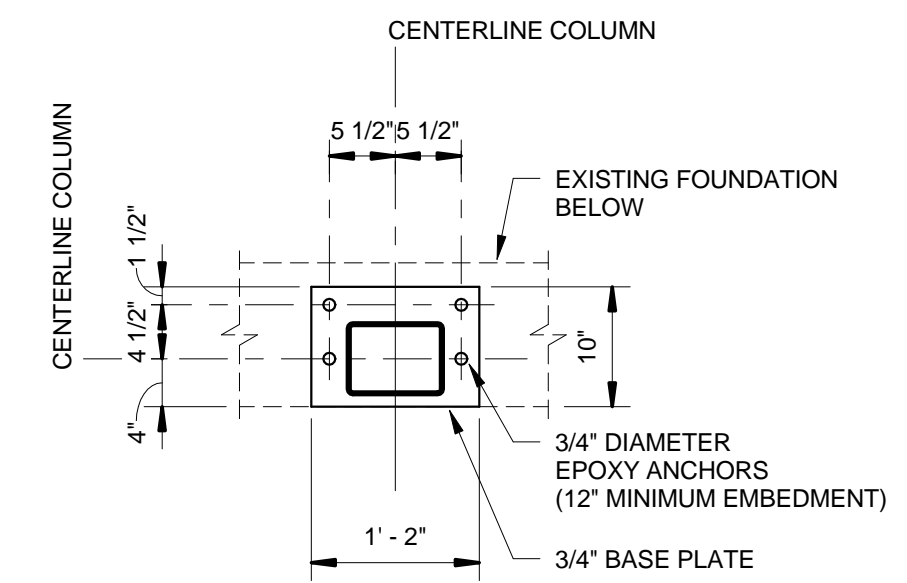
**TYPE - C**



**TYPE - D**

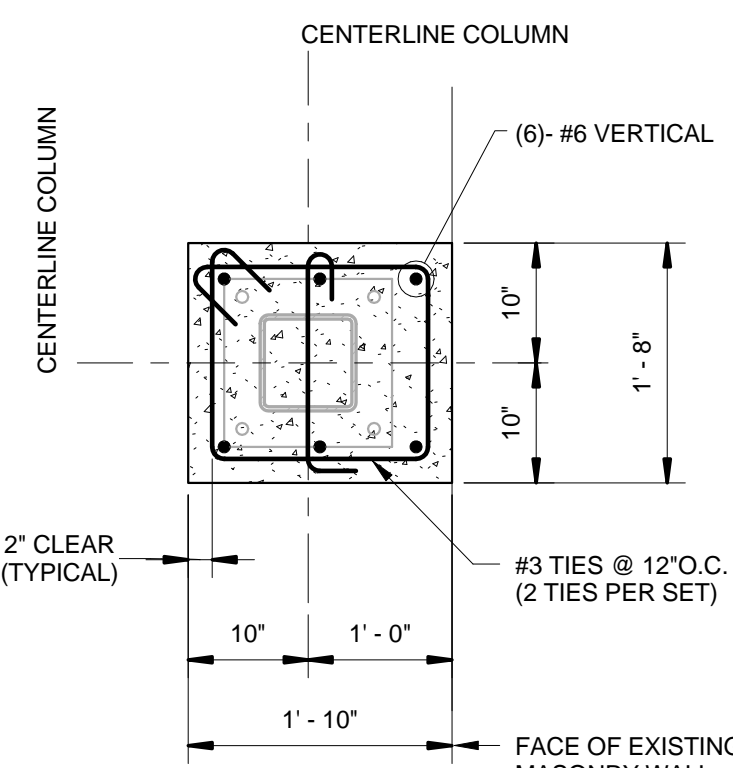


**TYPE - E**

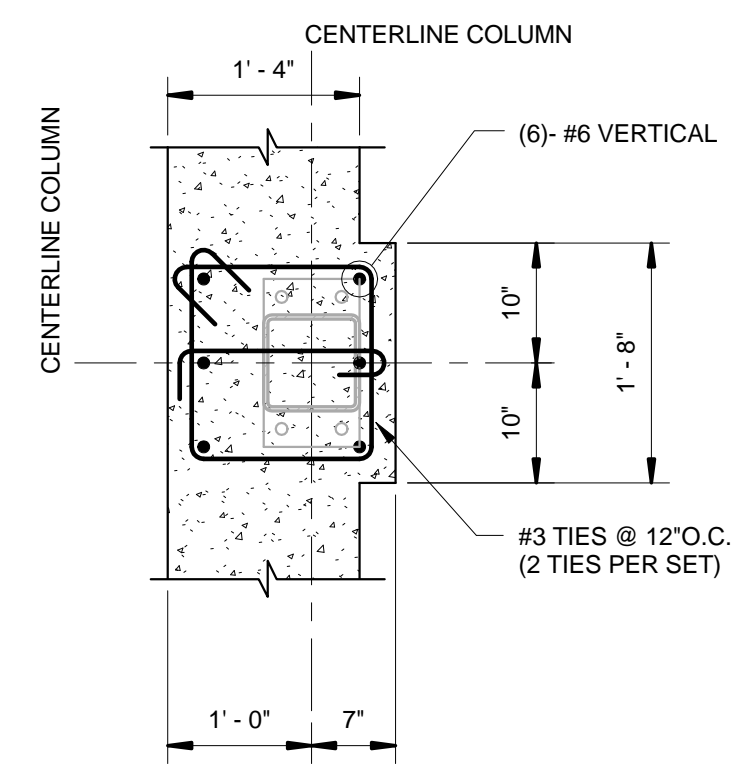


**TYPE - F**

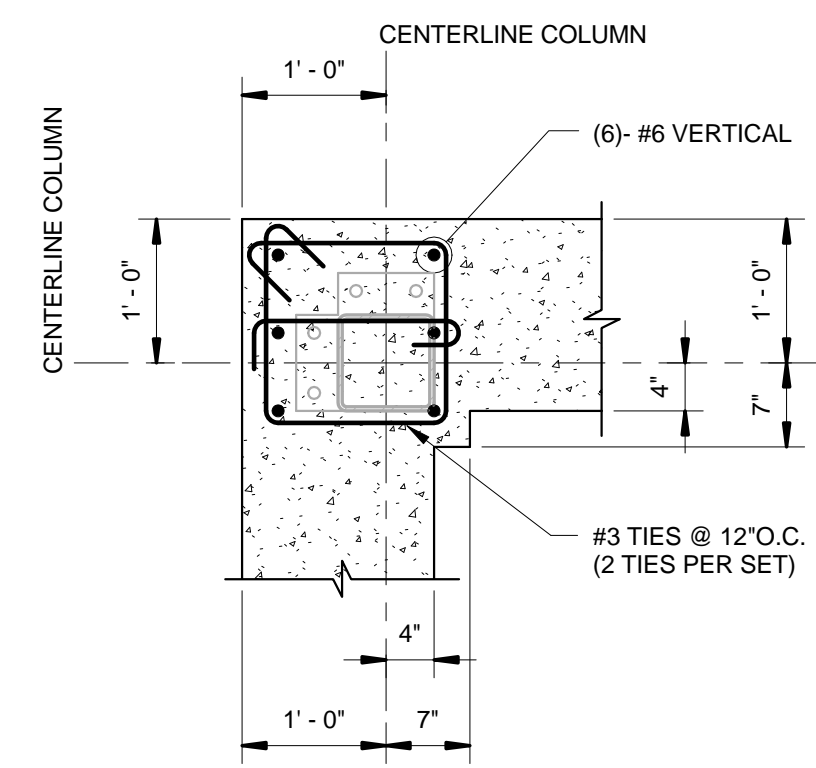
**BASE PLATE TYPES**  
 SCALE: 3/4" = 1'-0"



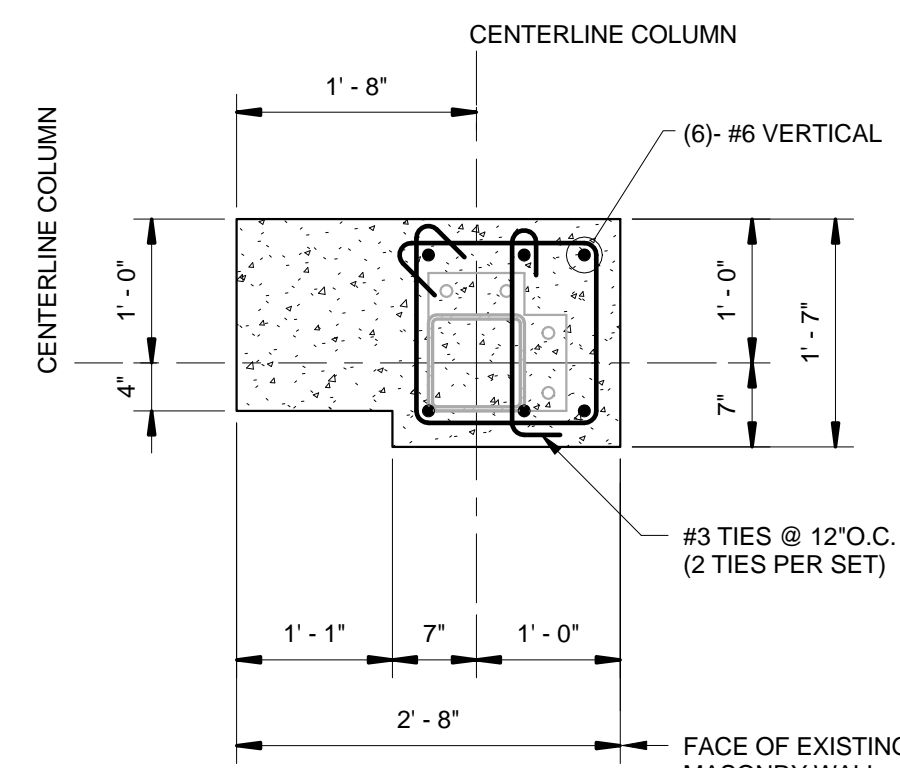
**PIER TYPE "P1"**



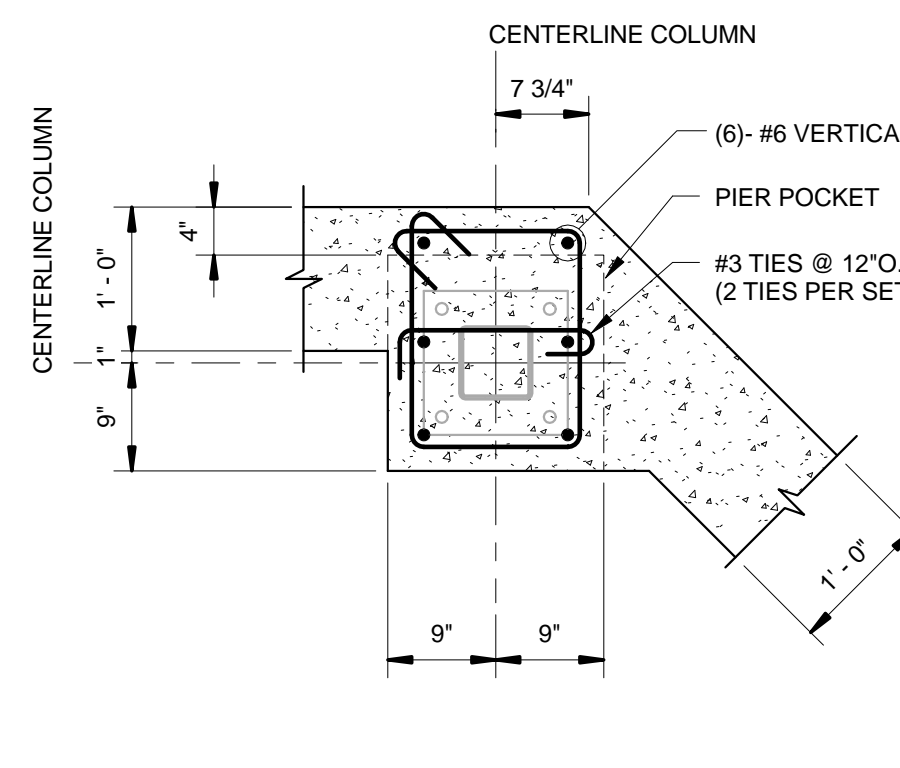
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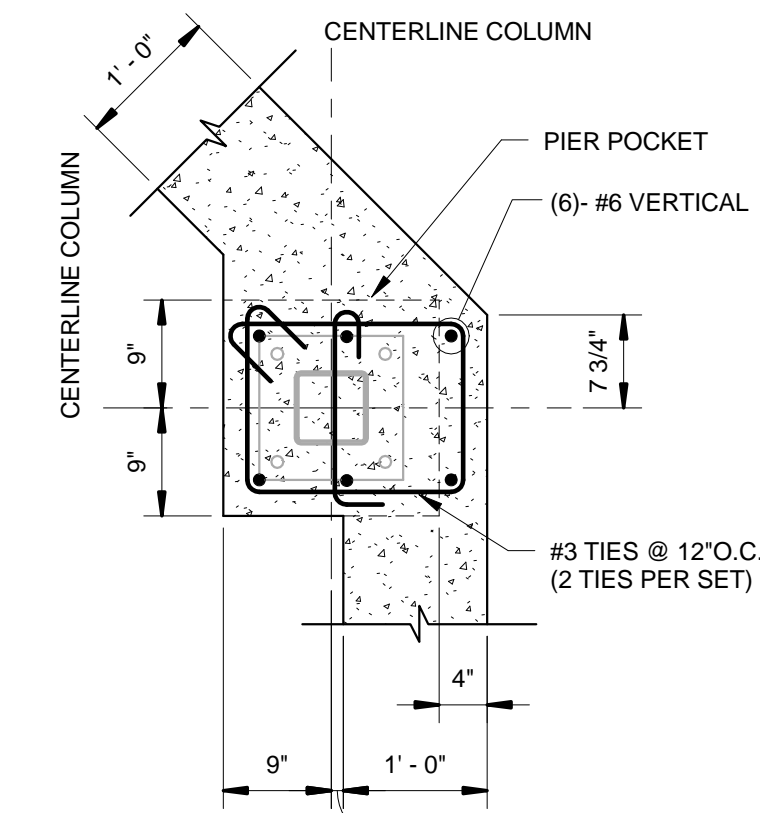
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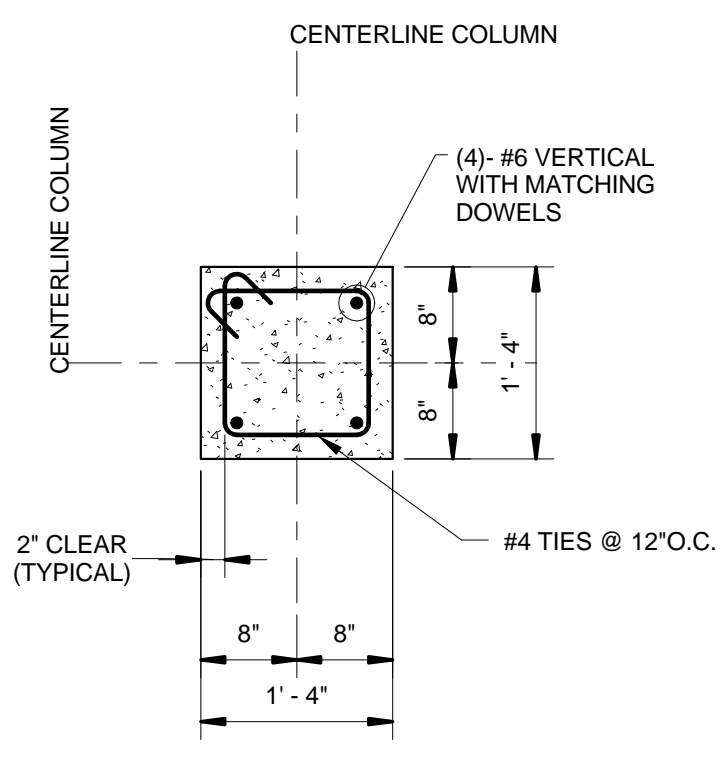
**PIER TYPE "P4"**



**PIER TYPE "P5"**  
 TOP OF PIER POCKET (-8")



**PIER TYPE "P6"**  
 TOP OF PIER POCKET (-8")



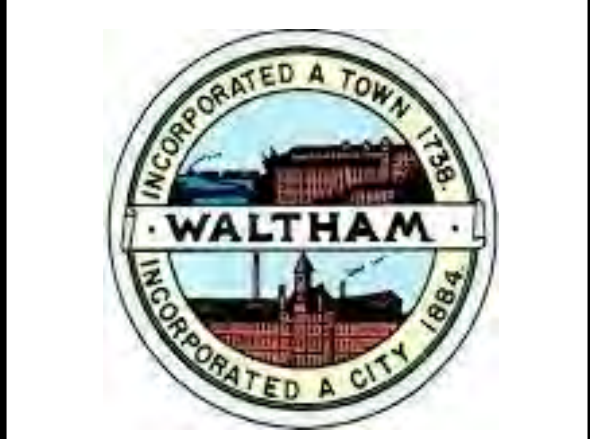
**PIER TYPE "P7"**

**PIER TYPES**  
 SCALE: 3/4" = 1'-0"

NOTE: WALL REINFORCING TO BE CONTINUOUS THROUGH PIERS.

REVISIONS		
Number	Description	Date

**ISSUED FOR BID**



**WALTHAM POLICE STATION RENOVATION**

155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**COLUMN SCHEDULE, BASE PLATE AND PIER DETAILS**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: JS  
 DRAWN BY: KC  
 CHECKED BY: JS  
 DATE: July-Aug. 2016  
 SCALE: As indicated

SHEET NUMBER:  
**S601**

ELEC: \_\_\_\_\_ MECH: \_\_\_\_\_ FIRE: \_\_\_\_\_ PLUM: \_\_\_\_\_ STRU: \_\_\_\_\_ ARCH: \_\_\_\_\_ CIVIL: \_\_\_\_\_  
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 PLOTTED: 7/14/2016 3:47 PM



REVIEWED BY: CIVIL: ARCH: MECH: FIRE: PLUM: STRUC: ELEC:

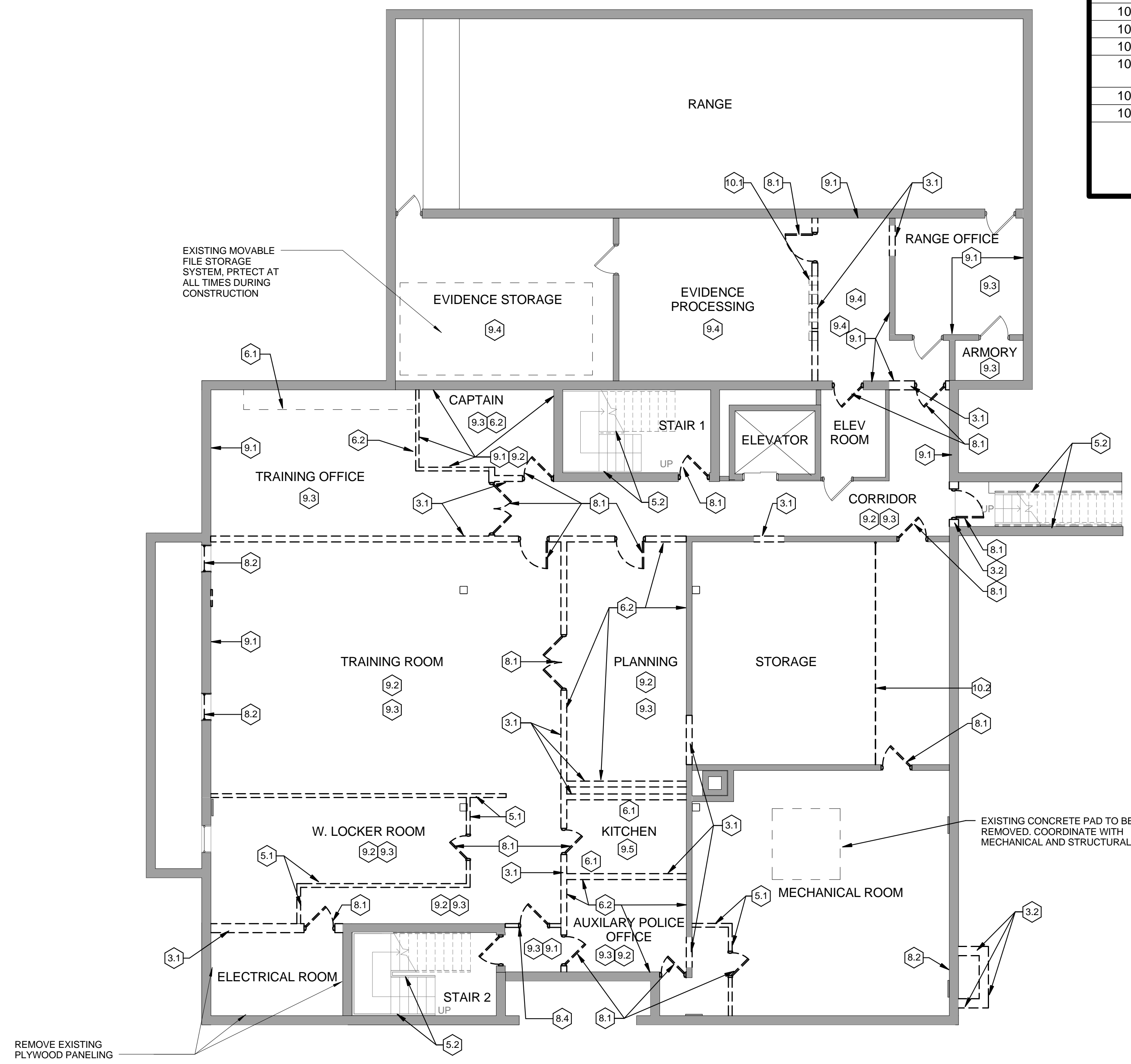
### KEYED DEMO PLAN WORK NOTES

3.1	REMOVE PORTION OF EXISTING CMU
3.2	REMOVE PORTION OF EXISTING CONCRETE WALL
3.3	REMOVE PORTION OF EXISTING EXTERIOR CMU, BRICK VENEER WALL
3.4	REMOVE PORTION OF EXISTING AIRWAY
5.1	REMOVE EXISTING METAL STUD WALL AND GYPSUM WALL BOARD FINISH
5.2	REMOVE EXISTING STAIR GUARD RAILS & RAILINGS
6.1	REMOVE EXISTING WOOD MILLWORK IN ITS ENTIRETY
6.2	REMOVE WOOD WAINSCOTING IN ITS ENTIRETY
6.3	REMOVE EXISTING BUILT UP RAMP
6.4	REMOVE EXISTING WOOD PARTITION WALL
8.1	REMOVE EXISTING DOOR & FRAMES
8.2	REMOVE EXISTING EXTERIOR WINDOW/LOUVER/ALUM STOREFRONT
8.3	REMOVE EXISTING INTERIOR WINDOW
8.4	REMOVE EXISTING STOREFRONT DOOR SIDELIGHTS & FRAMES
9.1	REMOVE GYPSUM WALL BOARD FINISH AND FURRING IN ITS ENTIRETY
9.2	REMOVE EXISTING CARPET FLOORING IN ITS ENTIRETY
9.3	REMOVE EXISTING VAT IN ITS ENTIRETY
9.4	REMOVE EXISTING VCT FLOORING IN ITS ENTIRETY
9.5	REMOVE EXISTING TILE FLOORING IN ITS ENTIRETY
9.6	REMOVE EXISTING TILE WALL FINISH IN ITS ENTIRETY
9.8	PORTION OF EXISTING KITCHEN CHASE FLOOR TO BE CUT OPEN. REFER TO MECHANICAL AND STRUCTURAL DRAWINGS.
10.1	REMOVE EXISTING EVIDENCE LOCKERS
10.2	REMOVE EXISTING WOOD FRAME AND METAL FENCE WALL IN ITS ENTIRETY
10.3	REMOVE EXISTING BATHROOM STALL PARTITIONS
10.4	REMOVE EXISTING TRANSACTION COUNTERS
10.5	REMOVE EXISTING DETENTION CELL UNITS (WALL, SLIDING DOOR AND BENCH) IN ITS ENTIRETY
10.6	REMOVE EXISTING CANOPY ABOVE DOOR
10.7	REMOVE AND RELOCATE EXISTING PISTOL LOCKER

\* PLEASE NOTE: NOT ALL WORK NOTES LISTED APPEAR ON THIS SHEET.

### GENERAL DEMO NOTES

- REMOVAL OF ANY WORK OR ITEM SHALL INCLUDE LEGAL DISPOSAL OF SAME UNLESS INDICATED TO BE SALVAGED. ALL REMOVAL AND DISPOSAL WORK SHALL BE PERFORMED IN A SAFE AND LEGAL MANNER. DOCUMENTATION OF RECYCLED WASTE IS REQUIRED.
- CONTRACTOR SHALL VERIFY ALL CONDITIONS IN THE FIELD PRIOR TO COMMENCEMENT OF DEMOLITION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S ARCHITECT IN WRITING IMMEDIATELY UPON DISCOVERY.
- DRAWINGS MAY NOT FULLY SHOW EVERY DETAIL OR CONDITION. CONTRACTOR SHALL COORDINATE WITH NEW CONSTRUCTION WORK TO PROVIDE ALL DEMOLITION WORK REQUIRED TO MEET NEW DESIGN BASED ON ALL INFORMATION PROVIDED.
- CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL STRUCTURAL MEMBERS PRIOR TO DEMOLITION AND SHALL PROVIDE ALL NECESSARY SHORING, BRACING AND TEMPORARY SUPPORTS REQUIRED TO ENSURE STRUCTURAL STABILITY AND PREVENT COLLAPSE OF EXISTING STRUCTURE AND CONSTRUCTION TO REMAIN.
- CONTRACTOR SHALL PROTECT ALL ADJACENT CONSTRUCTION THAT IS TO REMAIN AND SHALL REPAIR AND PATCH ANY EXISTING TO REMAIN CONSTRUCTION THAT IS DAMAGED DURING DEMOLITION OPERATIONS. REPAIRS SHALL MATCH EXISTING IN APPEARANCE AND INTEGRITY.
- REFER TO THE MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL NOTES FOR REMOVAL AND DISPOSAL OF EQUIPMENT, PIPES, CONDUITS, WIRING OR OTHER ITEMS THAT ARE INCLUDED AS PART OF THE SCOPE OF DEMOLITION WORK IN THIS CONTRACT.
- REFER TO STRUCTURAL DRAWINGS FOR CUTTING OF EXISTING CONCRETE SLAB. COORDINATE EXTENT WITH PLUMBING CONTRACTORS.
- PATCH ALL ROOF PENETRATIONS FROM REMOVED EQUIPMENT



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

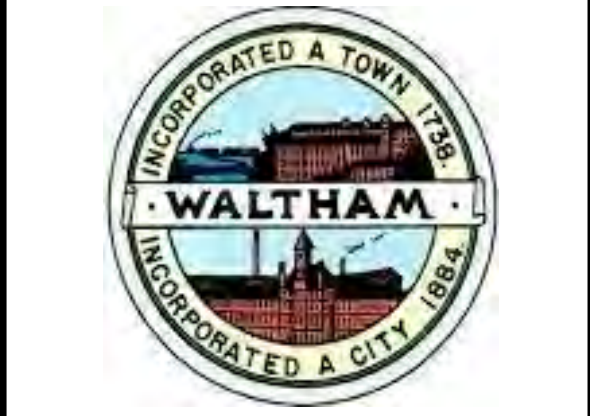
DEMOLITION PLAN LEGEND	
	EXISTING CONSTRUCTION TO REMAIN
	EXISTING CONSTRUCTION TO BE DEMOLISHED



**CDR MAGUIRE**  
Architects / Engineers / Planners  
211 Congress Street, 11th Floor  
Boston, Massachusetts 02110  
TEL: (617) 778-1440  
www.cdrmagine.com

REVISIONS		
Number	Description	Date

ISSUED FOR BID



**WALTHAM POLICE STATION RENOVATION**  
155 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS

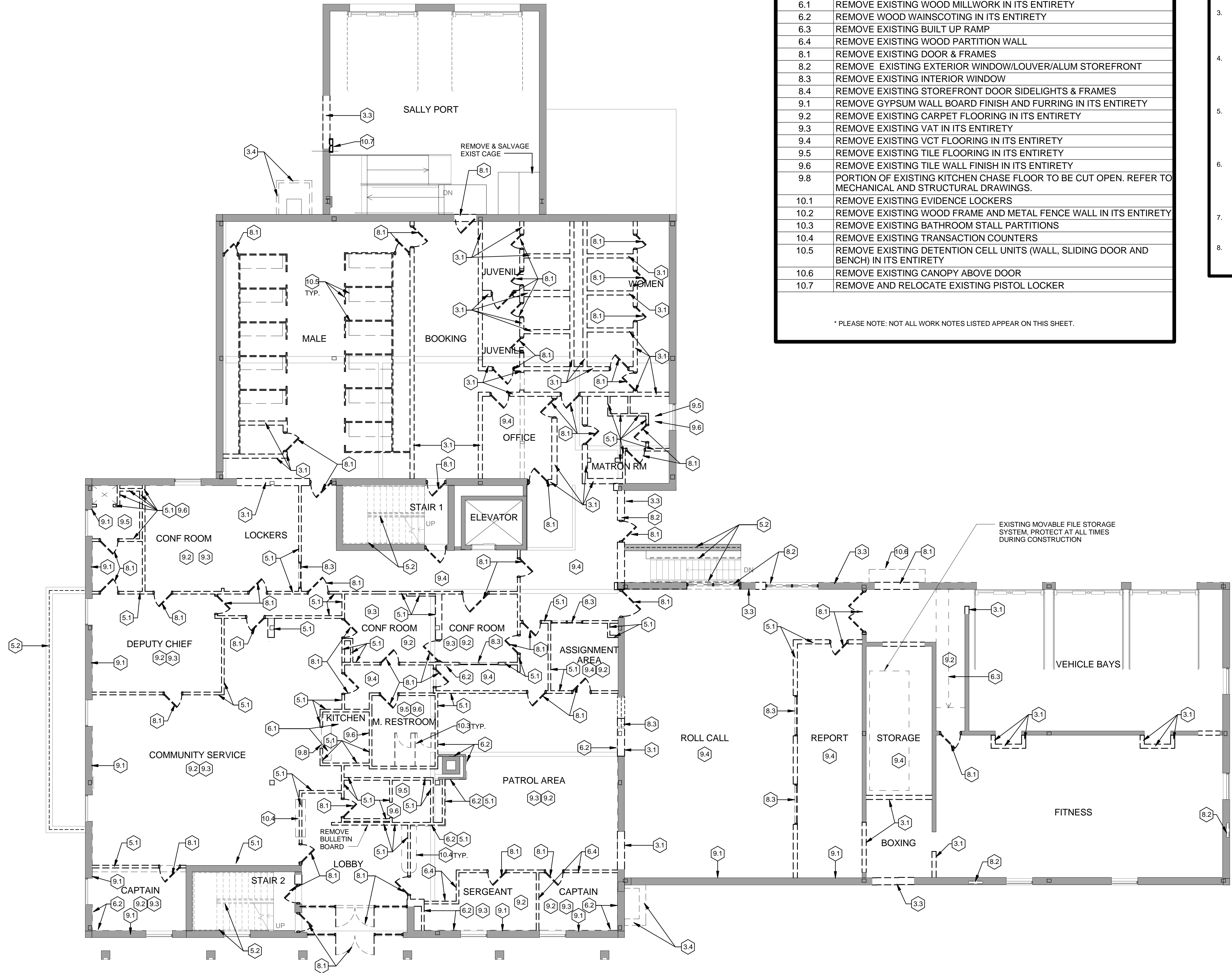
### BASEMENT DEMOLITION PLAN

PROJECT NUMBER: 19401.01  
DESIGNED BY: FC  
DRAWN BY: EKM  
CHECKED BY: FC  
DATE: July-Aug. 2016  
SCALE: As indicated  
SHEET NUMBER:

**AD101**



ELEC: \_\_\_\_\_ MECH: \_\_\_\_\_ FIRE: \_\_\_\_\_ PLUM: \_\_\_\_\_ STRUCT: \_\_\_\_\_ ARCH: \_\_\_\_\_ CIVIL: \_\_\_\_\_  
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 PLOTTED: 7/14/2016 11:23:33 PM



### KEYED DEMO PLAN WORK NOTES

3.1	REMOVE PORTION OF EXISTING CMU
3.2	REMOVE PORTION OF EXISTING CONCRETE WALL
3.3	REMOVE PORTION OF EXISTING EXTERIOR CMU, BRICK VENEER WALL
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5.1	REMOVE EXISTING METAL STUD WALL AND GYPSUM WALL BOARD FINISH
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6.1	REMOVE EXISTING WOOD MILLWORK IN ITS ENTIRETY
6.2	REMOVE WOOD WAINSCOTING IN ITS ENTIRETY
6.3	REMOVE EXISTING BUILT UP RAMP
6.4	REMOVE EXISTING WOOD PARTITION WALL
8.1	REMOVE EXISTING DOOR & FRAMES
8.2	REMOVE EXISTING EXTERIOR WINDOW/LOUVER/ALUM STOREFRONT
8.3	REMOVE EXISTING INTERIOR WINDOW
8.4	REMOVE EXISTING STOREFRONT DOOR SIDELIGHTS & FRAMES
9.1	REMOVE GYPSUM WALL BOARD FINISH AND FURRING IN ITS ENTIRETY
9.2	REMOVE EXISTING CARPET FLOORING IN ITS ENTIRETY
9.3	REMOVE EXISTING VAT IN ITS ENTIRETY
9.4	REMOVE EXISTING VCT FLOORING IN ITS ENTIRETY
9.5	REMOVE EXISTING TILE FLOORING IN ITS ENTIRETY
9.6	REMOVE EXISTING TILE WALL FINISH IN ITS ENTIRETY
9.8	PORTION OF EXISTING KITCHEN CHASE FLOOR TO BE CUT OPEN. REFER TO MECHANICAL AND STRUCTURAL DRAWINGS.
10.1	REMOVE EXISTING EVIDENCE LOCKERS
10.2	REMOVE EXISTING WOOD FRAME AND METAL FENCE WALL IN ITS ENTIRETY
10.3	REMOVE EXISTING BATHROOM STALL PARTITIONS
10.4	REMOVE EXISTING TRANSACTION COUNTERS
10.5	REMOVE EXISTING DETENTION CELL UNITS (WALL, SLIDING DOOR AND BENCH) IN ITS ENTIRETY
10.6	REMOVE EXISTING CANOPY ABOVE DOOR
10.7	REMOVE AND RELOCATE EXISTING PISTOL LOCKER

\* PLEASE NOTE: NOT ALL WORK NOTES LISTED APPEAR ON THIS SHEET.

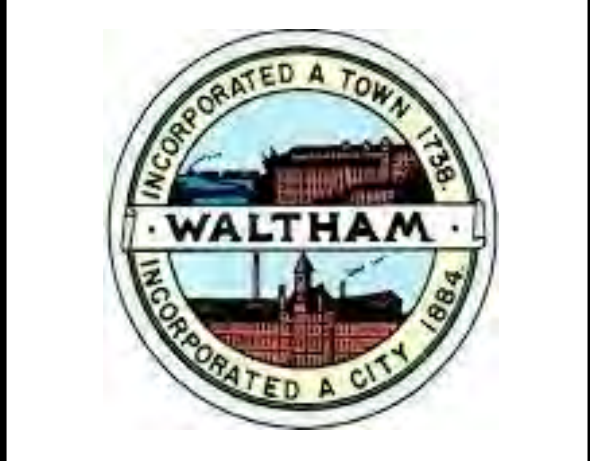
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- PATCH ALL ROOF PENETRATIONS FROM REMOVED EQUIPMENT

  
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Number	Description	Date

ISSUED FOR BID



**WALTHAM POLICE STATION RENOVATION**  
  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

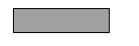
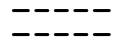
## FIRST FLOOR DEMOLITION PLAN

PROJECT NUMBER: 19401.01  
 DESIGNED BY: FC  
 DRAWN BY: EKM  
 CHECKED BY: FC  
 DATE: July-Aug. 2016  
 SCALE: As indicated  
 SHEET NUMBER:

AD102

SHEET 27 OF 157

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

DEMOLITION PLAN LEGEND	
	EXISTING CONSTRUCTION TO REMAIN
	EXISTING CONSTRUCTION TO BE DEMOLISHED





REVIEWED BY: CIVIL: ARCH: STRUC: PLUM: FIRE: MECH: ELEC:

### KEYED DEMO PLAN WORK NOTES

3.1	REMOVE PORTION OF EXISTING CMU
3.2	REMOVE PORTION OF EXISTING CONCRETE WALL
3.3	REMOVE PORTION OF EXISTING EXTERIOR CMU, BRICK VENEER WALL
3.4	REMOVE PORTION OF EXISTING AIRWAY
5.1	REMOVE EXISTING METAL STUD WALL AND GYPSUM WALL BOARD FINISH
5.2	REMOVE EXISTING STAIR GUARD RAILS & RAILINGS
6.1	REMOVE EXISTING WOOD MILLWORK IN ITS ENTIRETY
6.2	REMOVE WOOD WAINSCOTING IN ITS ENTIRETY
6.3	REMOVE EXISTING BUILT UP RAMP
6.4	REMOVE EXISTING WOOD PARTITION WALL
8.1	REMOVE EXISTING DOOR & FRAMES
8.2	REMOVE EXISTING EXTERIOR WINDOW/LOUVER/ALUM STOREFRONT
8.3	REMOVE EXISTING INTERIOR WINDOW
8.4	REMOVE EXISTING STOREFRONT DOOR SIDELIGHTS & FRAMES
9.1	REMOVE GYPSUM WALL BOARD FINISH AND FURRING IN ITS ENTIRETY
9.2	REMOVE EXISTING CARPET FLOORING IN ITS ENTIRETY
9.3	REMOVE EXISTING VAT IN ITS ENTIRETY
9.4	REMOVE EXISTING VCT FLOORING IN ITS ENTIRETY
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### GENERAL DEMO NOTES

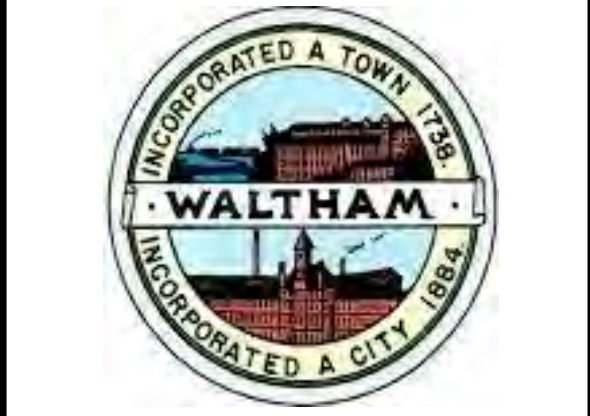
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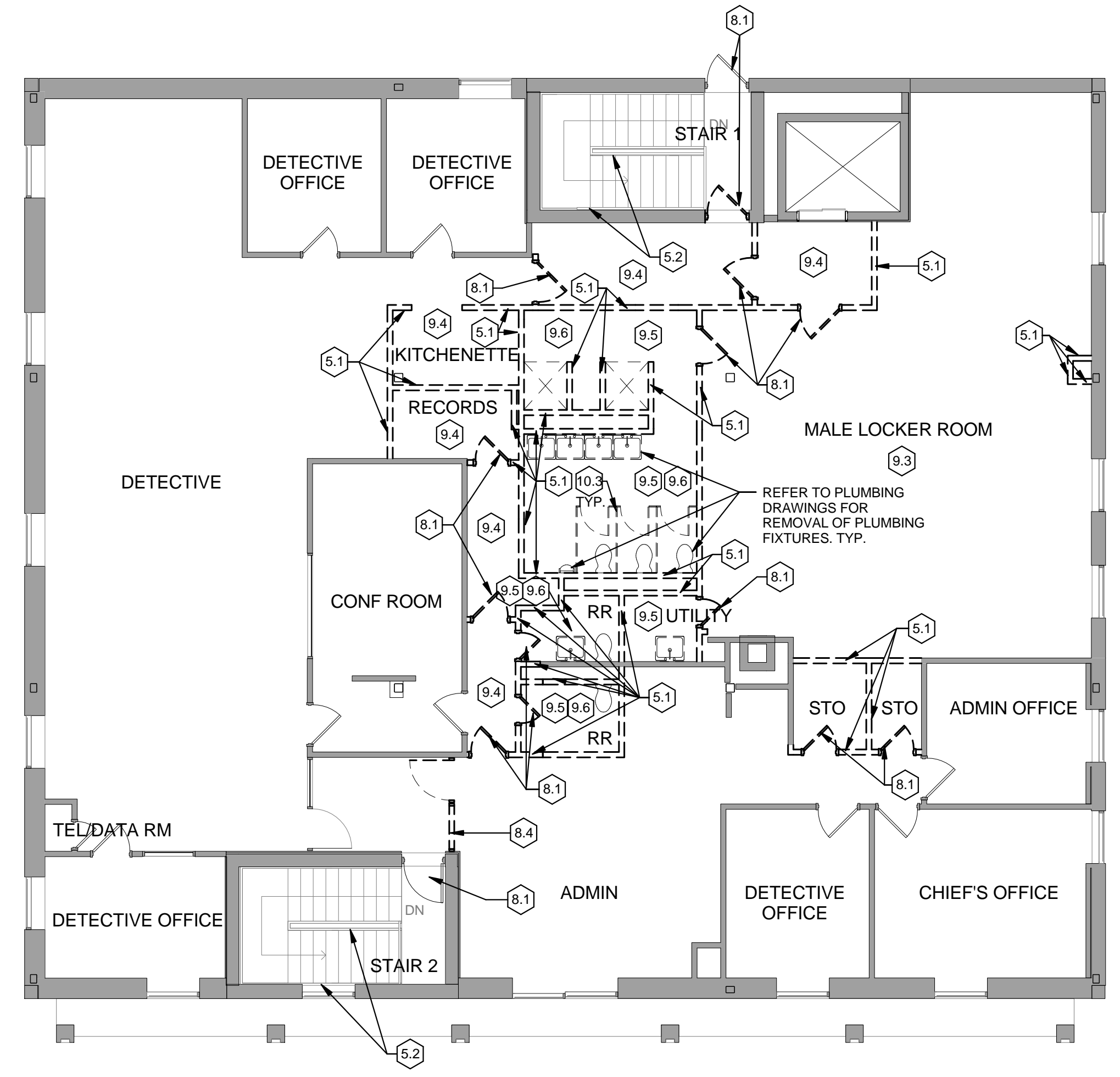
**WALTHAM POLICE STATION RENOVATION**

155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS


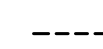
## SECOND FLOOR DEMOLITION PLAN

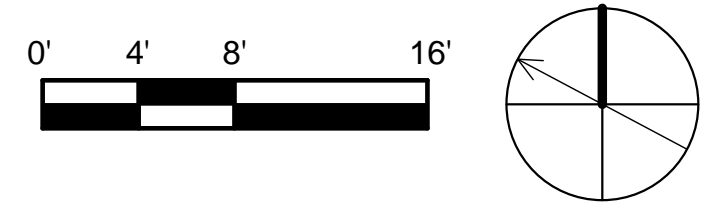
PROJECT NUMBER: 19401.01  
 DESIGNED BY: FC  
 DRAWN BY: EKM  
 CHECKED BY: FC  
 DATE: July-Aug. 2016  
 SCALE: As indicated

SHEET NUMBER:  
AD103



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

DEMOLITION PLAN LEGEND	
	EXISTING CONSTRUCTION TO REMAIN
	EXISTING CONSTRUCTION TO BE DEMOLISHED



PROJECT FILE: C:\Users\mlogoff\Documents\19401\Waltham Police Station-Architecture\_Mlogoff.rvt PLOTTED: 7/14/2016 1:23:31 PM







REVIEWED BY: CIVIL: ARCH: STRUCT: PLUMB: FIRE: MECH: ELEC:



**1 BASEMENT RCP DEMOLITION**  
SCALE: 1/8" = 1'-0"

**GENERAL DEMO NOTES**

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**RCP DEMOLITION LEGEND**

- EXIST'G CEILING COMPONENT TO BE DEMOLISHED (REFER TO MEP PLANS FOR MEP DEMOLITION)
- EXIST'G CEILING COMPONENT TO BE DEMOLISHED (REFER TO MEP PLANS FOR MEP DEMOLITION)
- EXIST'G CONSTRUCTION TO REMAIN

**KEYED RCP DEMO WORK NOTES**

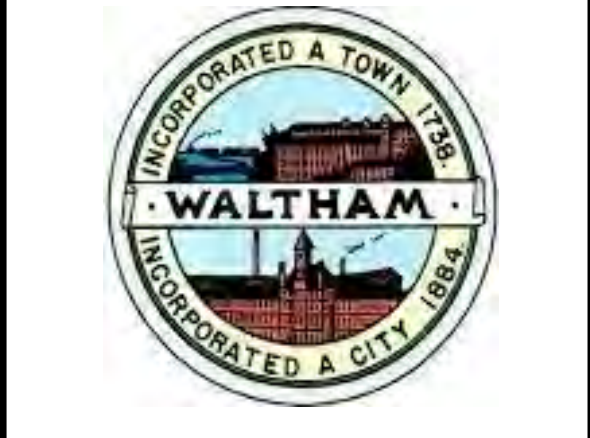
- (A)** DEMOLISH EXISTING ACOUSTICAL CEILING & ASSOCIATED COMPONENTS
- (B)** DEMOLISH EXISTING GYP BOARD CEILING & ASSOCIATED FRAMING
- (C)** DEMOLISH EXISTING STEEL PLATE DETENTION CEILING & ASSOCIATED COMPONENTS
- (D)** DEMOLISH EXIST PLASTER CEILING CONTAINING ASBESTOS (REFER TO HAZMAT DEMO DRAWINGS)
- (E)** DEMOLISH EXISTING GYPSUM BOARD SOFFIT
- (F)** DEMOLISH EXISTING SKYLIGHT SHAFTS

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Number	Description	Date

**ISSUED FOR BID**



**WALTHAM POLICE STATION RENOVATION**  
155 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS

**BASEMENT DEMOLITION RCP**

PROJECT NUMBER: 19401.01  
DESIGNED BY: Designer  
DRAWN BY: Author  
CHECKED BY: Checker  
DATE:  
SCALE: 2016 As indicated  
SHEET NUMBER:

**AD120**





REVIEWED BY: CIVIL ARCH: MECH: FIRE: PLUM: STRU: ELEC:



**1 FIRST FLOOR RCP DEMOLITION**  
SCALE: 1/8" = 1'-0"

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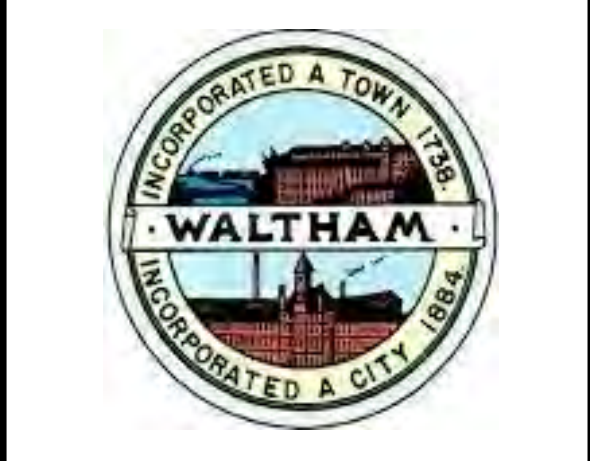
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**WALTHAM POLICE STATION RENOVATION**  
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WALTHAM, MASSACHUSETTS

**FIRST FLOOR DEMOLITION RCP**

PROJECT NUMBER: 19401.01  
DESIGNED BY: Designer  
DRAWN BY: Author  
CHECKED BY: Checker  
DATE: July-Aug. 2016  
SCALE: As indicated  
SHEET NUMBER:

**AD121**









PROJECT FILE: C:\Users\mgoff\Documents\19401 Waltham Police Station ARCHITECTURE\_Magnific PROJECT FILE: 7/14/2016 11:21:09 AM  
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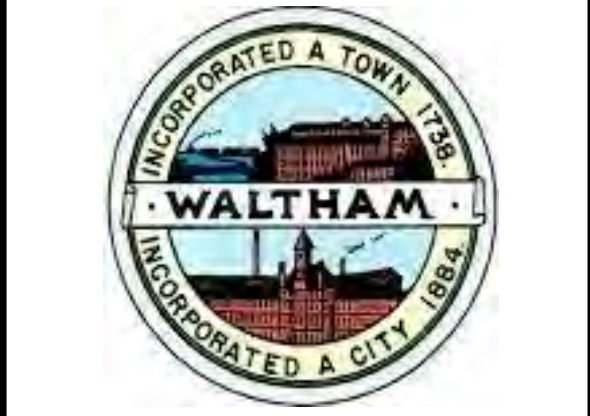
## ABBREVIATIONS LIST

<p><b>A.</b> AND <b>∠</b> ANGLE <b>@</b> CENTERLINE <b>C.L.</b> CHANNEL <b>⊕</b> DIAMETER OR ROUND <b>⊙</b> PENNY (NAIL) <b>PL, PLS</b> PLATE(S) <b>#, NO, NO'S</b> NUMBER(S)</p> <p><b>A.B.</b> ANCHOR BOLT <b>ABV.</b> ABOVE <b>A/C</b> AIR CONDITIONING <b>A.C.</b> ASPHALTIC CONCRETE <b>ACOUS.</b> ACOUSTICAL <b>ACT</b> ACOUSTICAL CEILING TILE <b>A.D.</b> AREA DRAIN <b>ADDOM</b> ADDENDUM <b>ADJ.</b> ADJUSTABLE <b>ADJA.</b> ADJACENT <b>AGGR.</b> AGGREGATE <b>A.F.F.</b> ABOVE FINISH FLOOR <b>AL.</b> ALUMINUM <b>ALT.</b> ALTERNATE <b>ANOD.</b> ANODIZED <b>A.P.</b> ACCESS PANEL <b>APPROX.</b> APPROXIMATE <b>ARCH.</b> ARCHITECT(URAL) <b>ASPH.</b> ASPHALT <b>A.T.</b> ACOUSTICAL TILE</p> <p><b>B.C.</b> BOTTOM OF CURB <b>BD.</b> BOARD <b>BIT.</b> BITUMINOUS <b>BLDG.</b> BUILDING <b>BLK.</b> BLOCK <b>BLKG.</b> BLOCKING <b>B.M.</b> BENCHMARK <b>BM</b> BEAM <b>BOT.</b> BOTTOM <b>B.R.</b> BEDROOM <b>BRKT.</b> BRACKET <b>BRNZ.</b> BRONZE <b>B.S.</b> BOTTOM OF STAIR <b>BSMT.</b> BASEMENT <b>BTWIN</b> BETWEEN <b>B.U.R.</b> BUILT-UP ROOF(ING) <b>B.W.</b> BOTTOM OF WALL</p> <p><b>CAB.</b> CABINET <b>CPT.</b> CARPET <b>C.B.</b> CATCH BASIN <b>C.B.B.</b> CEMENT BACKER BOARD <b>CEM.</b> CEMENT <b>CER.</b> CERAMIC <b>CF.</b> CUBIC FOOT/FEET <b>CHAM.</b> CHAMFER <b>C.I.</b> CAST IRON <b>C.J.</b> CONTROL JOINT <b>CLF.</b> CHAIN LINK FENCE <b>CLG.</b> CEILING <b>CLKG.</b> CAULKING <b>CLO.</b> CLOSET <b>CLR.</b> CLEAR(ANCE) <b>C.M.U.</b> CONCRETE MASONRY UNIT(S) <b>CNTR.</b> COUNTER <b>C.O.</b> CLEAN OUT <b>COL.</b> COLUMN <b>COMB.</b> COMBINATION <b>COMP.</b> COMPRESS(ED), (ION), (IBLE) <b>CONC.</b> CONCRETE <b>COND.</b> CONDITION <b>CONN.</b> CONNECTION <b>CONST.</b> CONSTRUCTION <b>CONT.</b> CONTINUOUS <b>CONTR.</b> CONTRACTOR <b>CORR.</b> CORRIDOR, CORRUGATED <b>C.R.M.</b> CONCRETE RUBBLE MASONRY <b>CSMT.</b> CASEMENT <b>C.T.</b> CERAMIC TILE <b>CTR.</b> CENTER <b>CTSK.</b> COUNTERSUNK, (SINK) <b>CY</b> CUBIC YARD(S)</p>	<p><b>D.</b> DEEP DEPTH <b>DBL.</b> DOUBLE <b>DEM.</b> DEMOLISH, DEMOLITION <b>DEP.</b> DEPRESSED <b>DEPT.</b> DEPARTMENT <b>DET.</b> DETAIL <b>D.F.</b> DRINKING FOUNTAIN <b>DIA.</b> DIAMETER <b>DIM.</b> DIMENSION <b>DISP.</b> DISPENSER <b>D.M.H.</b> DRAIN MANHOLE <b>DN.</b> DOWN <b>DR.</b> DOOR <b>DS</b> DOWNSPOUT <b>D.S.P.</b> DRY STANDPIPE <b>DWG.</b> DRAWING <b>DWR.</b> DRAWER</p> <p><b>E.</b> EAST <b>EACH</b> EACH <b>E.B.</b> EXPANSION BOLT <b>E.F.</b> EACH FACE <b>E.J.</b> EXPANSION JOINT <b>ELEVATION</b> ELEVATION <b>ELECTRICAL</b> ELECTRICAL <b>ELEV.</b> ELEVATOR <b>EMER.</b> EMERGENCY <b>ENCL.</b> ENCLOSURE <b>E.P.</b> ELEC. PANELBOARD <b>EQU.</b> EQUIPMENT <b>EQPT.</b> EQUIPMENT <b>E.S.</b> ELECTRIC STRIKE <b>E.T.R.</b> EXISTING TO REMAIN <b>E.W.</b> EACH WAY <b>E.W.C.</b> ELEC. WATER COOLER <b>EXH.</b> EXHAUST <b>EXP.</b> EXPOSED, EXPANSION <b>EXIST.</b> EXISTING <b>EXT.</b> EXTERIOR</p> <p><b>F.</b> FEMALE <b>F.A.</b> FIRE ALARM, FRESH AIR <b>F.A.E.M.</b> FLUID APPLIED ELASTOMERIC MEMBRANE <b>F.B.</b> FLAT BAR <b>F.B.O.</b> FURNISHED BY OTHERS <b>F.D.</b> FLOOR DRAIN <b>FDN.</b> FOUNDATION <b>F.E.</b> FIRE EXTINGUISHER <b>F.E.C.</b> FIRE EXTINGUISHER CABINET <b>F.F.</b> FACTORY FINISH <b>F.H.</b> FIRE HYDRANT <b>F.H.C.</b> FIRE HOSE CABINET <b>FIN. FL.</b> FINISHED FLOOR <b>FL.</b> FLOOR <b>FLASH.</b> FLASHING <b>FLDG.</b> FOLDING <b>FLUOR.</b> FLUORESCENT <b>F.O.C.</b> FACE OF CONCRETE <b>F.O.S.</b> FACE OF STUD(S) <b>FPRF.</b> FIREPROOF <b>FR.</b> FRAME <b>F.R.P.</b> FIBERGLASS REINFORCED PANEL <b>F.S.</b> FULL SIZE, FLOOR SINK <b>FT.</b> FOOT, FEET <b>F.T.</b> FIRE TREATED <b>FTG.</b> FOOTING <b>FURR.</b> FURRED, (ING) <b>FUT.</b> FUTURE</p> <p><b>G.</b> GAUGE <b>GALV.</b> GALVANIZED <b>G.B.</b> GRAB BAR <b>G.C.</b> GENERAL CONTRACTOR <b>G.C.M.U.</b> GLAZED CEMENT MASONRY UNIT <b>G.F.R.C.</b> GLASS FIBER REINFORCED CONCRETE <b>G.I.</b> GALVANIZED IRON/STEEL <b>GL.</b> GLASS <b>GLB.</b> GLASS BLOCK <b>GLU LAM.</b> GLUE LAMINATED <b>GND.</b> GROUND <b>GR.</b> GRADE <b>G.W.B.</b> GYPSUM WALL BOARD <b>GYP. BD.</b> GYPSUM BOARD</p>	<p><b>H.</b> HIGH <b>H.B.</b> HOSE BIBB <b>H.C.</b> HOLLOW CORE <b>H.D.</b> HEAVY DUTY, HOT DIPPED <b>HDDB</b> HARDBOARD <b>HDNR</b> HARDENER <b>HDR.</b> HEADER <b>HDWD.</b> HARDWOOD <b>HDVE.</b> HARDWARE <b>HGT.</b> HEIGHT <b>H.M.</b> HOLLOW METAL <b>HORIZ.</b> HORIZONTAL <b>H.P.</b> HIGH POINT <b>HR.</b> HOUR <b>H.V.A.C.</b> HEATING/VENTILATING AIR CONDITIONING</p> <p><b>I.</b> INSIDE DIAMETER/DIMENSION <b>EA.</b> EACH <b>(ING), (SIVE)</b> INCLUDED, (ING), (SIVE) <b>INSUL.</b> INSULATION <b>INT.</b> INTERIOR <b>INVT.</b> INVERT</p> <p><b>J.</b> JANITOR <b>JOIST</b> JOIST <b>JOINT</b> JOINT</p> <p><b>K.</b> KITCHEN <b>KEYED JOINT</b> KEYED JOINT <b>KNOCK-OUT</b> KNOCK-OUT</p> <p><b>L.</b> LABORATORY <b>LAMINATE</b> LAMINATE <b>LAV.</b> LAVATORY <b>LOCKER</b> LOCKER <b>LOW POINT</b> LOW POINT <b>L.R.</b> LIVING ROOM <b>LIGHT</b> LIGHT <b>L.V.R.</b> LOUVER <b>LIGHTWEIGHT</b> LIGHTWEIGHT</p> <p><b>M.</b> MALE <b>MAX.</b> MAXIMUM <b>M.C.</b> MEDICINE CABINET <b>MECH.</b> MECHANICAL <b>MEMB.</b> MEMBRANE <b>MET.</b> METAL <b>MFR.</b> MANUFACTURER <b>MH.</b> MANHOLE <b>MIN.</b> MINIMUM <b>MIR.</b> MIRROR <b>MISC.</b> MISCELLANEOUS <b>M.O.</b> MASONRY OPENING <b>MTD.</b> MOUNTED <b>MTG.</b> MOUNTING <b>MUL.</b> MULLION</p> <p><b>N.</b> NORTH <b>NONCOMBUSTIBLE</b> NONCOMBUSTIBLE <b>NOT IN CONTRACT</b> NOT IN CONTRACT <b>NO. #</b> NUMBER <b>NOM.</b> NOMINAL <b>N.T.S.</b> NOT TO SCALE</p> <p><b>O.</b> OVERALL <b>OBS.</b> OBSCURE <b>O.C.</b> ON CENTER <b>O.D.</b> OUTSIDE DIAMETER/DIMENSION <b>OFF.</b> OFFICE <b>OPNG.</b> OPENING <b>OPP.</b> OPPOSITE</p>	<p><b>P.</b> PIECE <b>PFND.</b> PREFINISHED <b>P.L.</b> PROPERTY LINE <b>PLAM.</b> PLASTER LAMINATE <b>PLAS.</b> PLASTER <b>PLBG.</b> PLUMBING <b>PL.GL.</b> PLATE GLASS <b>PLYWD.</b> PLYWOOD <b>PANEL</b> PANEL <b>POL.</b> POLISHED <b>P.P.</b> PORCELAIN PAVERS <b>PAIR</b> PAIR <b>PRCST.</b> PRECAST <b>PRESSURE TREATED</b> PRESSURE TREATED <b>POINT</b> POINT <b>PAINTED</b> PAINTED <b>P.T.D./R.</b> PAPER TOWEL DISPENSER <b>COMBINATION PAPER TOWEL DISPENSER AND RECEPTACLE</b> COMBINATION PAPER TOWEL DISPENSER AND RECEPTACLE <b>PARTITION</b> PARTITION <b>PAPER TOWEL RECEPTACLE</b> PAPER TOWEL RECEPTACLE <b>POLYVINYL CHLORIDE PAVEMENT</b> POLYVINYL CHLORIDE PAVEMENT</p> <p><b>Q.</b> QUARRY TILE</p> <p><b>R.</b> RISER, RADIUS <b>RAD.</b> RADIUS <b>R.A.F.</b> RAISED ACCESS FLOORING <b>R.A.R.</b> RETURN AIR REGISTER <b>R.B.</b> REINFORCING BAR(S) <b>R.D.</b> ROOF DRAIN <b>REF.</b> REFERENCE <b>REFR.</b> REFRIGERATOR <b>REINFORCES, REINFORCING</b> REINFORCES, REINFORCING <b>REQUID.</b> REQUIRED <b>RESIL.</b> RESILIENT <b>R.F.</b> RUBBER FLOORING <b>R.H.</b> ROBE HOOK <b>RM.</b> ROOM <b>R.O.</b> ROUGH OPENING <b>RUB</b> RUBBER <b>RWD.</b> REDWOOD</p> <p><b>S.</b> SOUTH <b>S.A.R.</b> SUPPLY AIR REGISTER <b>S.A.T.</b> SUSPENDED ACOUSTICAL TILE <b>S.C.</b> SOLID CORE <b>SCALE</b> SCALE <b>S.C.D.</b> SEAT COVER DISPENSER <b>SCHED.</b> SCHEDULE <b>SCR.</b> SCREEN <b>S.D.</b> SOAP DISPENSER <b>SECT.</b> SECTION <b>SF., SQ.FT.</b> SQUARE FOOT (FEET) <b>S.G.B.</b> SUSPENDED GYPSUM BOARD <b>SHR.</b> SHOWER <b>SHT.</b> SHEET <b>SIM.</b> SIMILAR <b>SL.</b> SLOPE <b>SLD.G.</b> SLIDING <b>S.N.D.</b> SANITARY NAPKIN DISPENSER <b>S.N.R.</b> SANITARY NAPKIN RECEPTACLE <b>SUSPENDED PLASTER</b> SUSPENDED PLASTER <b>SQ.</b> SQUARE <b>S.S.</b> STAINLESS STEEL <b>S.S.K.</b> SERVICE SINK <b>STA.</b> STATION <b>STD.</b> STANDARD <b>STL.</b> STEEL <b>STOR.</b> STORAGE <b>STRUC.</b> STRUCTURAL <b>SURR.</b> SURROUND <b>SUSP.(ED)</b> SUSPENDED <b>S.W.C.</b> SOLID WOOD CORE <b>SYM.</b> SYMMETRICAL</p> <p><b>T.B.</b> TOWEL BAR <b>T.C.</b> TOP OF CURB <b>TEL.</b> TELEPHONE <b>TEMP.</b> TEMPERED <b>TERRAZZO</b> TERRAZZO <b>T.G.</b> TONGUE AND GROOVE <b>T.O.S.</b> TOP OF STAIR (TOP OF STEEL) <b>THR.</b> THRESHOLD <b>T.P.</b> TOP OF PAVEMENT <b>T.P.D.</b> TOILET PAPER DISPENSER <b>T.P.H.</b> TOILET PAPER HOLDER <b>TRD.</b> TREAD <b>T.V.</b> TELEVISION <b>T.O.W.</b> TOP OF WALL <b>TYP.</b> TYPICAL</p> <p><b>UNF.</b> UNFINISHED <b>U.O.N.</b> UNLESS OTHERWISE NOTED <b>UR.</b> URINAL <b>U.P.</b> UTILITY POLE</p> <p><b>V.</b> VINYL BASE <b>V.C.T.</b> VINYL COMPOSITION TILE <b>VERT.</b> VERTICAL <b>V.I.F.</b> VERIFY IN FIELD <b>V.W.C.</b> VINYL WALL COVERING <b>VNR.PLAS.</b> VENEER PLASTER</p> <p><b>W.</b> WEST, WIDE, WIDTH <b>W.</b> WITH <b>W.C.</b> WATER CLOSET, <b>WD.</b> WOOD <b>WDW.</b> WINDOW <b>W.F.</b> WIDE FLANGE <b>WG</b> WATER GATE <b>W.H.</b> WATER HEATER <b>WO</b> WITHOUT <b>WP.</b> WATERPROOF (ING) <b>W.R.</b> WATER RESISTANT <b>WNSCOT</b> WAINSCOT <b>W.S.P.</b> WET STAND PIPE <b>WGT.</b> WEIGHT <b>W.W.M.</b> WELDED WIRE MESH</p>
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 Boston, Massachusetts 02110  
 TEL: (617) 778-1440  
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REVISIONS		
Number	Description	Date

ISSUED FOR BID



**WALTHAM POLICE STATION RENOVATION**  
  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**SYMBOLS AND ABBREVIATIONS**  
  
 PROJECT NUMBER: 19401.01  
 DESIGNED BY: FC  
 DRAWN BY: EKM  
 CHECKED BY: FC  
 DATE: July-Aug. 2016  
 SCALE: As indicated  
 SHEET NUMBER:  
A001  
 SHEET 33 OF 157

## ARCHITECTURAL SYMBOLS LEGEND

**TITLE MARKS**

DETAIL #  
DRAWING #  
SCALE

**DOOR TAG**

DOOR # = FIRST 3 NUMBERS DENOTE ROOM WHERE DOOR IS LOCATED  
LETTER INDICATES DOOR IN ROOM

**ROOM TAG**

ROOM NAME  
ROOM #

**INTERIOR PARTITION TAG**

WALL TYPE DESIGNATION  
BLOCK/STUD SIZE  
i = INSULATED  
INDICATES FIRE RATED ASSEMBLY

**DEMO NOTE**

INDICATES DEMO NOTE  
RE: TO DWG FOR SCHEDULE

**REVISION TAG**

INDICATES REVISION #  
RE: TO SHEET FOR DESCRIPTION & DATE  
INDICATES AREA OF REVISION

**INTERIOR/ EXTERIOR ELEVATION**

ELEVATION #

**NORTH ARROW**

INDICATES PROJECT NORTH  
INDICATES TRUE NORTH

**ELEVATION MARK**

FIRST FLOOR  
ELEV. = 100' - 0"  
VERTICAL ELEVATION REFERENCE  
(ARCH REF. = 100'-0")

**FF&E TAG**

INDICATES FURNITURE / EQUIPMENT #

**DIMENSIONS**

FACE OF MASONRY \ CONCRETE  
8'-0"  
CENTER LINE OF STUD  
8'-0"  
CENTER LINE OF BM \ COL  
8'-0"  
ALIGN WORK &/or ITEMS  
ALIGN

**KEYED NOTE**

INDICATES KEYED NOTE  
RE: TO DWG FOR SCHEDULE











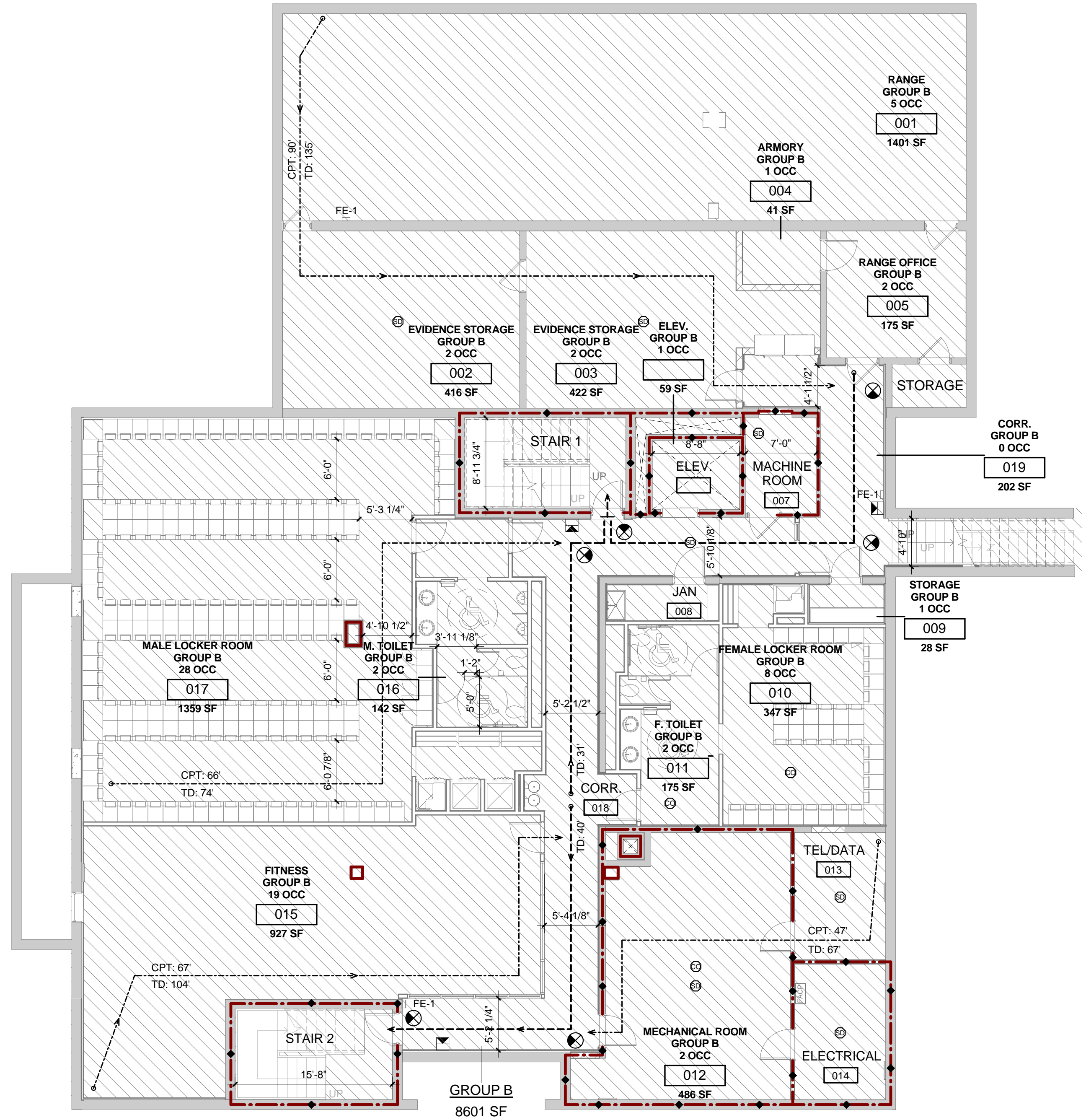
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**RELEVANT CODE SECTIONS AND EXCEPTIONS**  
 101.5.0 COMPLIANCE ALTERNATIVES. EXCEPT FOR STRUCTURAL WORK, WHERE COMPLIANCE WITH THE PROVISIONS OF THE CODE FOR NEW CONSTRUCTION, REQUIRED BY THIS CODE, IS IMPRACTICAL BECAUSE OF CONSTRUCTION DIFFICULTIES OR REGULATORY CONFLICTS, COMPLIANCE ALTERNATIVES MAY BE ACCEPTED BY THE BUILDING OFFICIAL. EXAMPLES OF COMPLIANCE ALTERNATIVES AND ARCHAIC CONSTRUCTION SYSTEMS CAN BE FOUND AT THE FAQ LINK AT WWW.MASS.GOV/DPS. THE BUILDING OFFICIAL MAY ACCEPT THESE COMPLIANCE ALTERNATIVES, ARCHAIC CONSTRUCTION SYSTEMS, OR OTHERS PROPOSED, IF THE COMPLIANCE ALTERNATIVE INVOLVES FIRE PROTECTION SYSTEMS THE BUILDING OFFICIAL SHALL CONSULT WITH THE FIRE OFFICIAL.

101.5.0.1 SUBMITTALS. THE APPLICATION FOR A BUILDING PERMIT SHALL BE IN ACCORDANCE WITH SUBSECTION 107.2.1 OF THE INTERNATIONAL BUILDING CODE 2009 WITH MASSACHUSETTS AMENDMENTS (780 CMR 107.2.1) AND IDENTIFY ALL ITEMS OF NON- OR PARTIAL COMPLIANCE WITH THE REQUIREMENTS OF THIS CODE, AND COMPLIANCE ALTERNATIVES, IF ANY ARE PROPOSED, FOR APPROVAL BY THE BUILDING OFFICIAL. THE BUILDING OFFICIAL SHALL RESPOND TO THE ACCEPTABILITY OF ANY PROPOSED COMPLIANCE ALTERNATIVES WITHIN 30 DAYS OF THE FILING OF THE BUILDING PERMIT APPLICATION. WHERE PROPOSED COMPLIANCE ALTERNATIVES ARE, IN THE OPINION OF THE BUILDING OFFICIAL, UNACCEPTABLE, OR WHERE ISSUES OF NON-COMPLIANCE REMAIN, THE PERMIT APPLICANT SHALL HAVE THE REMEDIES PRESCRIBED BY SECTION 113 OF THE INTERNATIONAL BUILDING CODE 2009 WITH THE MASSACHUSETTS AMENDMENTS (780 CMR 113).

303.1 GENERAL. EXCEPT AS PROVIDED BY SECTION 301.2 OR THIS SECTION, ALTERATIONS TO ANY BUILDING OR STRUCTURE SHALL COMPLY WITH THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE FOR NEW CONSTRUCTION. ALTERATIONS SHALL BE SUCH THAT THE EXISTING BUILDING OR STRUCTURE IS NO LESS CONFORMING TO THE PROVISIONS OF THE INTERNATIONAL BUILDING CODE THAN THE EXISTING BUILDING OR STRUCTURE WAS PRIOR TO THE ALTERATION.

EXCEPTIONS:  
 1. AN EXISTING STAIRWAY SHALL NOT BE REQUIRED TO COMPLY WITH THE REQUIREMENTS OF SECTION 1009 OF THE INTERNATIONAL BUILDING CODE WHERE THE EXISTING SPACE AND CONSTRUCTION DOES NOT ALLOW A REDUCTION IN PITCH OR SLOPE.



**OCCUPANCY LEGEND**



OCCUPANCY AREA SCHEDULE	
Name	Area

<b>BASEMENT FLOOR</b>	
GROUP B	8601 SF
BASEMENT FLOOR: 1	8601 SF
<b>FIRST FLOOR</b>	
GROUP A-3	839 SF
GROUP B	104 SF
GROUP B	9345 SF
GROUP I-3	3593 SF
GROUP S-2	712 SF
GROUP S-2	993 SF
FIRST FLOOR: 6	15586 SF
<b>SECOND FLOOR</b>	
GROUP B	5726 SF
SECOND FLOOR: 1	5726 SF
Grand total: 8	29913 SF

**LIFE SAFETY LEGEND**

OCCUPANT LOAD: IBC 2009 SECTION 1004

Room → ROOM NUMBER  
 GROUP Rm. Occupancy → OCCUPANCY TYPE  
 Occupancy OCC → NUMBER OF OCC  
 101 → ROOM NUMBER  
 150 SF → AREA

EXIT ACCESS TRAVEL DISTANCE:  
 IBC 2009 SECTION 1016

----- PATH OF TRAVEL (TD)  
 ----- COMMON PATH OF TRAVEL (CPT)  
 ⊗ EXIT SIGN

EGRESS WIDTH: IBC 2009 SECTION 1005

0 → EGRESS WIDTH  
 0 → EGRESS CAPACITY

FIRE-RESISTANCE RATED WALL SYMBOLS:  
 IBC SECTION 703

--- ◆ 1 HR FIRE  
 --- ◆◆ 2 HR FIRE  
 --- ◆S 1 HR FIRE/SMOKE  
 --- ◆◆S 2 HR FIRE/SMOKE

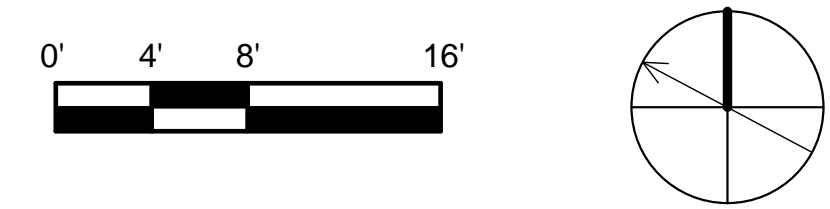
**FIRE EXTINGUISHER LEGEND (NFPA 10)**

FE-1 SURFACE MOUNTED FIRE EXTINGUISHER  
 FE-2 SEMI RECESSED (3" MAX PROJECTION) FIRE EXTINGUISHER & CABINET

**FIRE ALARM LEGEND**

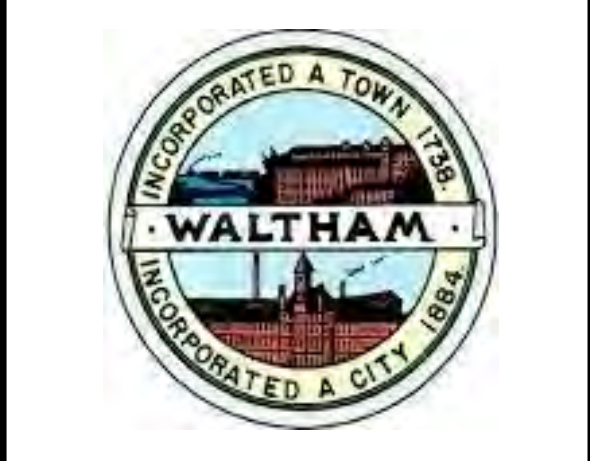
FACP FIRE ALARM CONTROL PANEL  
 FAP FIRE ALARM ANNUNCIATOR PANEL  
 ⊕ CARBON MONOXIDE DETECTOR  
 ⊙ SMOKE DETECTOR  
 □ FIRE ALARM MANUAL PULL STATION  
 FDC FIRE DEPARTMENT CONNECTION

**1 BASEMENT LIFE SAFETY PLAN - 102 OCCUPANTS**  
 SCALE: 1/8" = 1'-0"



REVISIONS		
Number	Description	Date

**ISSUED FOR BID**



**WALTHAM POLICE STATION RENOVATION**  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**BASEMENT LIFE SAFETY PLAN**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: Designer  
 DRAWN BY: Author  
 CHECKED BY: Checker  
 DATE: July-Aug. 2016  
 SCALE: 1/8" = 1'-0"

SHEET NUMBER:  
**A010**



REVIEWED BY: CIVIL: ARCH: FIRE: PLUM: STRU: MECH: ELEC:  
 PROJECT FILE: C:\Users\magui\Documents\19401\Waltham Police Station\ARCHITECTURE\_M\001.dwg  
 PLOTTED: 7/14/2016 10:23:24 PM

**RELEVANT CODE SECTIONS AND EXCEPTIONS**

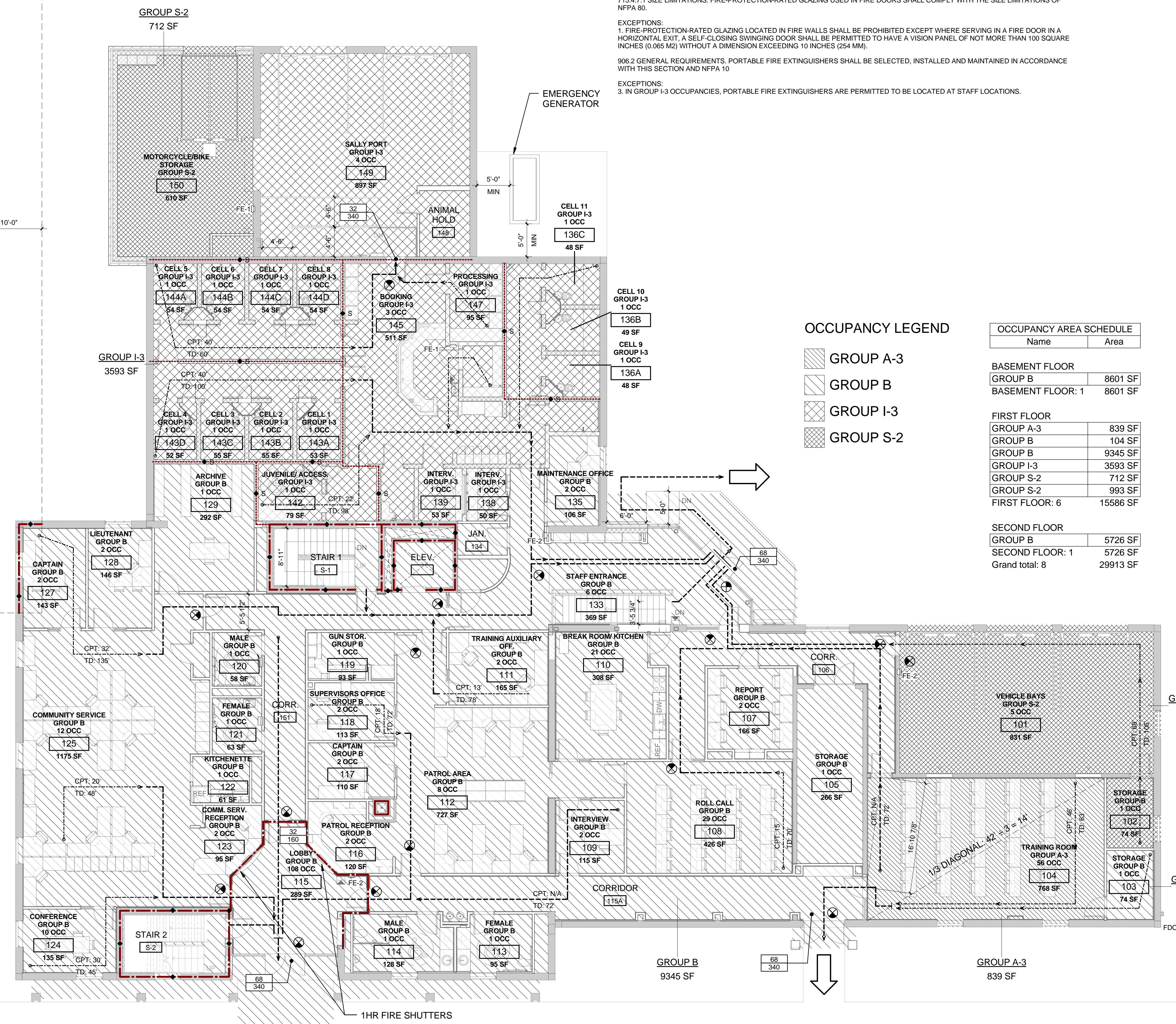
408.3.7 SALLYPORTS. A SALLYPORT SHALL BE PERMITTED IN A MEANS OF EGRESS WHERE THERE ARE PROVISIONS FOR CONTINUOUS AND UNOBSTRUCTED PASSAGE THROUGH THE SALLYPORT DURING AN EMERGENCY EGRESS CONDITION.

715.4.7.1 SIZE LIMITATIONS. FIRE-PROTECTION-RATED GLAZING USED IN FIRE DOORS SHALL COMPLY WITH THE SIZE LIMITATIONS OF NFPA 80.

EXCEPTIONS:  
 1. FIRE-PROTECTION-RATED GLAZING LOCATED IN FIRE WALLS SHALL BE PROHIBITED EXCEPT WHERE SERVING IN A FIRE DOOR IN A HORIZONTAL EXIT. A SELF-CLOSING SWINGING DOOR SHALL BE PERMITTED TO HAVE A VISION PANEL OF NOT MORE THAN 100 SQUARE INCHES (0.065 M2) WITHOUT A DIMENSION EXCEEDING 10 INCHES (254 MM).

906.2 GENERAL REQUIREMENTS. PORTABLE FIRE EXTINGUISHERS SHALL BE SELECTED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH THIS SECTION AND NFPA 10

EXCEPTIONS:  
 3. IN GROUP I-3 OCCUPANCIES, PORTABLE FIRE EXTINGUISHERS ARE PERMITTED TO BE LOCATED AT STAFF LOCATIONS.



**LIFE SAFETY LEGEND**

- OCCUPANT LOAD: IBC 2009 SECTION 1004
- Room → ROOM NUMBER  
 GROUP Rm. Occupancy → OCCUPANCY TYPE  
 Occupancy OCC → NUMBER OF OCC  
 101 → ROOM NUMBER  
 150 SF → AREA
- EXIT ACCESS TRAVEL DISTANCE:  
 IBC 2009 SECTION 1016
- PATH OF TRAVEL (TD)  
 ----- COMMON PATH OF TRAVEL (CPT)  
 ⊗ EXIT SIGN
- EGRESS WIDTH: IBC 2009 SECTION 1005
- 0 → EGRESS WIDTH  
 0 → EGRESS CAPACITY
- FIRE-RESISTANCE RATED WALL SYMBOLS:  
 IBC SECTION 703
- ♦ 1 HR FIRE  
 ----- ♦♦ 2 HR FIRE  
 ----- ♦S 1 HR FIRE/SMOKE  
 ----- ♦♦S 2 HR FIRE/SMOKE
- FIRE EXTINGUISHER LEGEND (NFPA 10)**
- FE-1 SURFACE MOUNTED FIRE EXTINGUISHER  
 FE-2 SEMI RECESSED (3" MAX PROJECTION) FIRE EXTINGUISHER & CABINET
- FIRE ALARM LEGEND**
- FACP FIRE ALARM CONTROL PANEL  
 FAP FIRE ALARM ANNUNCIATOR PANEL  
 ⊕ CARBON MONOXIDE DETECTOR  
 ⊙ SMOKE DETECTOR  
 □ FIRE ALARM MANUAL PULL STATION  
 FDC FIRE DEPARTMENT CONNECTION

**OCCUPANCY LEGEND**

- GROUP A-3
- GROUP B
- GROUP I-3
- GROUP S-2

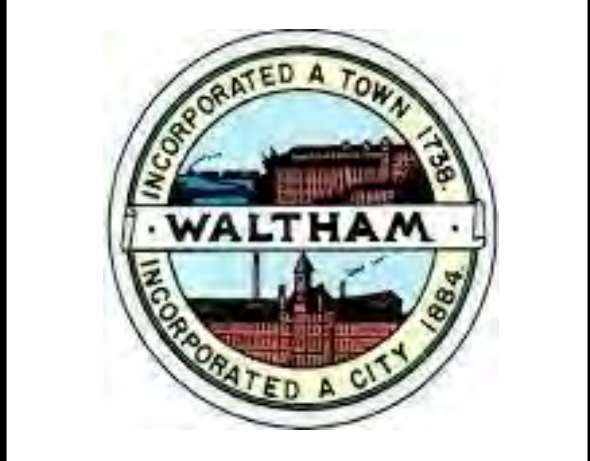
**OCCUPANCY AREA SCHEDULE**

Name	Area
<b>BASEMENT FLOOR</b>	
GROUP B	8601 SF
BASEMENT FLOOR: 1	8601 SF
<b>FIRST FLOOR</b>	
GROUP A-3	839 SF
GROUP B	104 SF
GROUP B	9345 SF
GROUP I-3	3593 SF
GROUP S-2	712 SF
GROUP S-2	993 SF
FIRST FLOOR: 6	15586 SF
<b>SECOND FLOOR</b>	
GROUP B	5726 SF
SECOND FLOOR: 1	5726 SF
Grand total: 8	29913 SF

**REVISIONS**

Number	Description	Date

**ISSUED FOR BID**



**WALTHAM POLICE STATION RENOVATION**

155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**FIRST FLOOR LIFE SAFETY PLAN**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: Designer  
 DRAWN BY: Author  
 CHECKED BY: Checker  
 DATE: July-Aug. 2016  
 SCALE: 1/8" = 1'-0"  
 SHEET NUMBER:

**A011**

**1 FIRST FLOOR LIFE SAFETY PLAN - 333 OCCUPANTS**  
 SCALE: 1/8" = 1'-0"



ELEC: \_\_\_\_\_ MECH: \_\_\_\_\_ FIRE: \_\_\_\_\_ PLUM: \_\_\_\_\_ STRU: \_\_\_\_\_ ARCH: \_\_\_\_\_ CIVIL: \_\_\_\_\_  
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 PLOTTED: 7/14/2016 11:21:28 AM

**SECTION 1016 EXIT ACCESS TRAVEL DISTANCE**

1016.1 TRAVEL DISTANCE LIMITATIONS. EXITS SHALL BE SO LOCATED ON EACH STORY SUCH THAT THE MAXIMUM LENGTH OF EXIT ACCESS TRAVEL, MEASURED FROM THE MOST REMOTE POINT WITHIN A STORY ALONG THE NATURAL AND UNOBSTRUCTED PATH OF EGRESS TRAVEL TO AN EXTERIOR EXIT DOOR AT THE LEVEL OF EXIT DISCHARGE, AN ENTRANCE TO A VERTICAL EXIT ENCLOSURE, AN EXIT PASSAGEWAY, A HORIZONTAL EXIT, AN EXTERIOR EXIT STAIRWAY OR AN EXTERIOR EXIT RAMP, SHALL NOT EXCEED THE DISTANCES GIVEN IN TABLE 1016.1.

**EXCEPTIONS:**

3. IN OTHER THAN OCCUPANCY GROUPS H AND I, THE EXIT ACCESS TRAVEL DISTANCE TO A MAXIMUM OF 50 PERCENT OF THE EXITS IS PERMITTED TO BE MEASURED FROM THE MOST REMOTE POINT WITHIN A BUILDING TO AN EXIT USING UNENCLOSED EXIT ACCESS STAIRWAYS OR RAMP WHEN CONNECTING A MAXIMUM OF TWO STORIES. THE TWO CONNECTED STORIES SHALL BE PROVIDED WITH AT LEAST TWO MEANS OF EGRESS. SUCH INTERCONNECTED STORIES SHALL NOT BE OPEN TO OTHER STORIES.

4. IN OTHER THAN OCCUPANCY GROUPS H AND I, EXIT ACCESS TRAVEL DISTANCE IS PERMITTED TO BE MEASURED FROM THE MOST REMOTE POINT WITHIN A BUILDING TO AN EXIT USING UNENCLOSED EXIT ACCESS STAIRWAYS OR RAMP IN THE FIRST AND SECOND STORIES ABOVE GRADE PLANE IN BUILDINGS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 903.3.1.1. THE FIRST AND SECOND STORIES ABOVE GRADE PLANE SHALL BE PROVIDED WITH AT LEAST TWO MEANS OF EGRESS. SUCH INTERCONNECTED STORIES SHALL NOT BE OPEN TO OTHER STORIES.

WHERE APPLICABLE, TRAVEL DISTANCE ON UNENCLOSED EXIT ACCESS STAIRWAYS OR RAMP AND ON CONNECTING STORIES SHALL ALSO BE INCLUDED IN THE TRAVEL DISTANCE MEASUREMENT. THE MEASUREMENT ALONG STAIRWAYS SHALL BE MADE ON A PLANE PARALLEL AND TANGENT TO THE STAIR TREAD NOSINGS IN THE CENTER OF THE STAIRWAY.

**OCCUPANCY LEGEND**



OCCUPANCY AREA SCHEDULE	
Name	Area

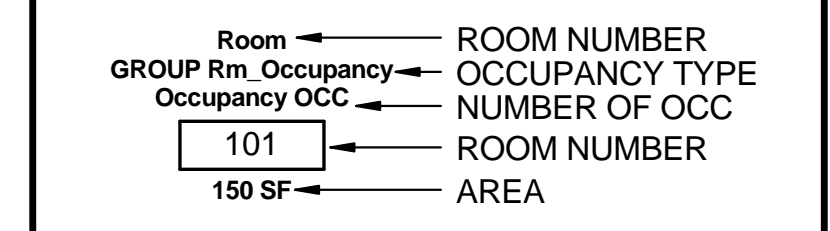
<b>BASEMENT FLOOR</b>	
GROUP B	8601 SF
<b>BASEMENT FLOOR: 1</b>	<b>8601 SF</b>

<b>FIRST FLOOR</b>	
GROUP A-3	839 SF
GROUP B	104 SF
GROUP B	9345 SF
GROUP I-3	3593 SF
GROUP S-2	712 SF
GROUP S-2	993 SF
<b>FIRST FLOOR: 6</b>	<b>15586 SF</b>

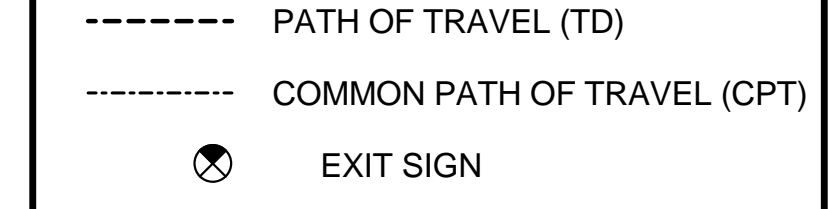
<b>SECOND FLOOR</b>	
GROUP B	5726 SF
<b>SECOND FLOOR: 1</b>	<b>5726 SF</b>
<b>Grand total: 8</b>	<b>29913 SF</b>

**LIFE SAFETY LEGEND**

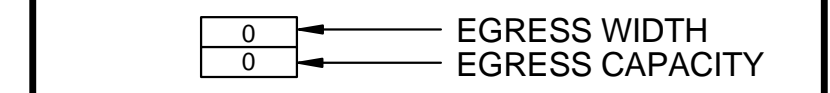
OCCUPANT LOAD: IBC 2009 SECTION 1004



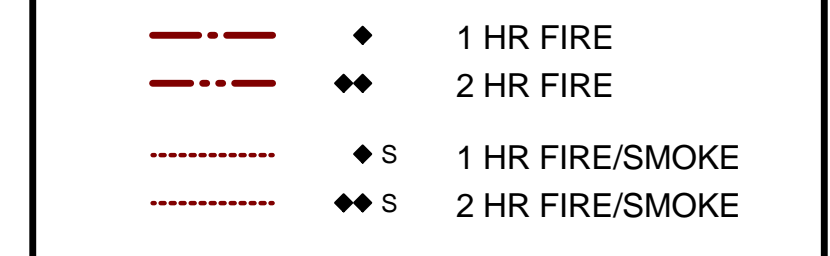
EXIT ACCESS TRAVEL DISTANCE:  
IBC 2009 SECTION 1016



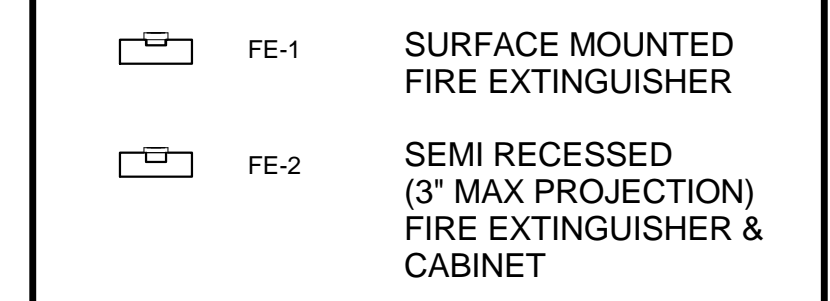
EGRESS WIDTH: IBC 2009 SECTION 1005



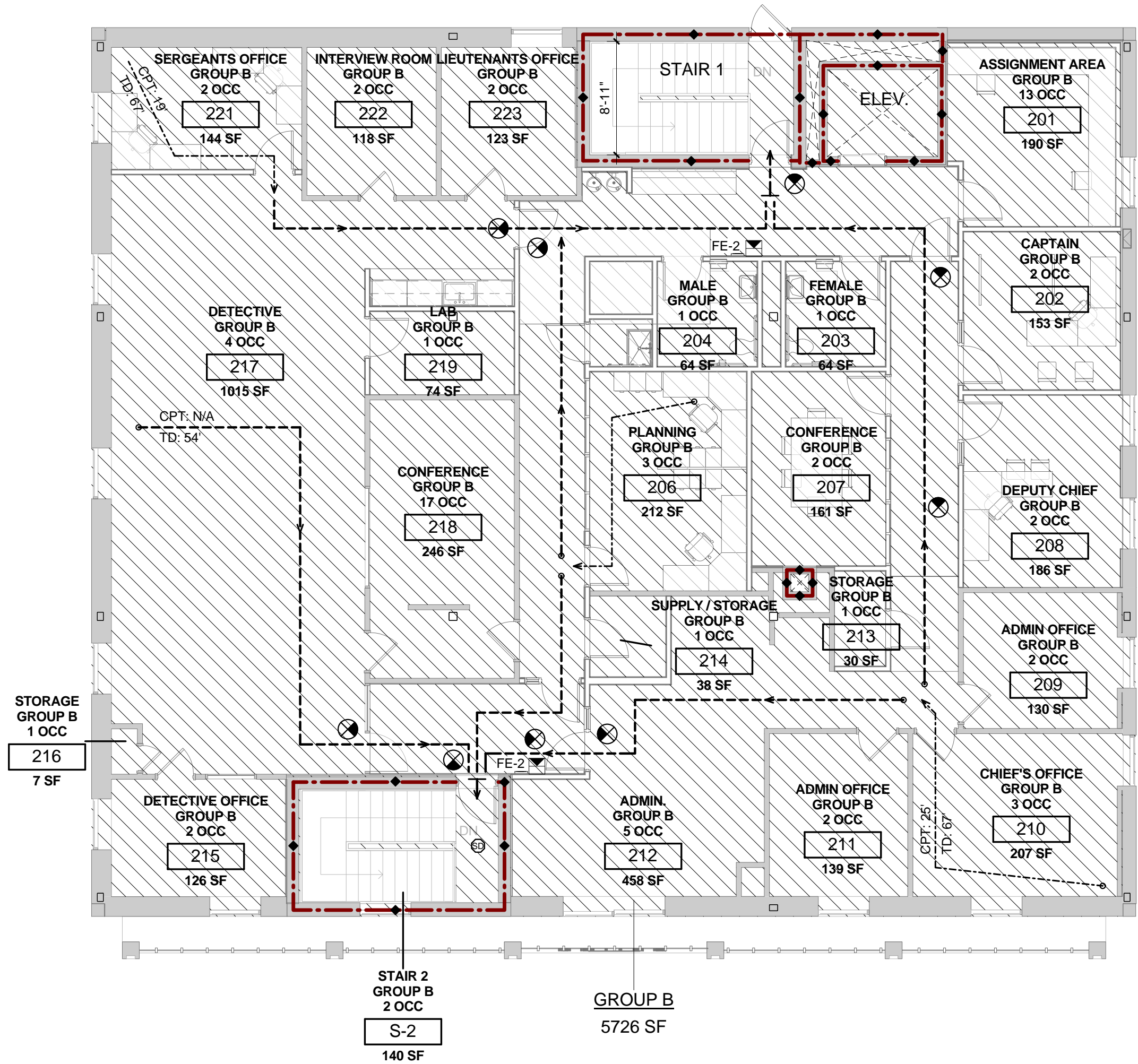
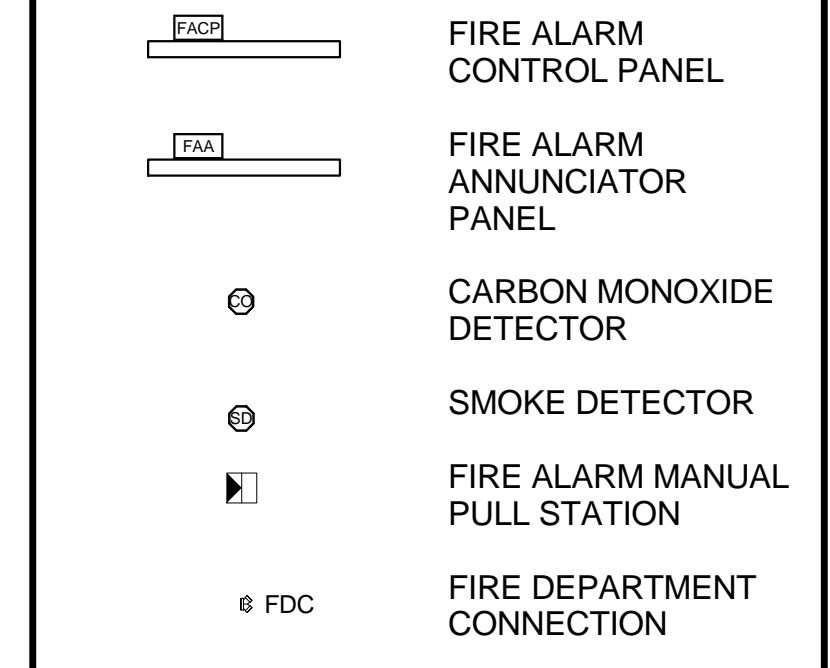
FIRE-RESISTANCE RATED WALL SYMBOLS:  
IBC SECTION 703



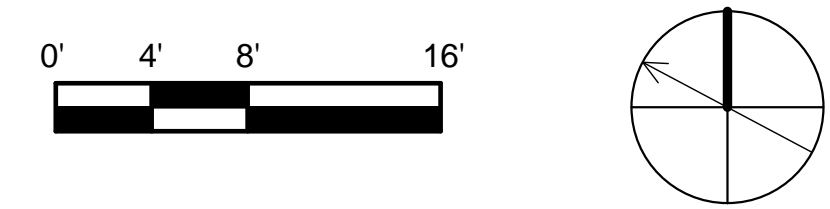
**FIRE EXTINGUISHER LEGEND (NFPA 10)**



**FIRE ALARM LEGEND**

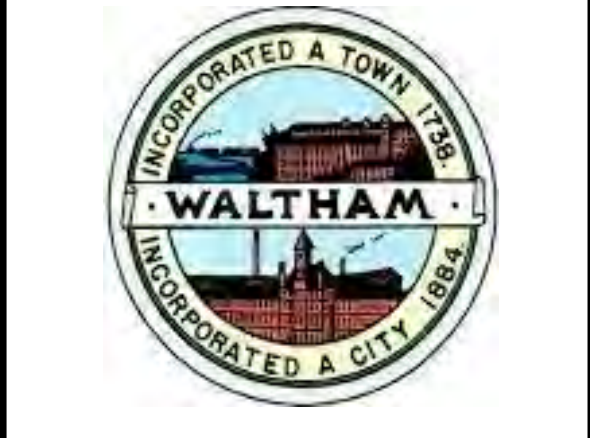


**1 SECOND FLOOR LIFE SAFETY PLAN - 83 OCCUPANTS**  
A012 1/8" = 1'-0"



REVISIONS		
Number	Description	Date

**ISSUED FOR BID**



**WALTHAM POLICE STATION RENOVATION**  
155 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS

**SECOND FLOOR LIFE SAFETY PLAN**

PROJECT NUMBER: 19401.01  
DESIGNED BY: Designer  
DRAWN BY: Author  
CHECKED BY: Checker  
DATE: July-Aug. 2016  
SCALE: 1/8" = 1'-0"  
SHEET NUMBER:

**A012**



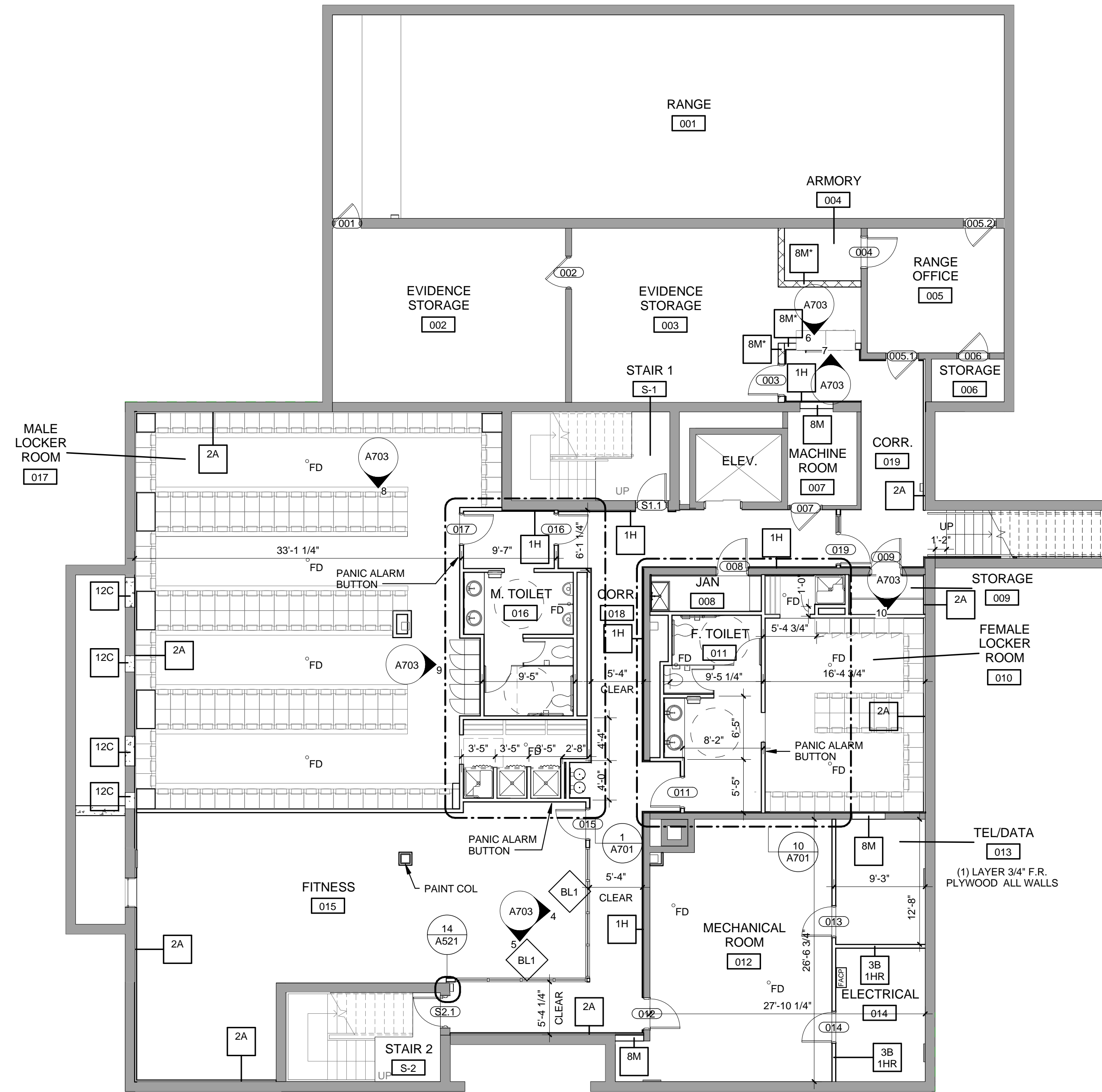
REVIEWED BY: CIVIL ARCH: PLUM: FIRE: MECH: ELEC:

PLOTTED: 7/14/2016 11:21:27 AM

PROJECT FILE: C:\Users\mgoff\Documents\19401\Waltham Police Station\ARCHITECTURE\MRoff1.rvt

### GENERAL PLAN NOTES

- COORDINATE ALL NEW WORK w/ STRUCTURAL, PLUMBING, MECHANICAL & ELECTRICAL DRAWINGS. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK.
- ALL DIMENSIONS TO NEW CONSTRUCTION ARE TO CENTERLINE OF STUD AND FACE OF MASONRY UNLESS NOTED OTHERWISE.
- ALL DIMENSIONS TO EXISTING CONSTRUCTION ARE TO FACE OF FINISH UNLESS NOTED OTHERWISE.
- ALL NEW INTERIOR WALLS ARE TYPE 3B UNLESS NOTED OTHERWISE.
- ALL INTERIOR GYPSUM WALL BOARD CORNERS WITHOUT WAINSCOTING SHALL HAVE STEEL CORNER GUARDS.
- ALL EXISTING DOOR FRAMES TO REMAIN SHALL BE SCRAPED, PRIMED AND PAINTED.
- ALL EXISTING WOOD DOORS TO REMAIN SHALL BE SANDED AND REFINISHED.
- ALL EXISTING METAL DOORS TO REMAIN SHALL BE SCRAPED, PRIMED AND PAINTED.
- SEE FINISH PLANS FOR THE EXTENT OF WAINSCOTING.
- REFER TO STRUCTURAL DRAWINGS FOR PATCHING OF CONCRETE SLAB.
- WALL TAGS MARKED WITH "" DENOTES GYP BOARD SHALL RUN TO THE UNDERSIDE OF DECK ABOVE



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

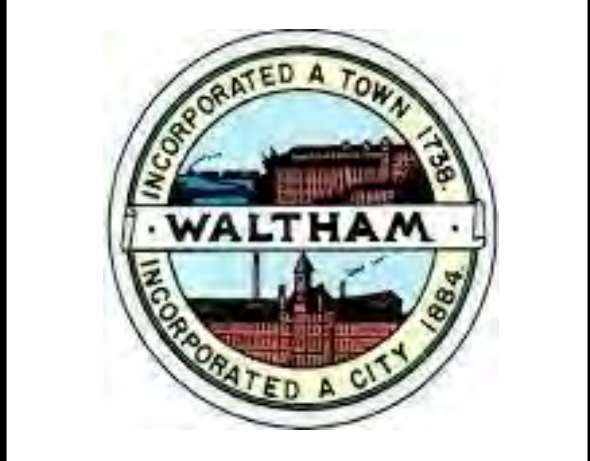
FLOOR PLAN LEGEND	
	EXISTING CONSTRUCTION TO REMAIN
	NEW CONSTRUCTION



**CDR MAGUIRE**  
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Boston, Massachusetts 02110  
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**WALTHAM POLICE STATION RENOVATION**  
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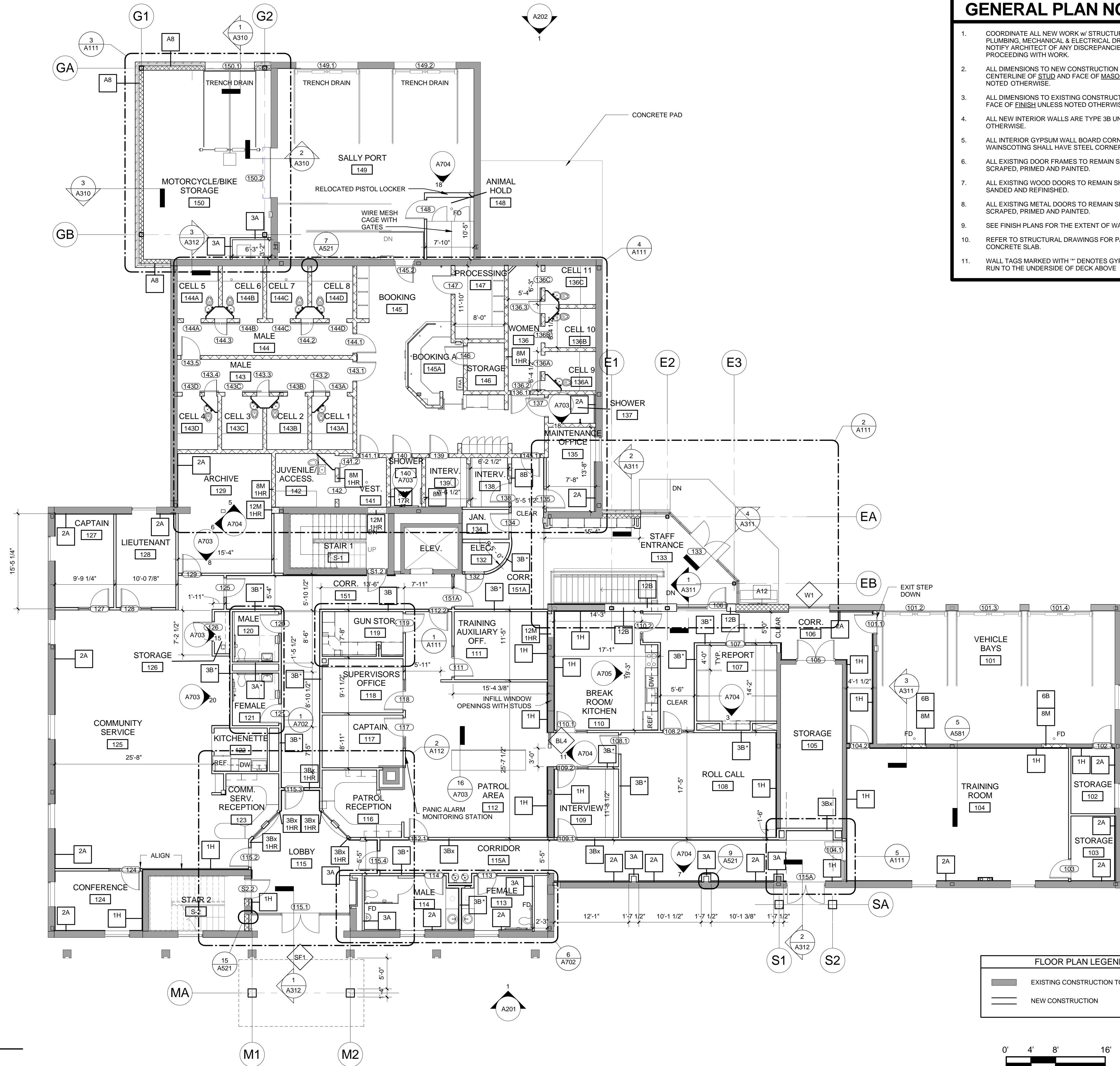
## BASEMENT FLOOR PLAN

PROJECT NUMBER: 19401.01  
DESIGNED BY: FC  
DRAWN BY: EKM, LR  
CHECKED BY: FC  
DATE:  
SCALE: 2016 As Indicated  
SHEET NUMBER:

**A100**



REVIEWED BY: CIVIL ARCH: STRUC: PLUM: FIRE: MECH: ELEC:  
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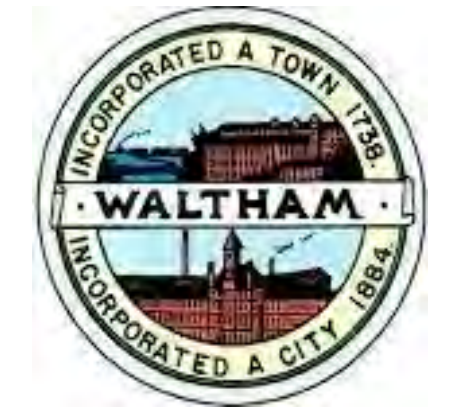


- ### GENERAL PLAN NOTES
- COORDINATE ALL NEW WORK w/ STRUCTURAL, PLUMBING, MECHANICAL & ELECTRICAL DRAWINGS. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK.
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  - ALL NEW INTERIOR WALLS ARE TYPE 3B UNLESS NOTED OTHERWISE.
  - ALL INTERIOR GYPSUM WALL BOARD CORNERS WITHOUT WAINSCOTING SHALL HAVE STEEL CORNER GUARDS.
  - ALL EXISTING DOOR FRAMES TO REMAIN SHALL BE SCRAPED, PRIMED AND PAINTED.
  - ALL EXISTING WOOD DOORS TO REMAIN SHALL BE SANDED AND REFINISHED.
  - ALL EXISTING METAL DOORS TO REMAIN SHALL BE SCRAPED, PRIMED AND PAINTED.
  - SEE FINISH PLANS FOR THE EXTENT OF WAINSCOTING.
  - REFER TO STRUCTURAL DRAWINGS FOR PATCHING OF CONCRETE SLAB.
  - WALL TAGS MARKED WITH " " DENOTES GYP BOARD SHALL RUN TO THE UNDERSIDE OF DECK ABOVE

  
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**WALTHAM POLICE STATION RENOVATION**  
 155 LEXINGTON STREET  
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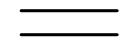
**FIRST FLOOR PLAN**

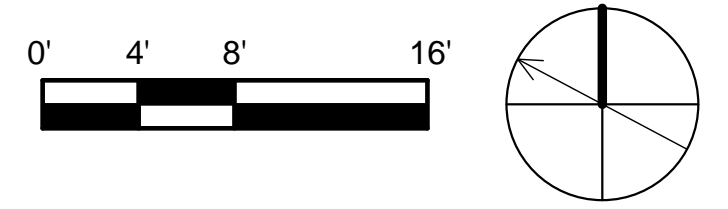
PROJECT NUMBER: 19401.01  
 DESIGNED BY: FC  
 DRAWN BY: EKM, LR  
 CHECKED BY: FC  
 DATE: July-Aug. 2016  
 SCALE: As indicated  
 SHEET NUMBER:

**A101**

SHEET 40 OF 157

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

FLOOR PLAN LEGEND	
	EXISTING CONSTRUCTION TO REMAIN
	NEW CONSTRUCTION

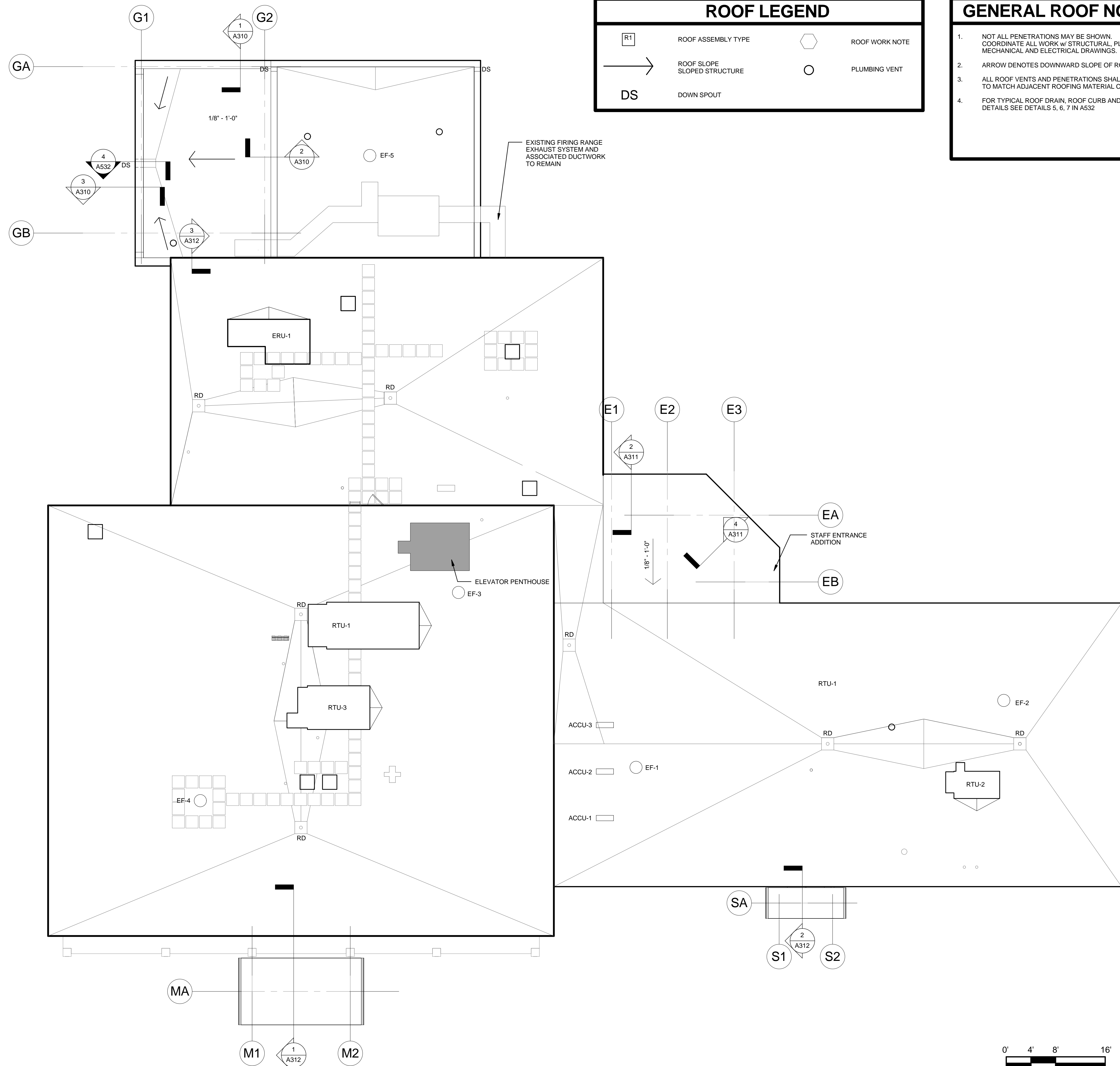








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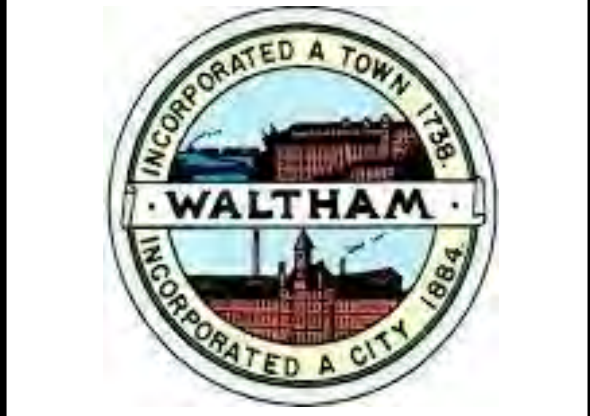
ROOF LEGEND			
[R1]	ROOF ASSEMBLY TYPE	⬡	ROOF WORK NOTE
→	ROOF SLOPE SLOPED STRUCTURE	○	PLUMBING VENT
DS	DOWN SPOUT		

- | GENERAL ROOF NOTES |   |
|--------------------|---|
| 1.                 | NOT ALL PENETRATIONS MAY BE SHOWN. COORDINATE ALL WORK w/ STRUCTURAL, PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS. |
| 2.                 | ARROW DENOTES DOWNWARD SLOPE OF ROOF.   |
| 3.                 | ALL ROOF VENTS AND PENETRATIONS SHALL BE PAINTED TO MATCH ADJACENT ROOFING MATERIAL COLORS.                         |
| 4.                 | FOR TYPICAL ROOF DRAIN, ROOF CURB AND ROOF VENT DETAILS SEE DETAILS 5, 6, 7 IN A532                                 |

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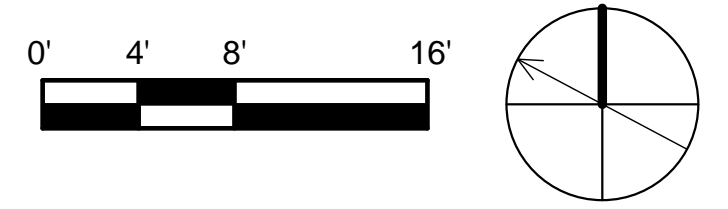
**WALTHAM POLICE STATION RENOVATION**  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**ROOF PLAN**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: FC  
 DRAWN BY: EKM, LR  
 CHECKED BY: LR  
 DATE:  
 SCALE: 2016 As  
 SHEET NUMBER:

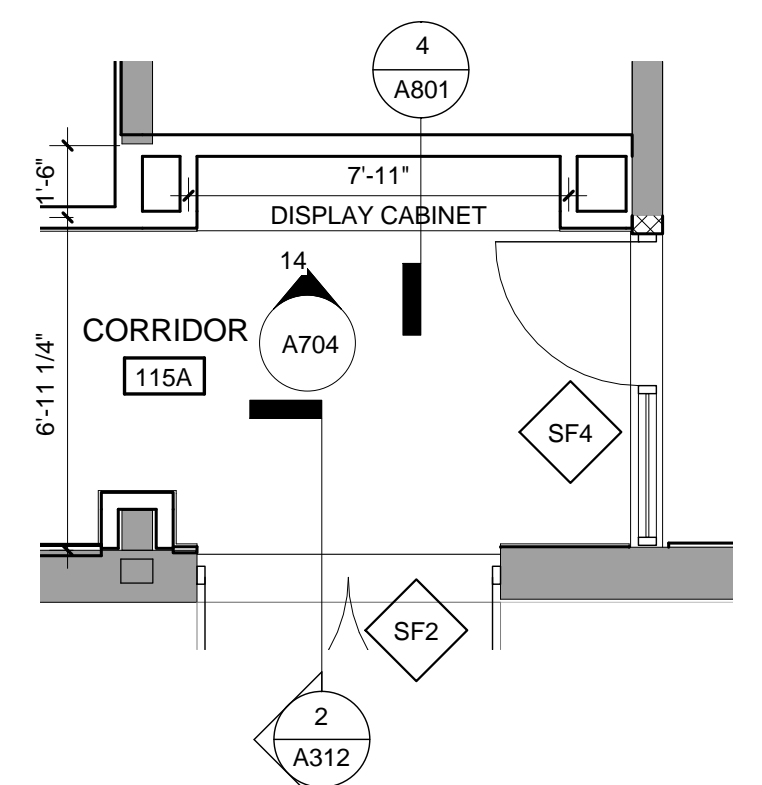
**A103**

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

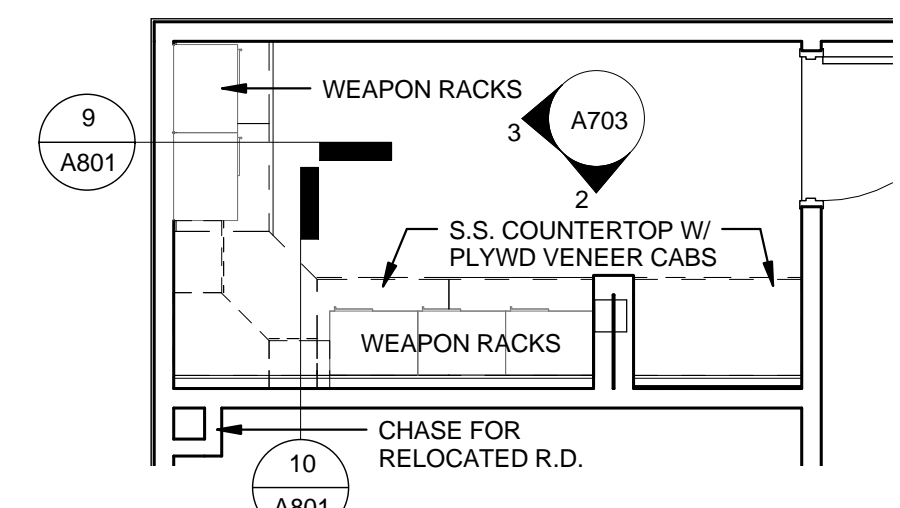




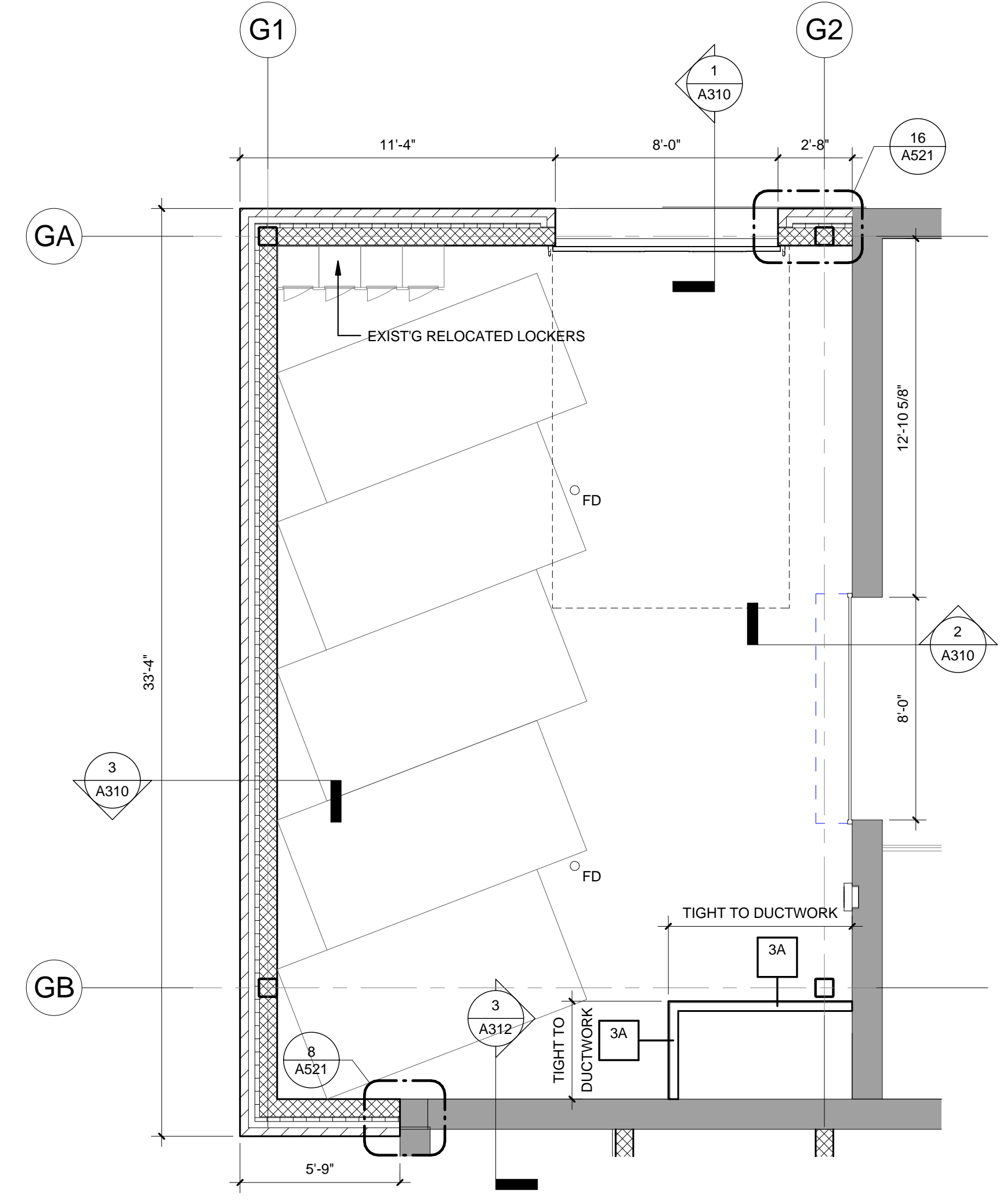
ELEC. MECH. FIRE. PLUM. ARCH. STRUC. CIVIL. REVIEW BY: DATE: 7/14/2016 11:23:39 AM PLOTTED: 7/14/2016 11:23:39 AM PROJECT FILE: C:\Users\mgoff\Documents\19401\Waltham Police Station\ARCHITECTURE\_Mfgoff.rvt



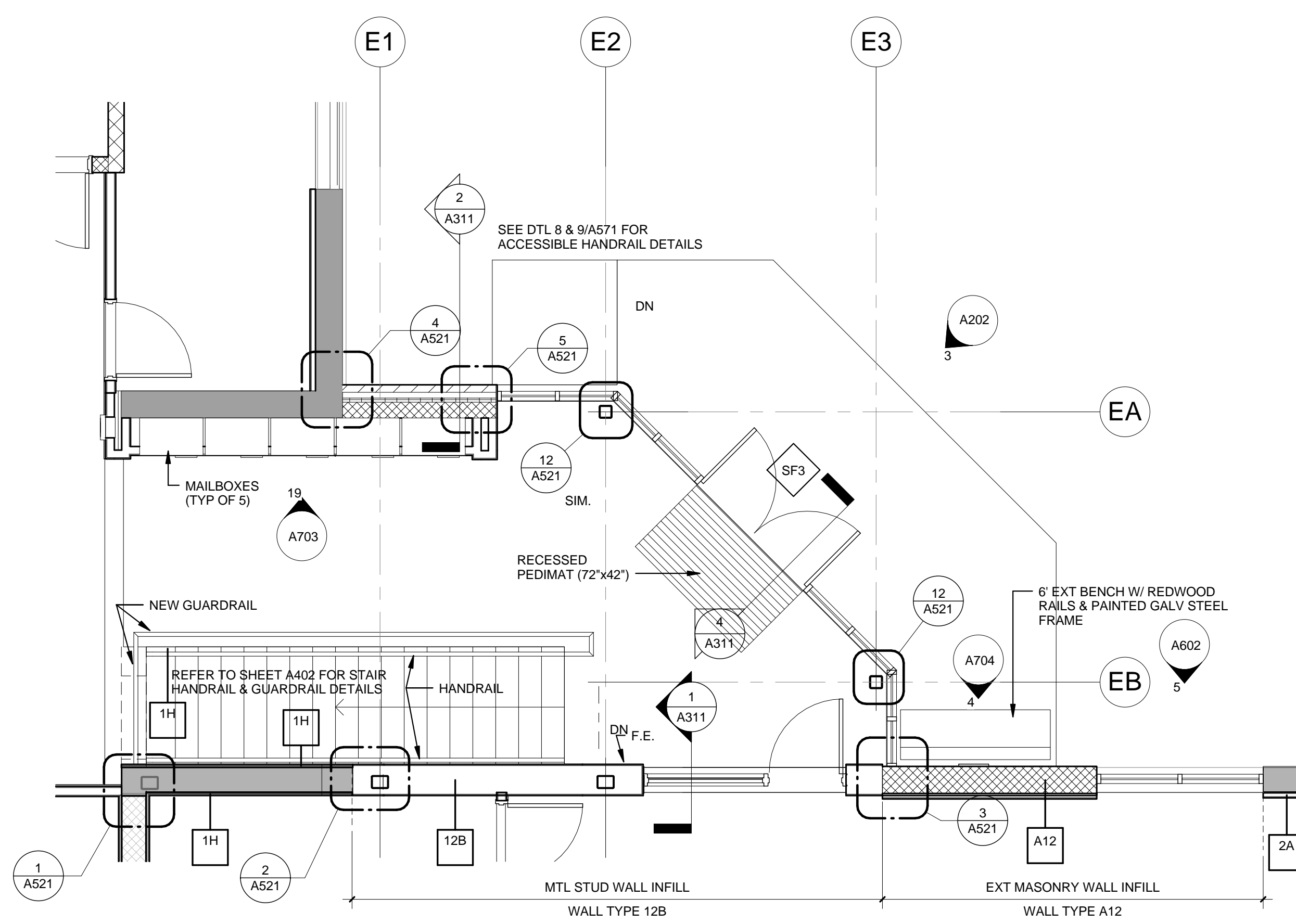
**5 VESTIBULE @ 115A**  
SCALE: 1/4" = 1'-0"



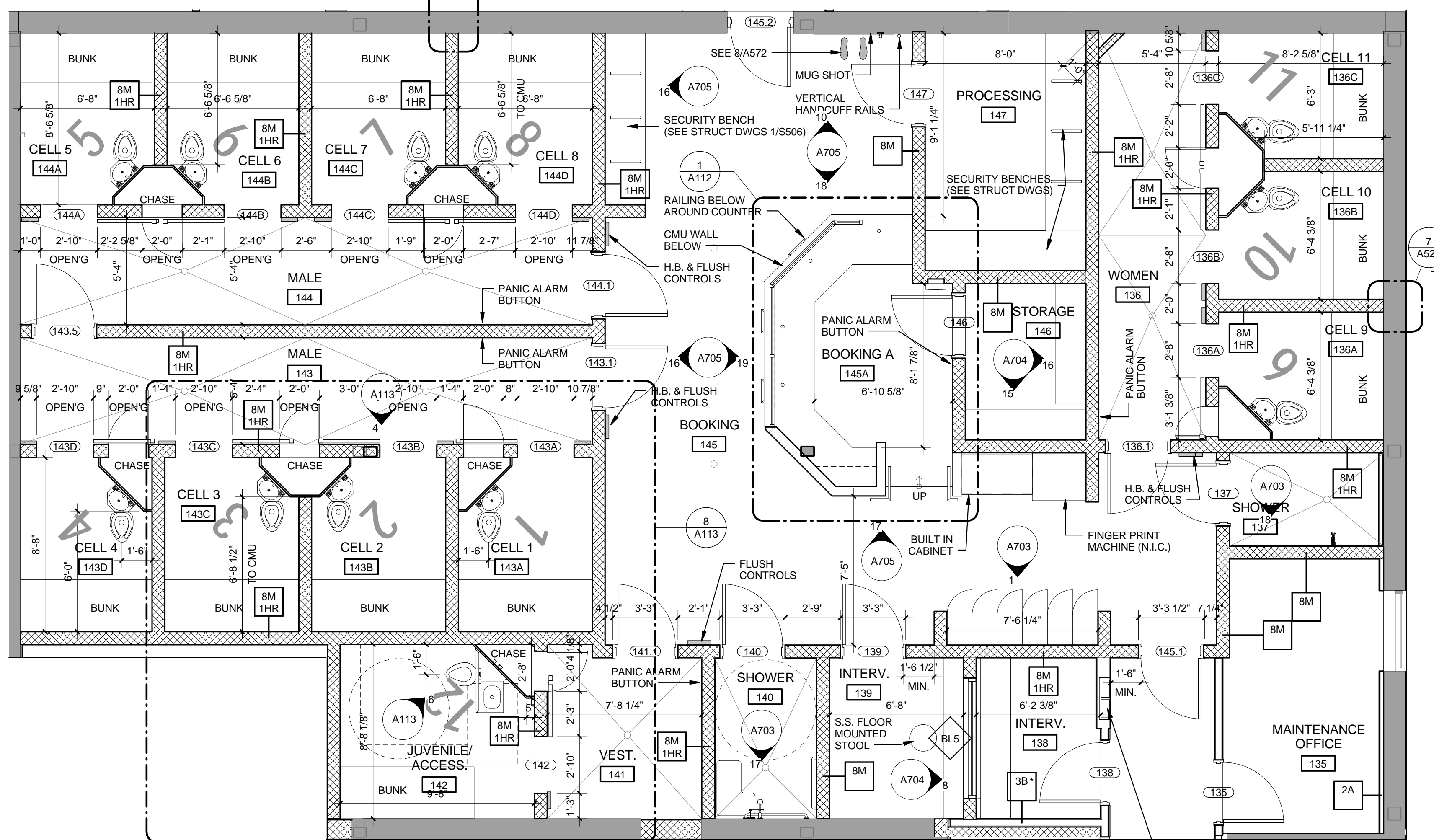
**1 ENLARGED GUN STORAGE PLAN**  
SCALE: 1/4" = 1'-0"



**3 ENLARGED MOTORCYCLE/BIKE STORAGE PLAN**  
SCALE: 1/4" = 1'-0"



**2 ENLARGED STAFF ENTRANCE**  
SCALE: 1/4" = 1'-0"

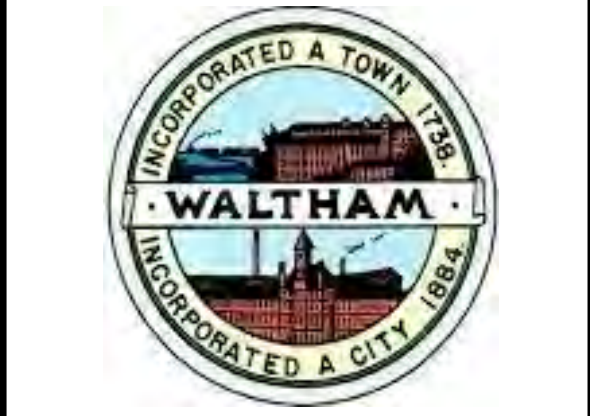


**4 ENLARGED DETENTION AREA PLAN**  
SCALE: 1/4" = 1'-0"

- ### GENERAL PLAN NOTES
- COORDINATE ALL NEW WORK w/ STRUCTURAL, PLUMBING, MECHANICAL & ELECTRICAL DRAWINGS. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK.
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  - ALL DIMENSIONS TO EXISTING CONSTRUCTION ARE TO FACE OF FINISH UNLESS NOTED OTHERWISE.
  - ALL NEW INTERIOR WALLS ARE TYPE 3B UNLESS NOTED OTHERWISE.
  - ALL INTERIOR GYPSUM WALL BOARD CORNERS WITHOUT WAINSCOTING SHALL HAVE STEEL CORNER GUARDS.
  - ALL EXISTING DOOR FRAMES TO REMAIN SHALL BE SCRAPED, PRIMED AND PAINTED.
  - ALL EXISTING WOOD DOORS TO REMAIN SHALL BE SANDED AND REFINISHED.
  - ALL EXISTING METAL DOORS TO REMAIN SHALL BE SCRAPED, PRIMED AND PAINTED.
  - SEE FINISH PLANS FOR THE EXTENT OF WAINSCOTING.
  - REFER TO STRUCTURAL DRAWINGS FOR PATCHING OF CONCRETE SLAB.
  - WALL TAGS MARKED WITH " DENOTES GYP BOARD SHALL RUN TO THE UNDERSIDE OF DECK ABOVE

REVISIONS		
Number	Description	Date

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**WALTHAM POLICE STATION RENOVATION**
  
 155 LEXINGTON STREET
   
 WALTHAM, MASSACHUSETTS

ENLARGED FLOOR PLANS

PROJECT NUMBER: 19401.01
   
 DESIGNED BY: FC
   
 DRAWN BY: EKM, JR
   
 CHECKED BY: FC
   
 DATE: July-Aug. 2016
   
 SCALE: As indicated



















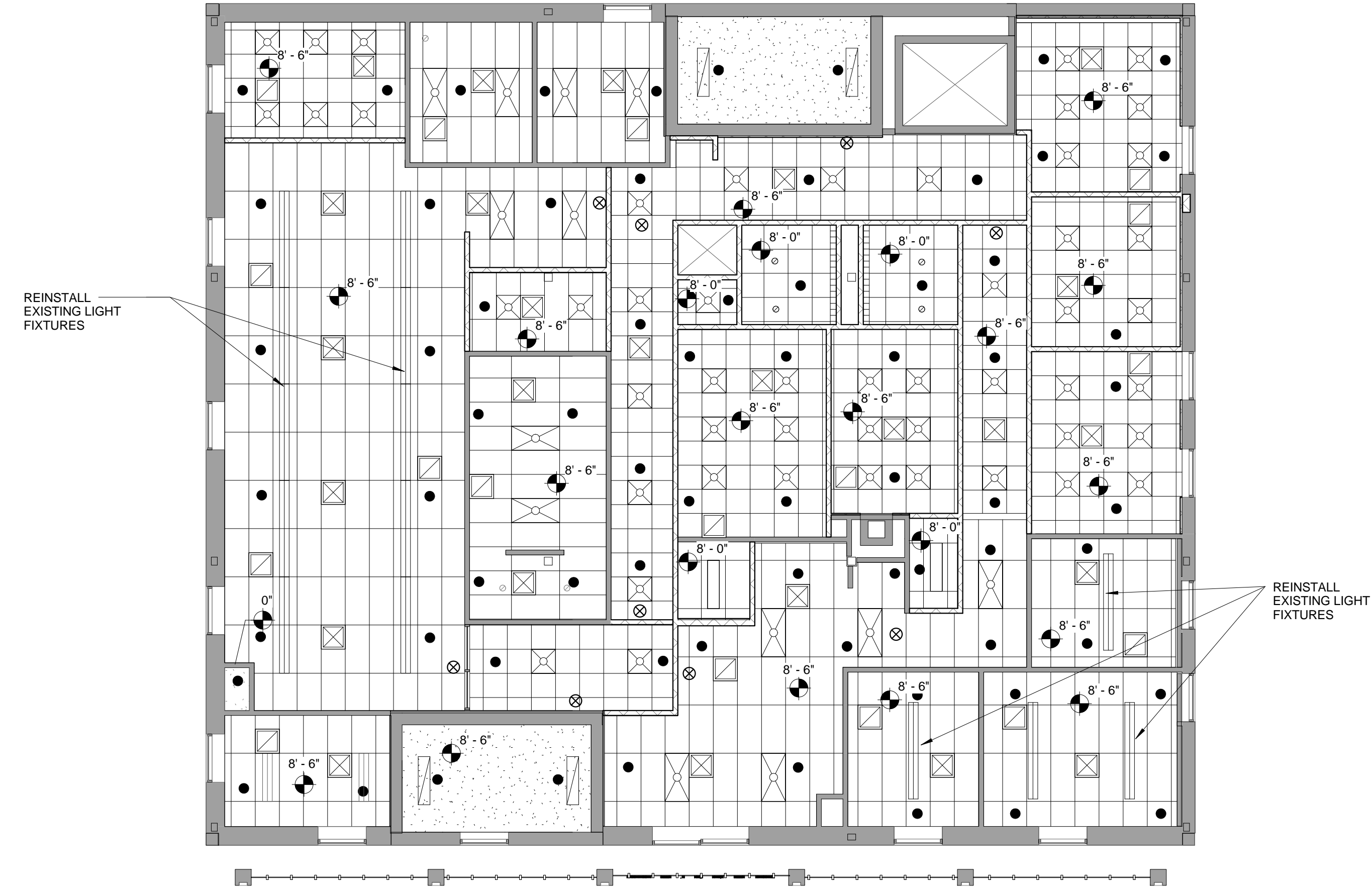
REVIEWED BY: CIVIL: ARCH: STRUC: PLUM: FIRE: MECH: ELEC:

### RCP FINISH LEGEND

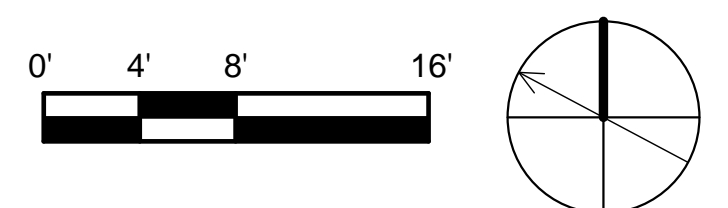
	2X4' SUSPENDED ACT CEILING		2X2 RECESSED LIGHT FIXTURE. (SEE ELEC.)		EXIT SIGN. (SEE ELEC.)
	GYPSUM BOARD CEILING / SOFFIT		2X4 RECESSED LIGHT FIXTURE. (SEE ELEC.)		SPEAKERS (SEE TD DRAWINGS)
	2X2' SECURITY CEILING		TUBE STRIP SURFACE MOUNTED LIGHT FIXTURE (SEE ELEC.)		SPRINKLER HEADS (SEE FIRE SUPPRESSION)
	STEEL PLATE CELL CEILING		PENDANT LIGHT FIXTURE. (SEE ELEC.)		MECHANICAL DIFFUSER / REGISTER. (SEE MECH.)
			SURFACE MOUNTED LIGHT FIXTURE (SEE ELEC.)		MECHANICAL DIFFUSER / REGISTER. (SEE MECH.)
			RECESSED SOFFIT LIGHT		
			RECESSED CAN LIGHT		
			RECESSED LIGHT FIXTURE		

- ### GENERAL RCP NOTES
- NOT ALL CEILING MOUNTED ITEMS MAY BE SHOWN. CONTRACTOR TO COORDINATE W/ STRUCTURAL, PLUMBING, MECHANICAL, ELECTRICAL & I.T. DRAWINGS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
  - ALL CEILING MOUNTED ITEMS ARE TO BE CENTERED IN CEILING TILES UNLESS NOTED OTHERWISE.
  - SPRINKER HEAD LAYOUT IS APPROXIMATE AND NOT ALL HEADS MAY BE SHOWN. COORDINATE W/ SPRINKLER DWGS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
  - PROVIDE WHITE GROMMET TRIM @ ALL SUPPORT CABLE PENETRATIONS FOR SUSPENDED ELEMENTS.
  - ALL EXPOSED PIPING UTILITIES, HVAC SHALL BE PAINTED IN EXPOSED CEILING AREAS.
  - SEE SHEET A581 FOR TYPICAL CEILING DETAILS.
  - REFER TO ELECTRICAL DRAWINGS FOR LIGHT LOCATIONS.

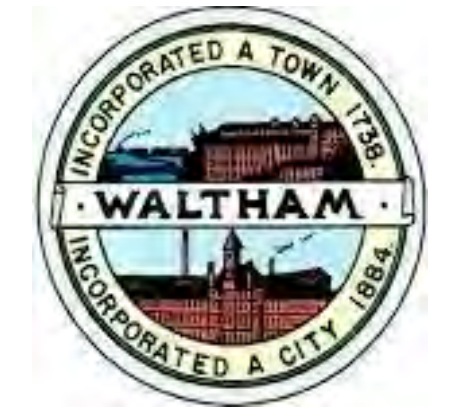
REVISIONS		
Number	Description	Date



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



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**WALTHAM POLICE STATION RENOVATION**  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**SECOND FLOOR RCP**

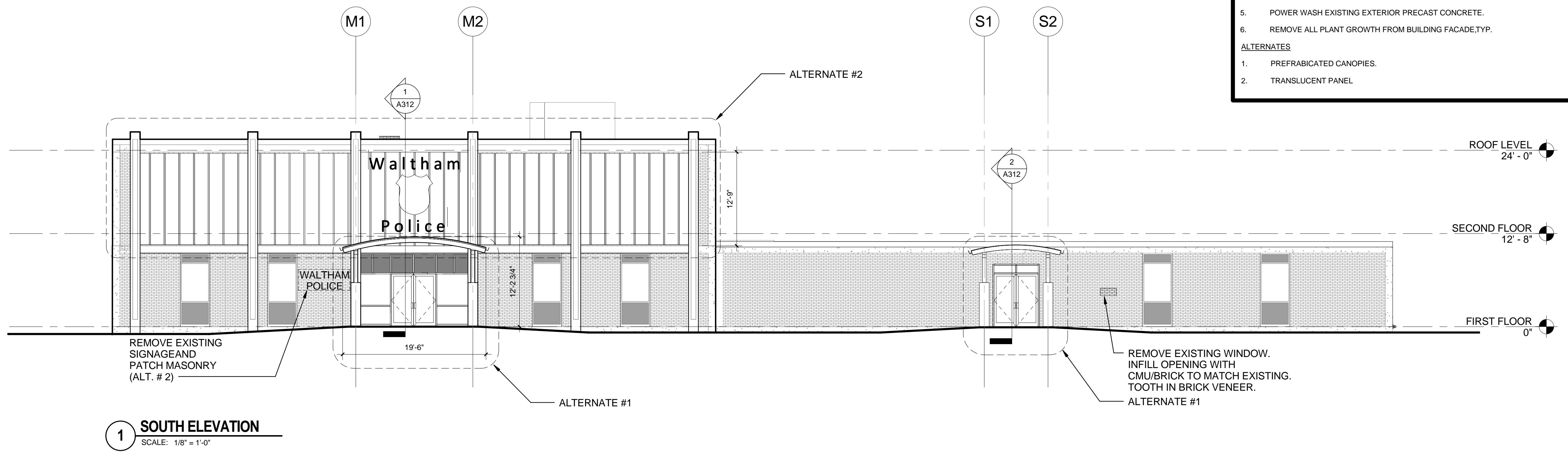
PROJECT NUMBER: 19401.01  
 DESIGNED BY: FC  
 DRAWN BY: EKM, LR  
 CHECKED BY: Checker  
 DATE:  
 SCALE: 2016 As Indicated  
 SHEET NUMBER:

**A122**

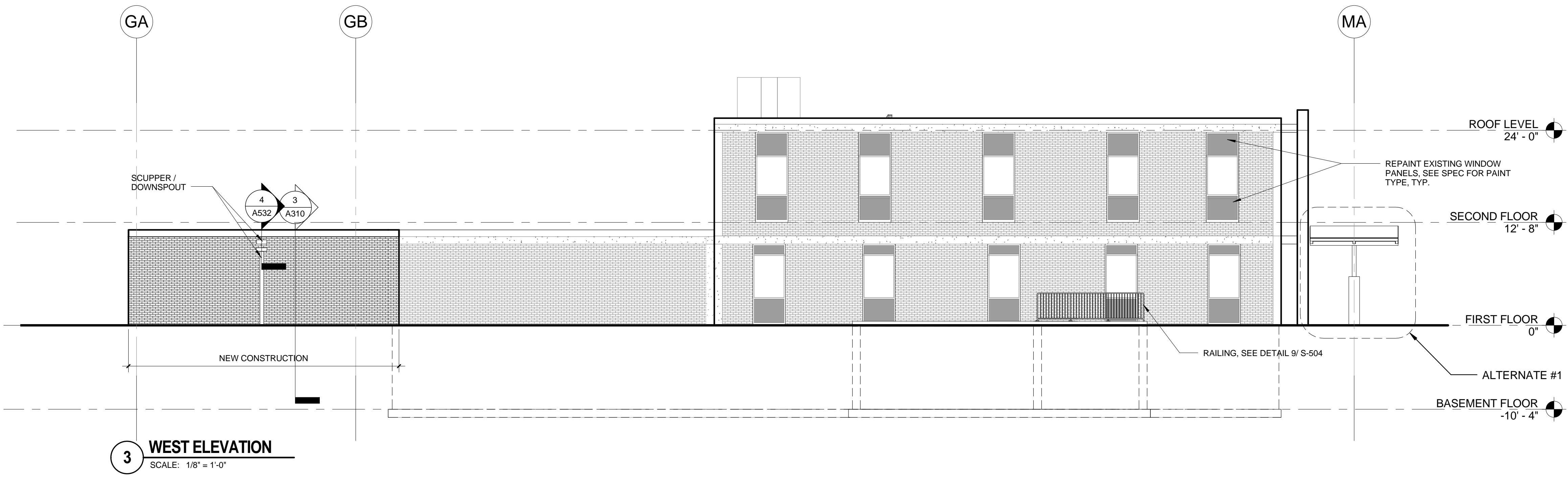


ELEC: \_\_\_\_\_ MECH: \_\_\_\_\_ FIRE: \_\_\_\_\_ PLUM: \_\_\_\_\_ STRUC: \_\_\_\_\_ ARCH: \_\_\_\_\_ CIVIL: \_\_\_\_\_  
 PROJECT FILE: C:\Users\mgoff\Documents\19401\Waltham Police Station\ARCHITECTURE\_M\mgoff.rvt  
 PLOTTED: 7/14/2016 1:52:28 PM

- ### EXTERIOR ELEVATION NOTES
1. REPAIR & PAINT ALL EXISTING WINDOW FRAMES/ SOLID PANELS AND STEEL LINTELS.
  2. REMOVE AND REPLACE ALL EXISTING SEALANT JOINTS AROUND PENETRATIONS, DOORS, WINDOWS, AND BETWEEN BRICK AND PRECAST CONCRETE.
  3. CLEAN ALL EXISTING EXTERIOR BRICK, SURFACES AS PER SPECIFICATIONS.
  4. REPOINT EXISTING DETERIORATED BRICK MORTAR AS PER SPECIFICATIONS. INCLUDE AN ALLOWANCE OF 30% OF THE EXISTING MORTAR QUANTITY.
  5. POWER WASH EXISTING EXTERIOR PRECAST CONCRETE.
  6. REMOVE ALL PLANT GROWTH FROM BUILDING FACADE.TYP.
- ALTERNATES**
1. PREFABRICATED CANOPIES.
  2. TRANSLUCENT PANEL



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

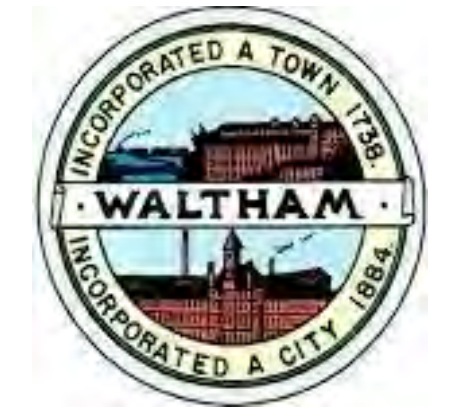


**3 WEST ELEVATION**  
SCALE: 1/8" = 1'-0"

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**WALTHAM POLICE STATION RENOVATION**  
  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**EXTERIOR ELEVATION**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: FC  
 DRAWN BY: EKM, LR  
 CHECKED BY: FC  
 DATE:  
 SCALE: 2016 As  
 SHEET NUMBER:

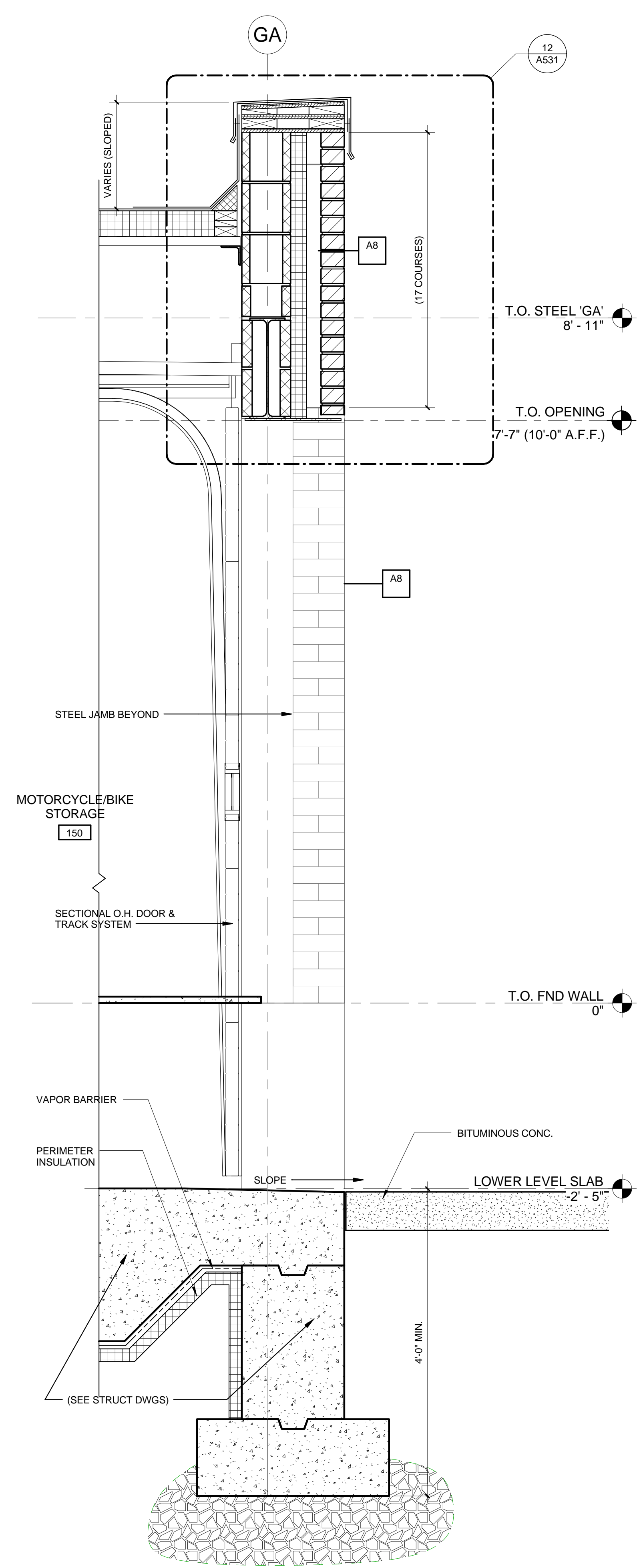
A201



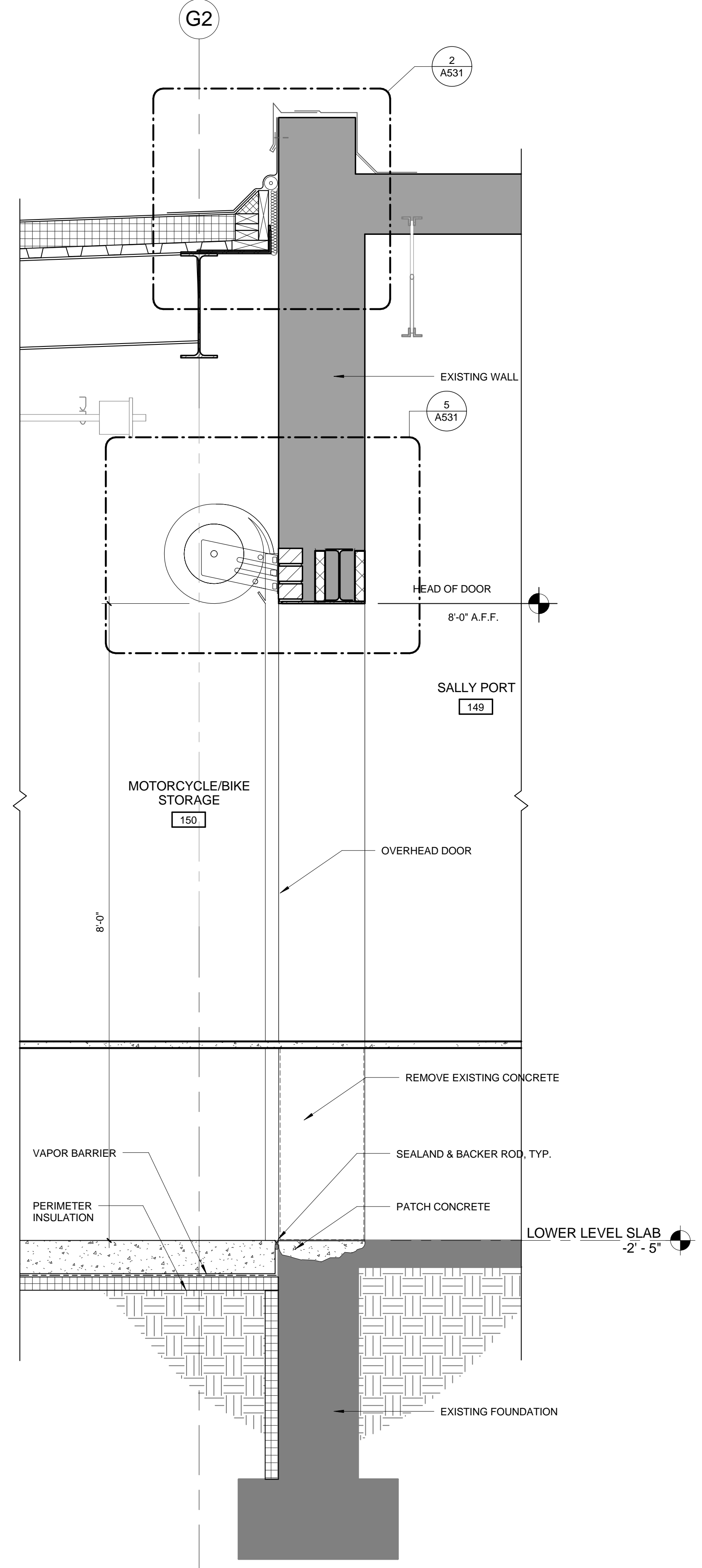




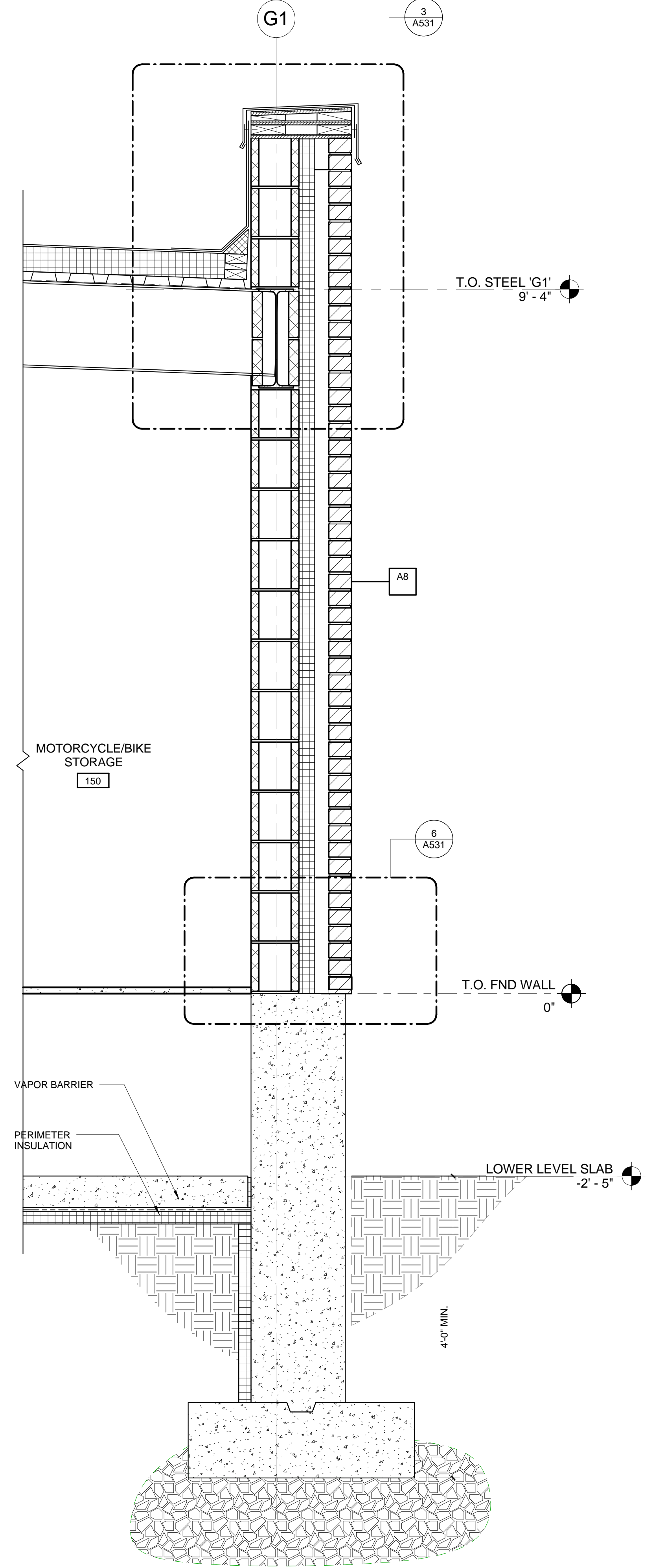
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 REVIEWED BY: CIVIL: ARCH: STRUC: PLUM: FIRE: MECH: ELEC:



**1 MOTORCYCLE/BIKE STORAGE DOOR SECTION**  
SCALE: 1" = 1'-0"



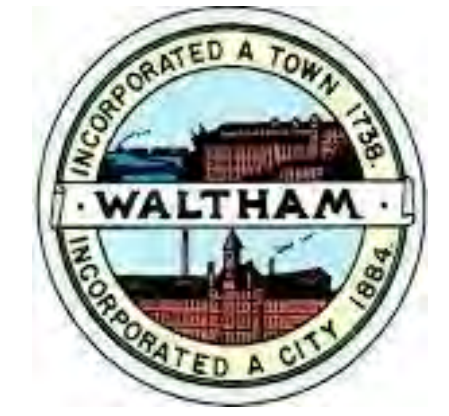
**2 OH DOOR SECTION**  
SCALE: 1" = 1'-0"



**3 MOTORCYCLE/BIKE STORAGE EXTERIOR WALL**  
SCALE: 1" = 1'-0"

REVISIONS		
Number	Description	Date

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**WALTHAM POLICE STATION RENOVATION**  
  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**TYP. WALL SECTIONS**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: FC  
 DRAWN BY: JR, LR  
 CHECKED BY: FC  
 DATE: July-Aug. 2016  
 SCALE: 1" = 1'-0"  
 SHEET NUMBER:

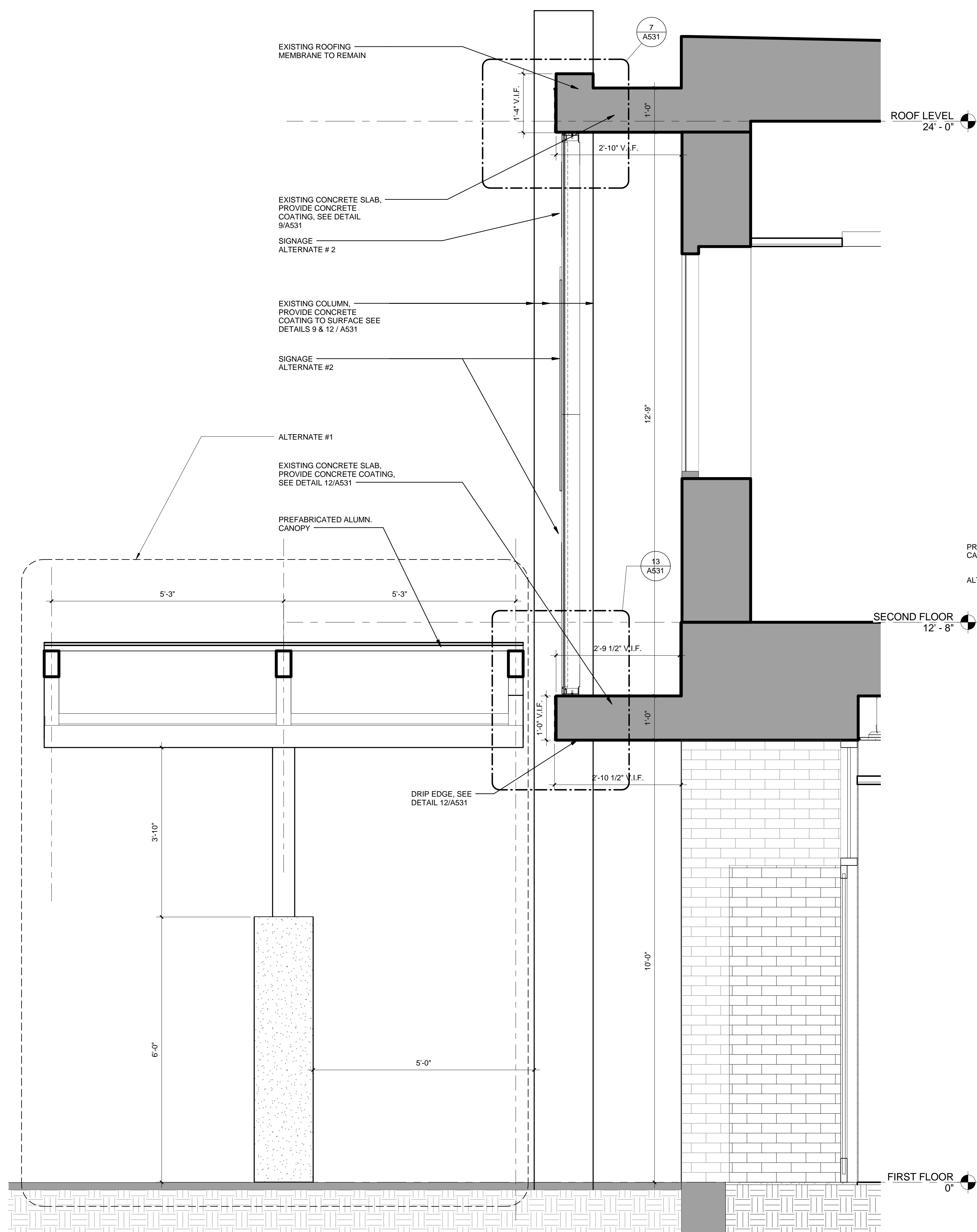
**A310**



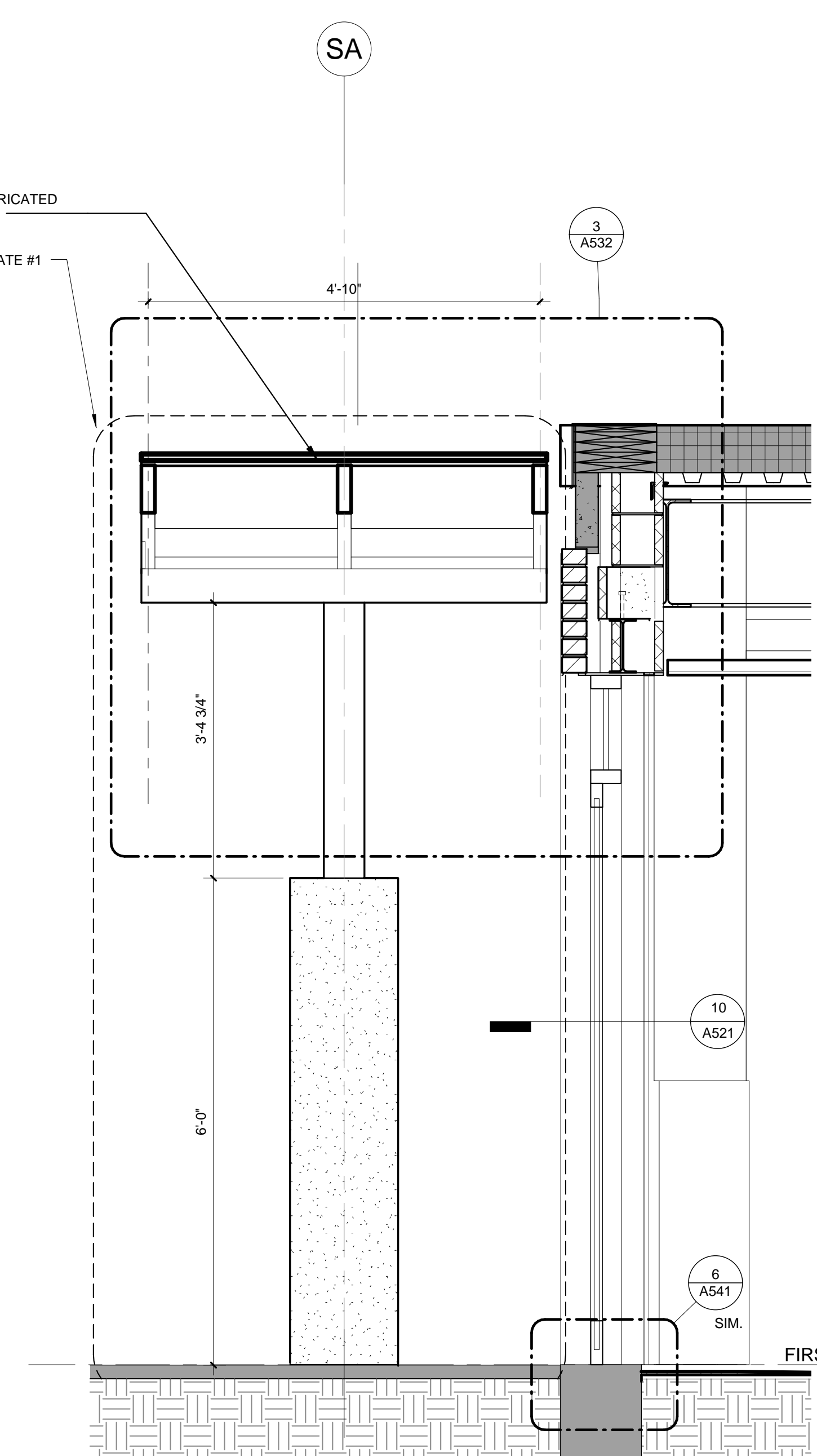




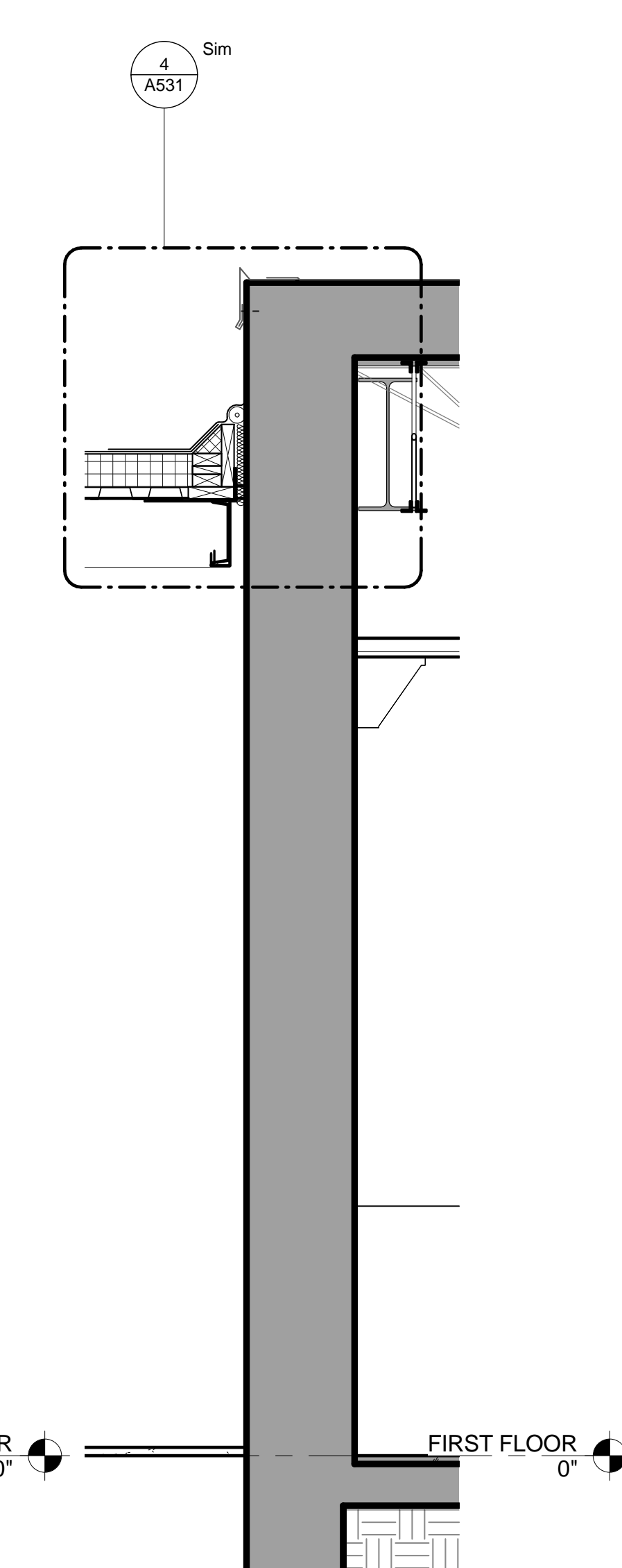
ELEC: \_\_\_\_\_ MECH: \_\_\_\_\_ FIRE: \_\_\_\_\_ PLUM: \_\_\_\_\_ STRU: \_\_\_\_\_ ARCH: \_\_\_\_\_ CIVIL: \_\_\_\_\_  
 REVIEWED BY: \_\_\_\_\_  
 PLOTTED: 7/10/2014 8:22:46 AM  
 PROJECT FILE: C:\Users\jha\Documents\19401\19401-Waltham Police Station-ARCHITECTURE-11-14-14.rvt



**1 SECTION THROUGH MAIN ENTRANCE & FRONT CANOPY**  
SCALE: 3/4" = 1'-0"



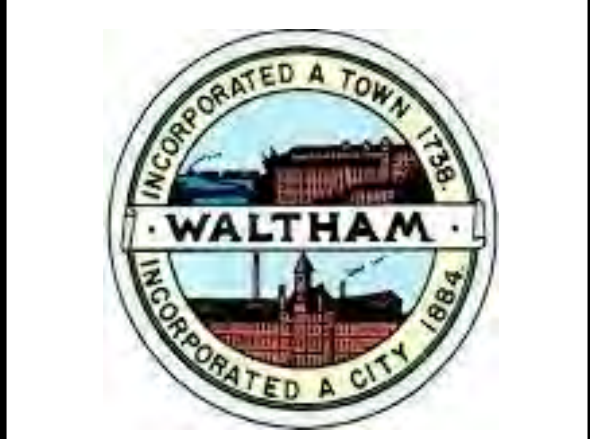
**2 SECONDARY ENTRANCE CANOPY**  
SCALE: 3/4" = 1'-0"



**3 SALLYPORT EXISTING WALL**  
SCALE: 3/4" = 1'-0"

REVISIONS		
Number	Description	Date

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**WALTHAM POLICE STATION RENOVATION**  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**TYP. WALL SECTIONS**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: Designer  
 DRAWN BY: LR  
 CHECKED BY: Checker  
 DATE: July-Aug. 2016  
 SCALE: 3/4" = 1'-0"

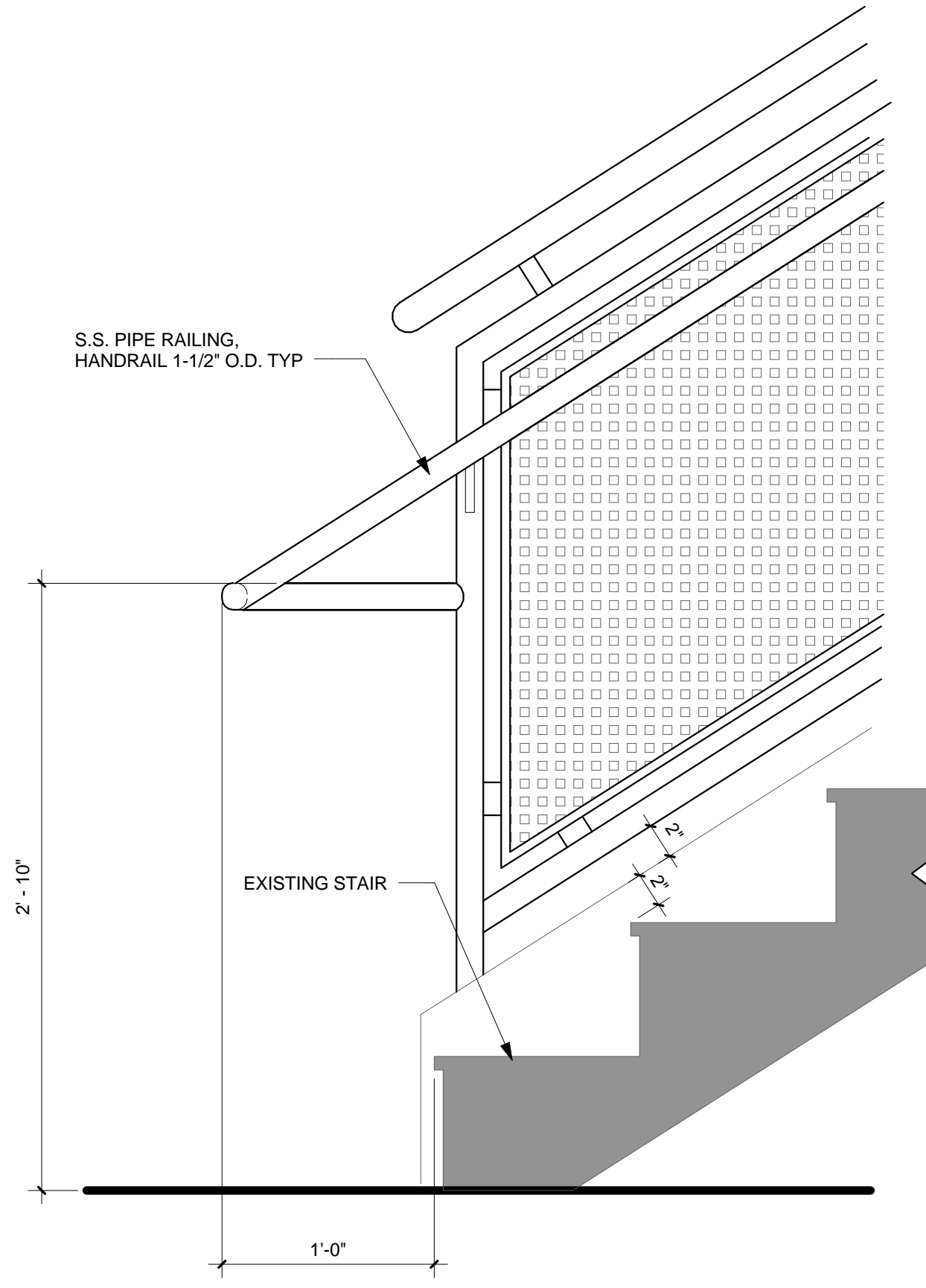
SHEET NUMBER:  
A312



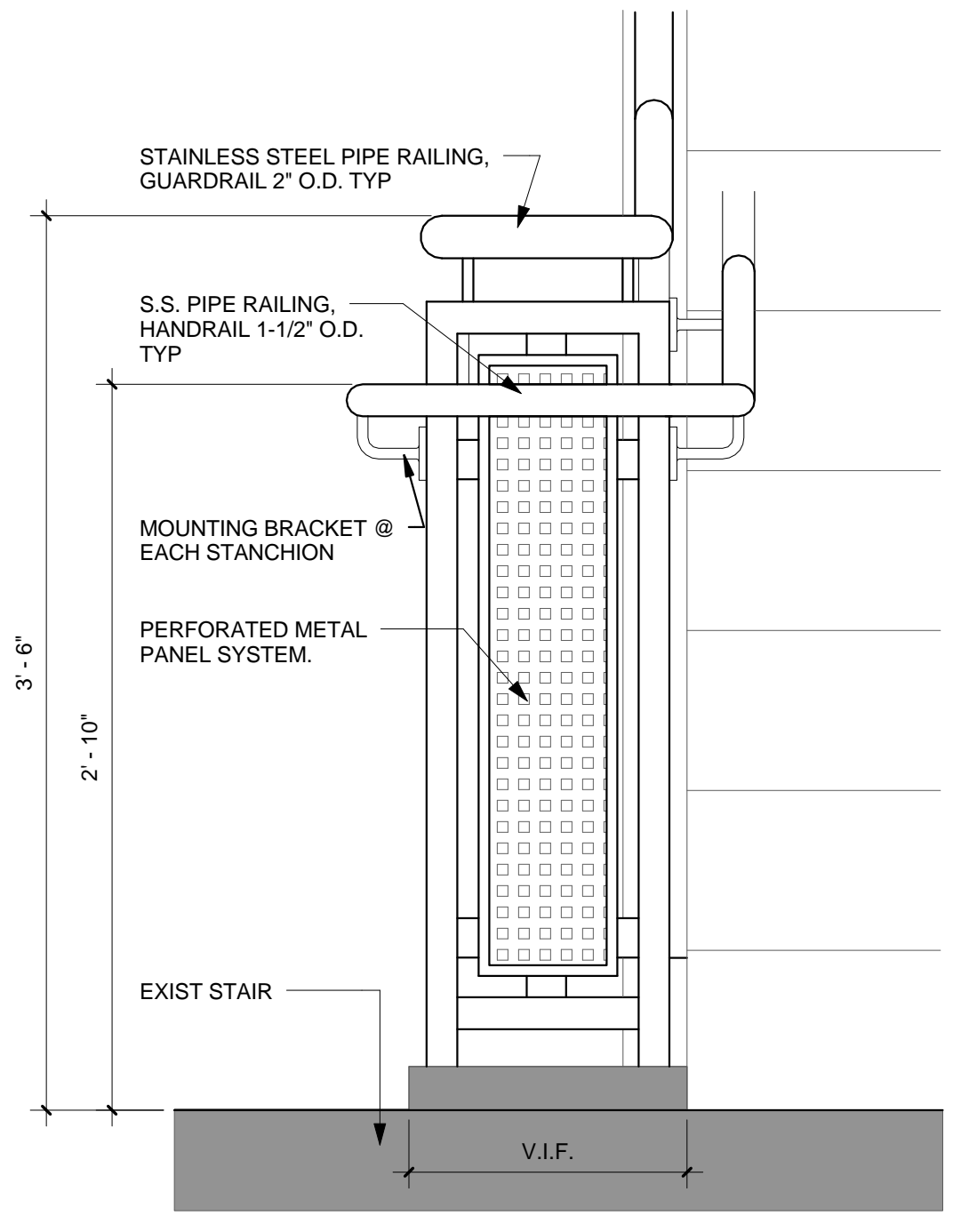




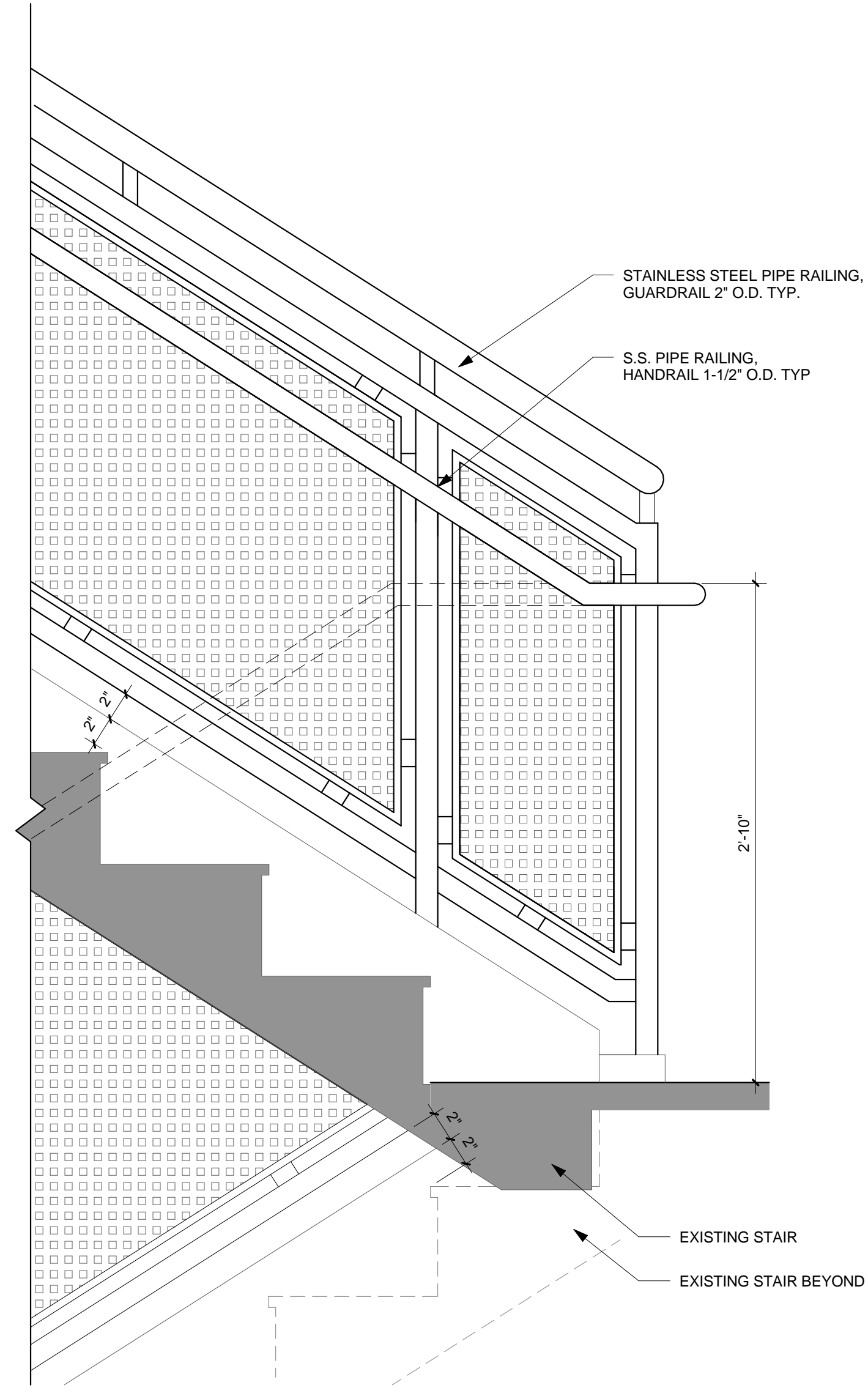
ELEC: \_\_\_\_\_ MECH: \_\_\_\_\_ FIRE: \_\_\_\_\_ PLUM: \_\_\_\_\_ STRUC: \_\_\_\_\_ ARCH: \_\_\_\_\_ CIVIL: \_\_\_\_\_ REVIEWED BY: \_\_\_\_\_



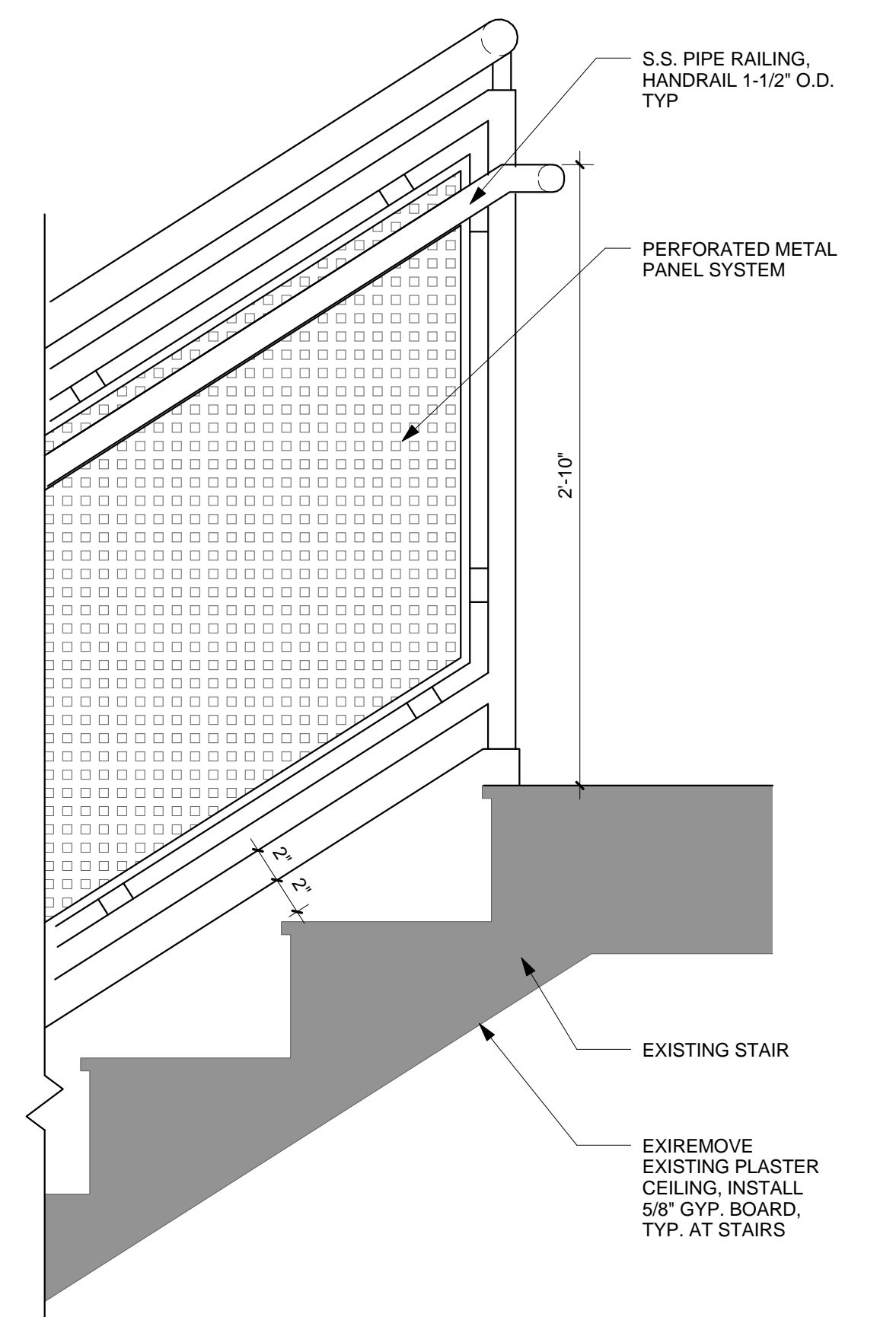
**1 TYP. STAIR BOTTOM**  
SCALE: 1 1/2" = 1'-0"



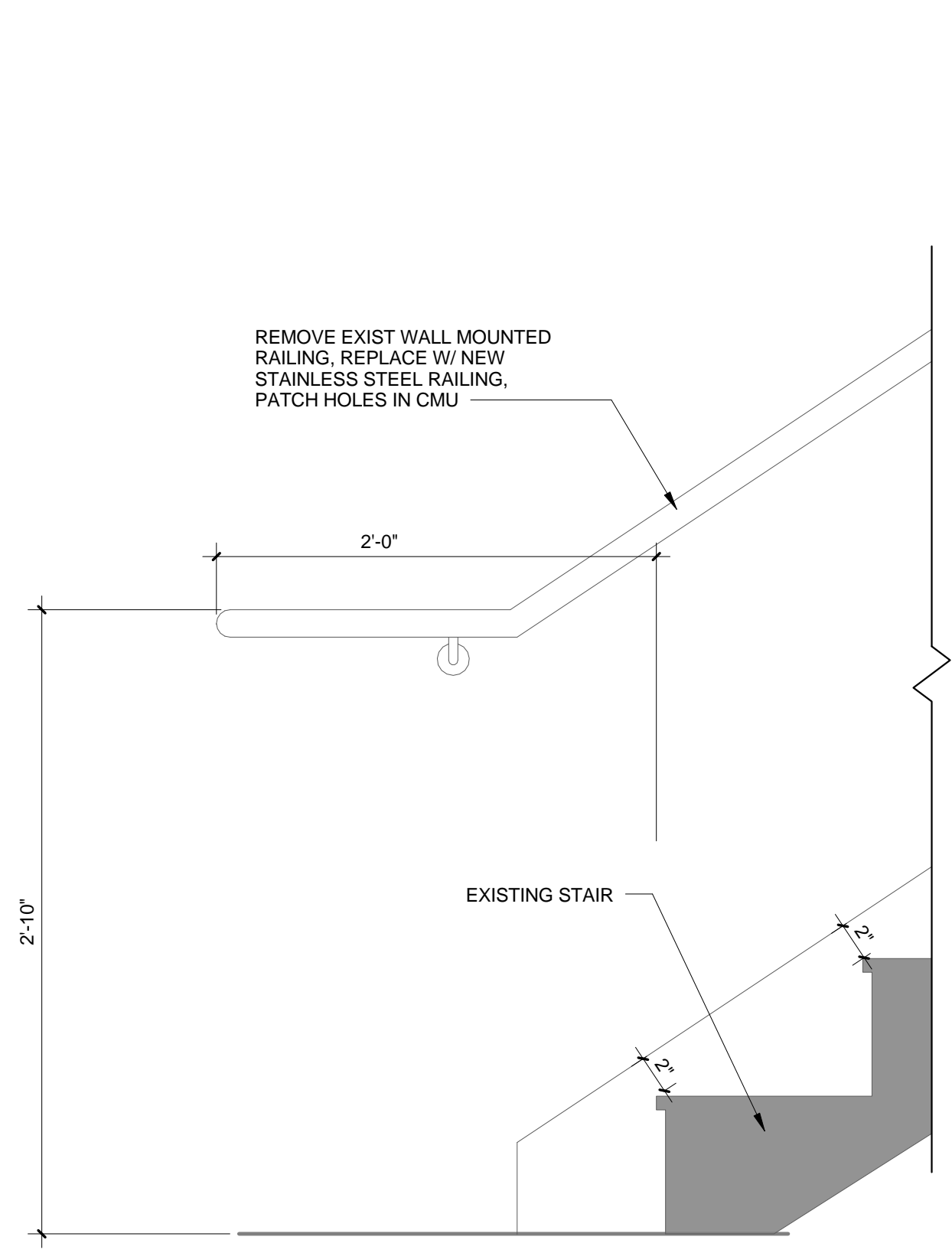
**2 TYP. STAIR RAIL RETURN**  
SCALE: 1 1/2" = 1'-0"



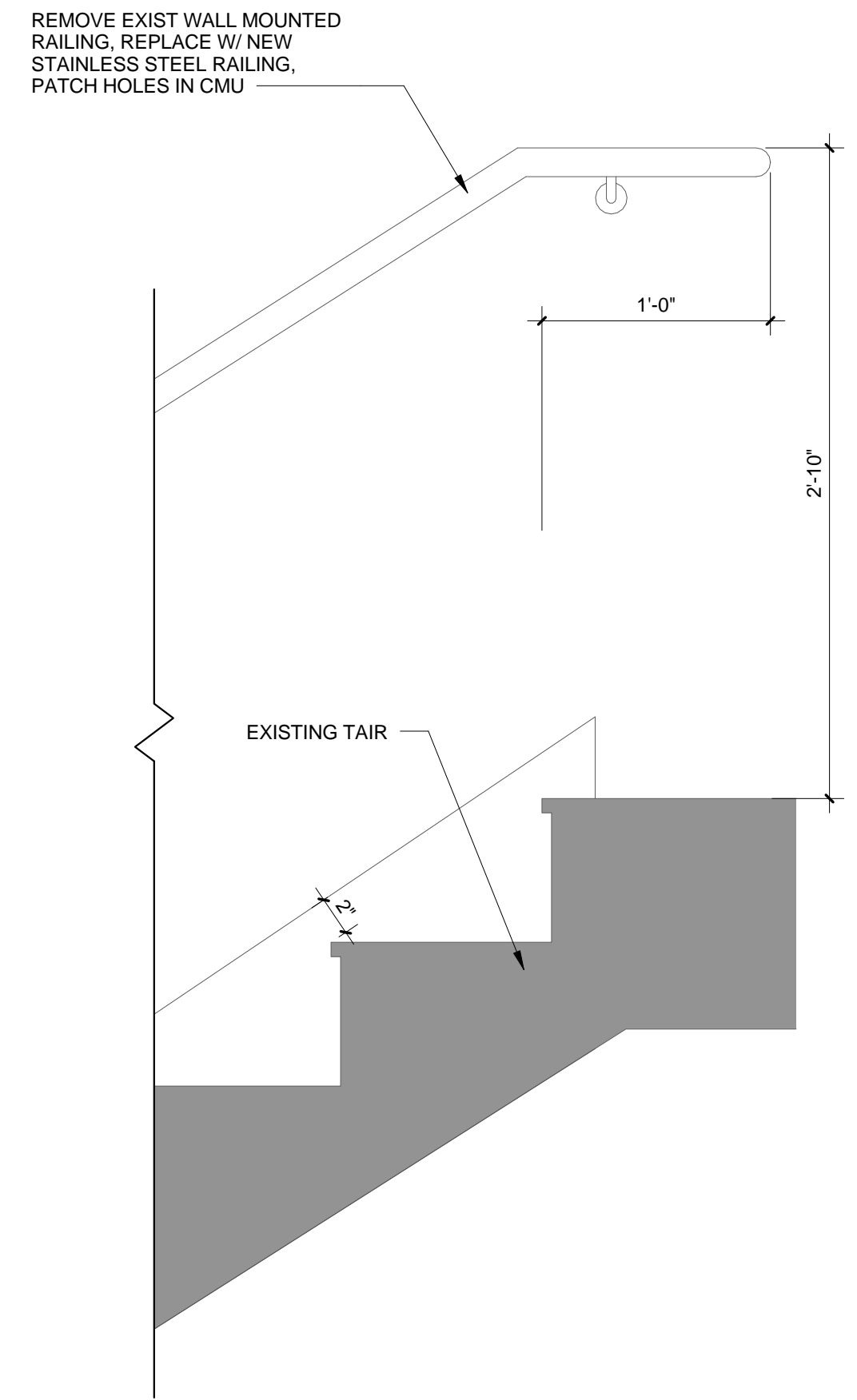
**4 TYP. STAIR INTERMEDIATE**  
SCALE: 1 1/2" = 1'-0"



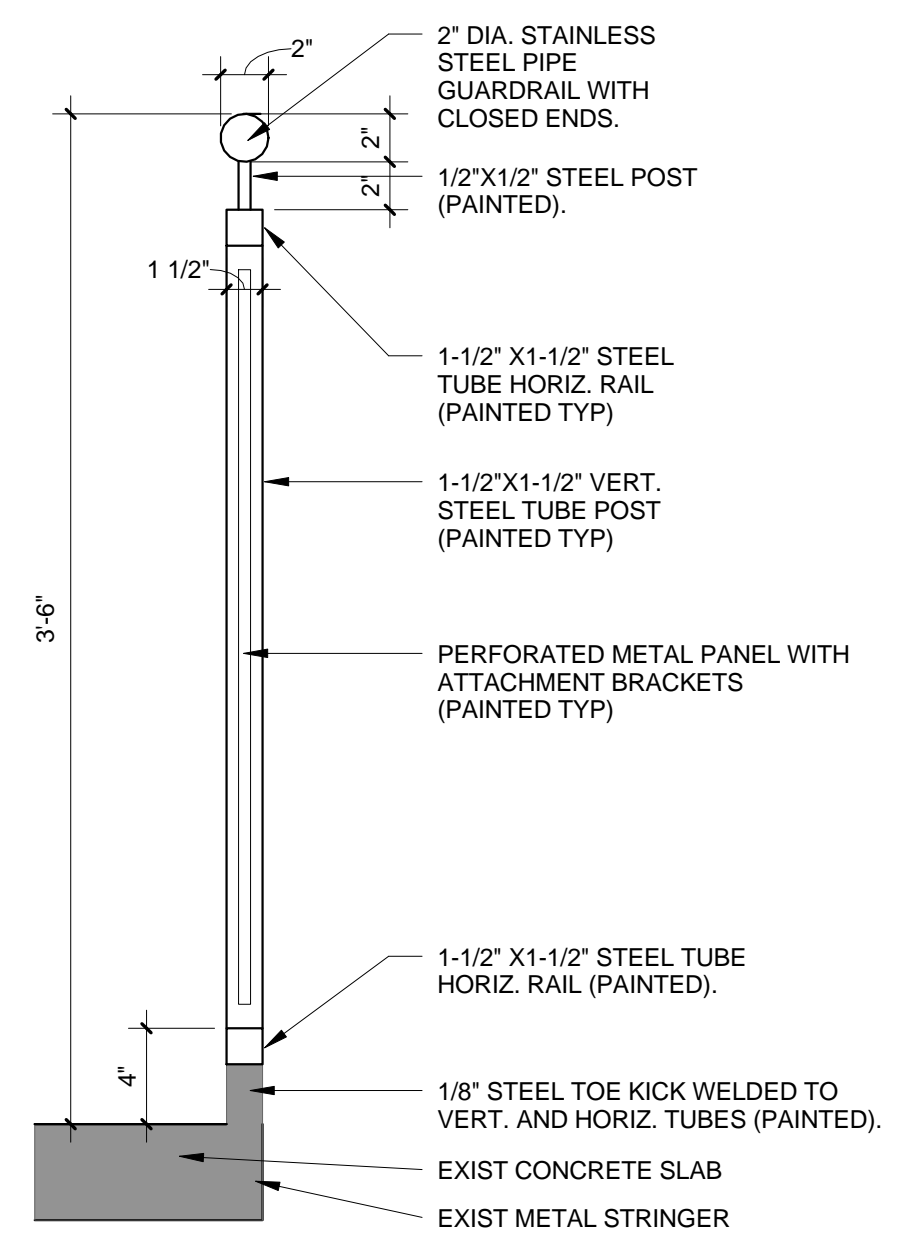
**5 TYP. STAIR TOP**  
SCALE: 1 1/2" = 1'-0"



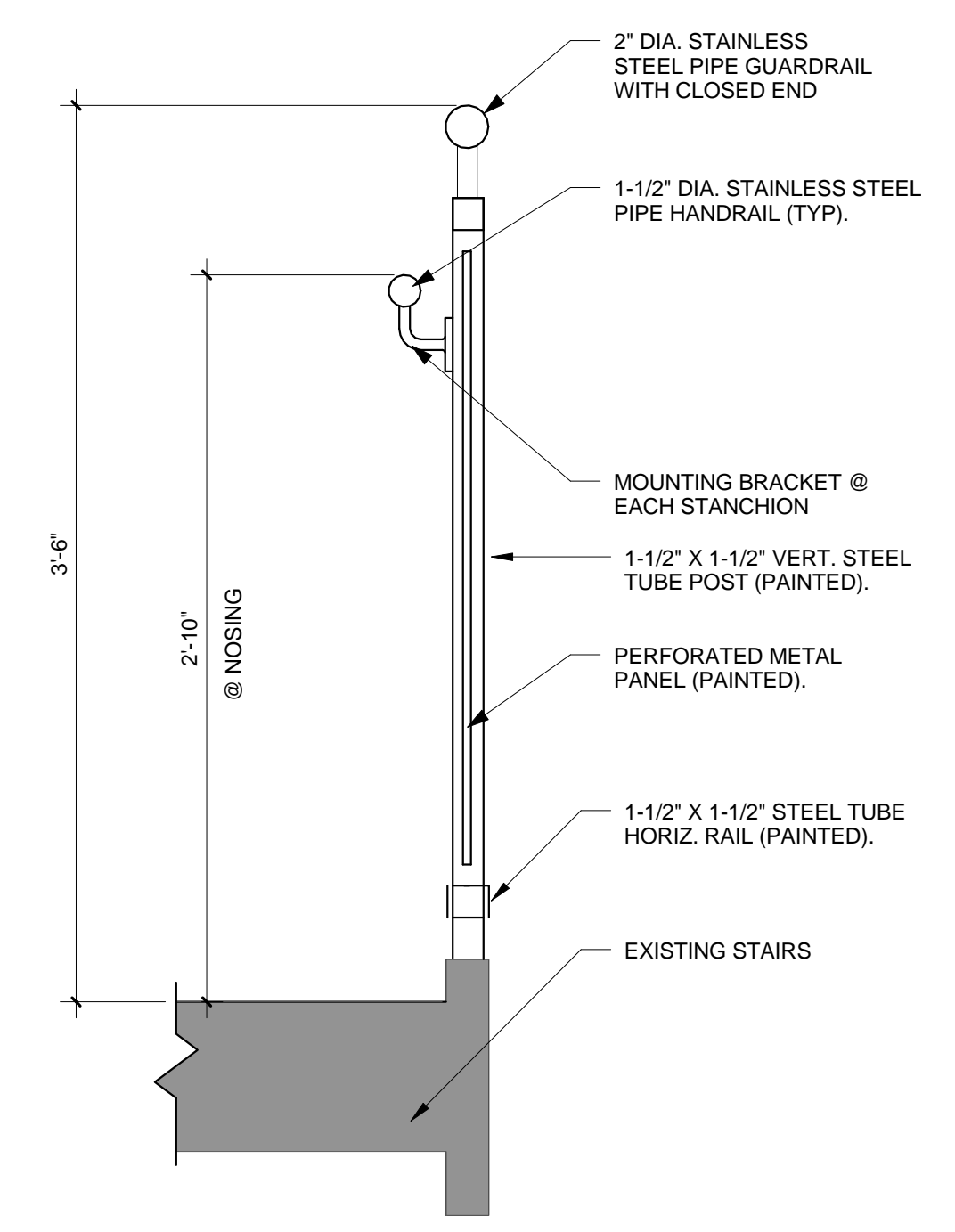
**6 TYP. STAIR BOTTOM - HANDRAIL**  
SCALE: 1 1/2" = 1'-0"



**3 TYP. STAIR TOP - HANDRAIL**  
SCALE: 1 1/2" = 1'-0"



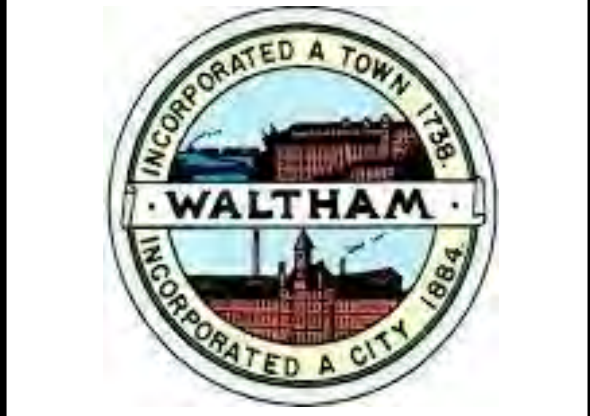
**7 TYP. GUARD RAIL**  
SCALE: 1 1/2" = 1'-0"



**8 TYP. CHANNEL STRINGER**  
SCALE: 1 1/2" = 1'-0"

REVISIONS		
Number	Description	Date

ISSUED FOR BID



**WALTHAM POLICE STATION RENOVATION**
  
 155 LEXINGTON STREET
   
 WALTHAM, MASSACHUSETTS

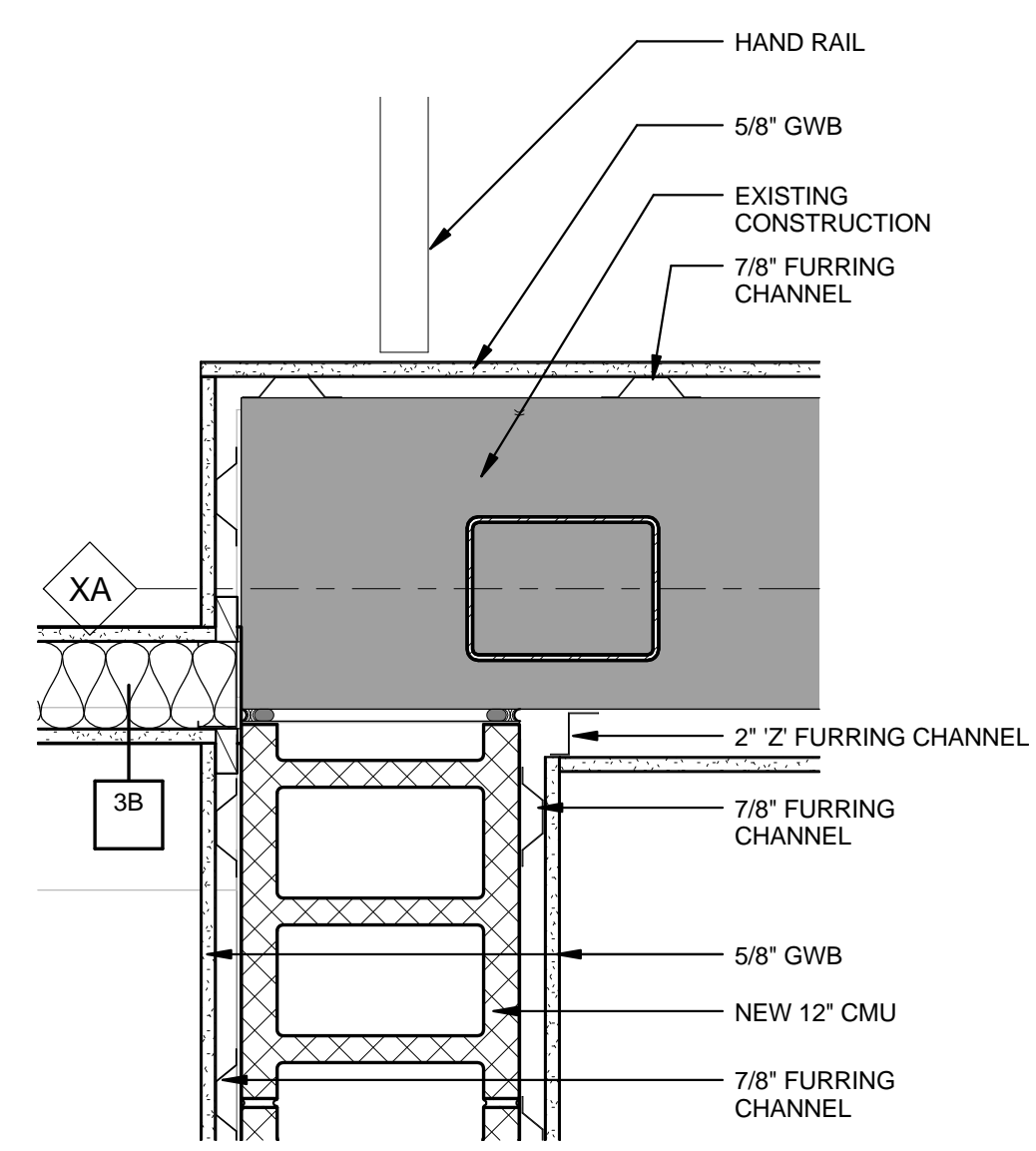
**STAIR PLAN, SECTIONS, DETAILS**

PROJECT NUMBER: 19401.01
   
 DESIGNED BY: FC
   
 DRAWN BY: EKM
   
 CHECKED BY: Checker
   
 DATE: July-Aug. 2016
   
 SCALE: 1 1/2" = 1'-0"

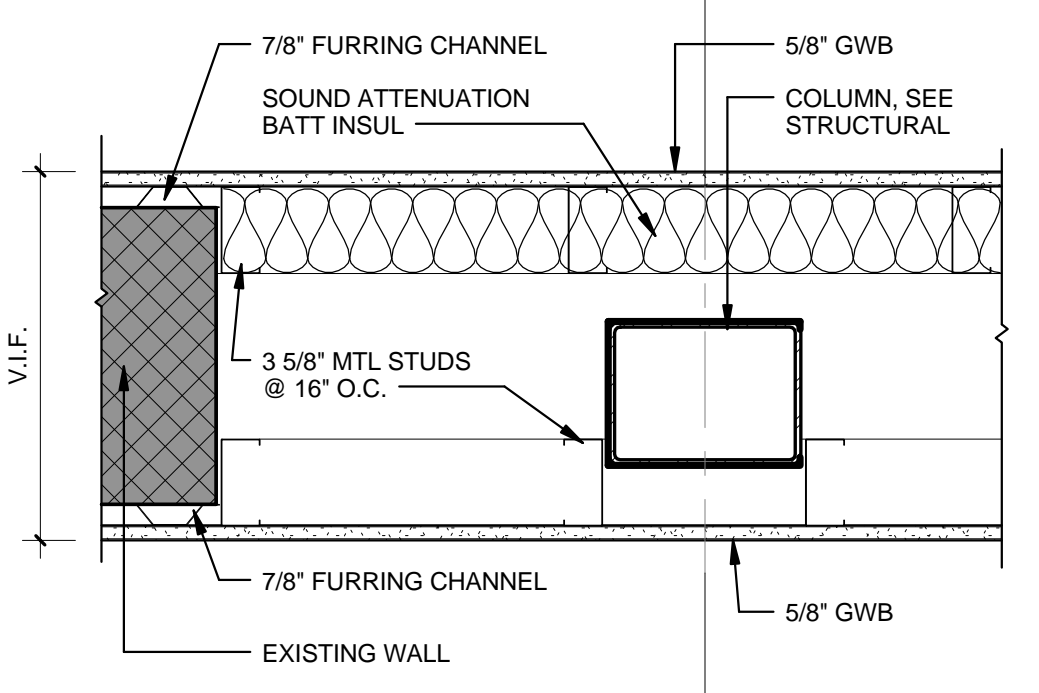
SHEET NUMBER: **A402**



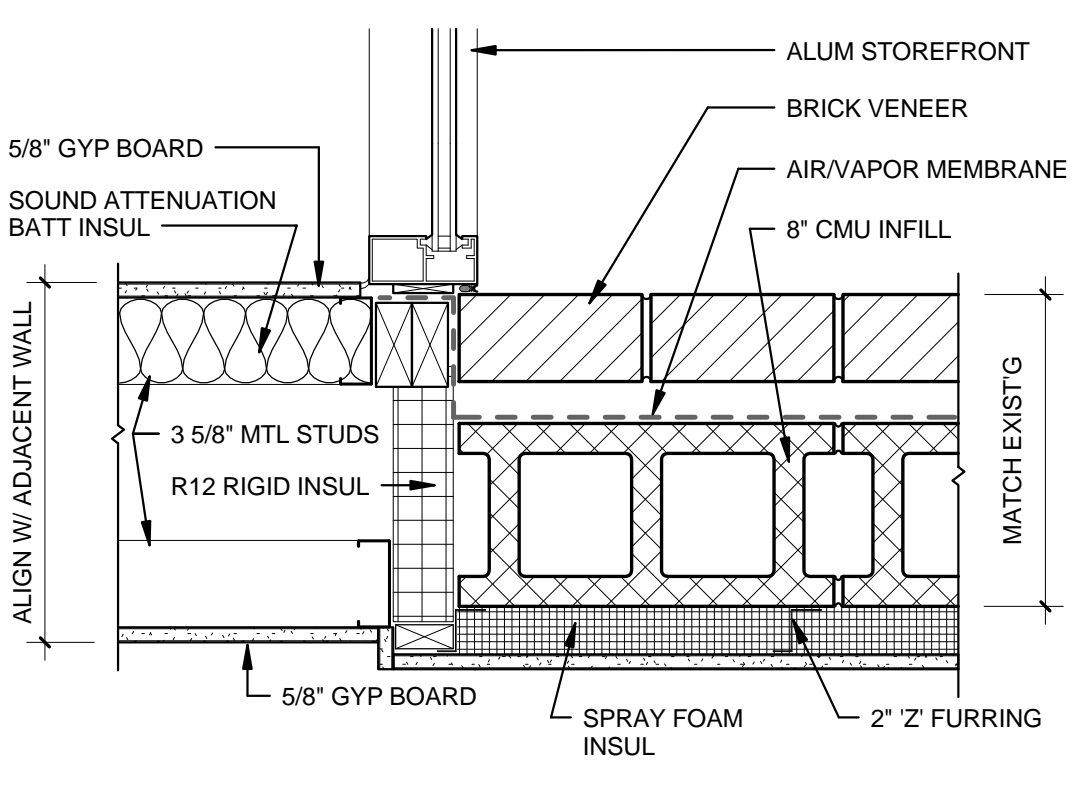
ELEC: \_\_\_\_\_  
 MECH: \_\_\_\_\_  
 FIRE: \_\_\_\_\_  
 PLUM: \_\_\_\_\_  
 STRUC: \_\_\_\_\_  
 ARCH: \_\_\_\_\_  
 REVIEWED BY: CIVIL: \_\_\_\_\_  
 PROJECT FILE: C:\Users\jha\Documents\2016\Waltham Police Station\ARCHITECTURE\1614-0000.rvt  
 PLOTTED: 7/10/2016 9:03:34 AM



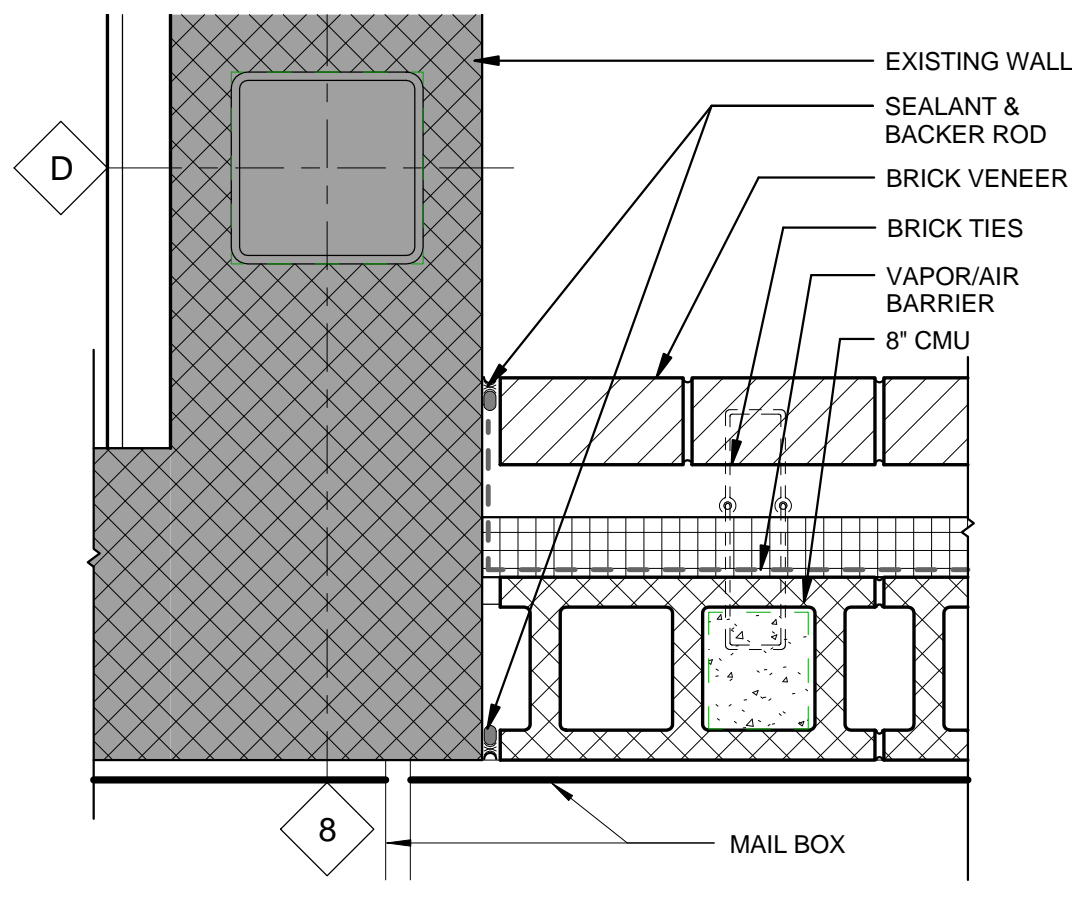
**1 COLUMN DETAIL AT STAIR**  
SCALE: 1 1/2" = 1'-0"



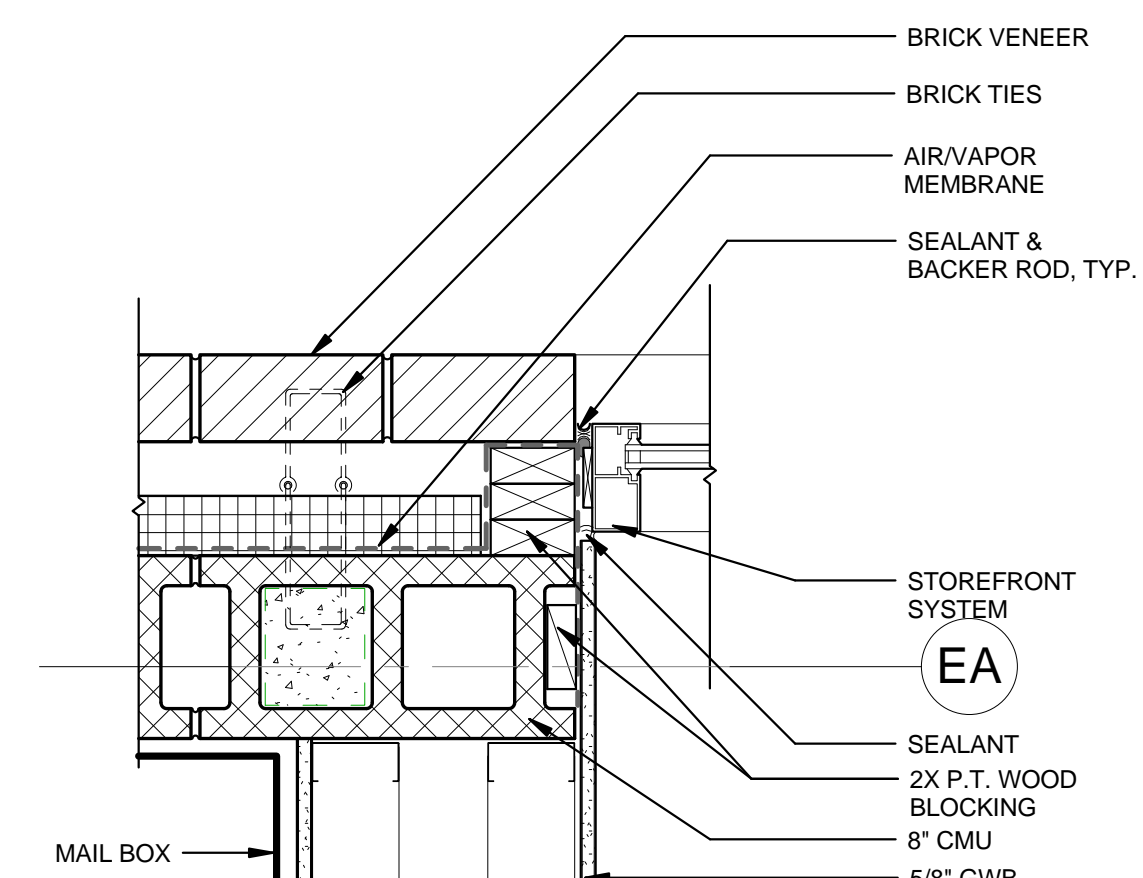
**2 COLUMN DETAIL @ STAIR WALL**  
SCALE: 1 1/2" = 1'-0"



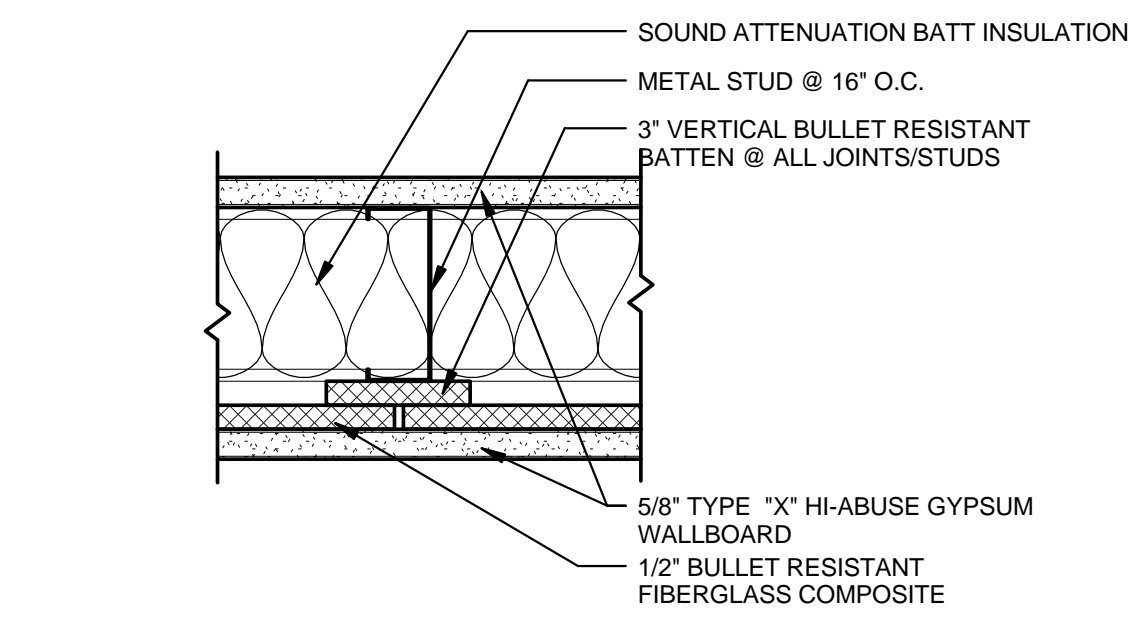
**3 PLAN DETAIL @ STAFF ENTRANCE**  
SCALE: 1 1/2" = 1'-0"



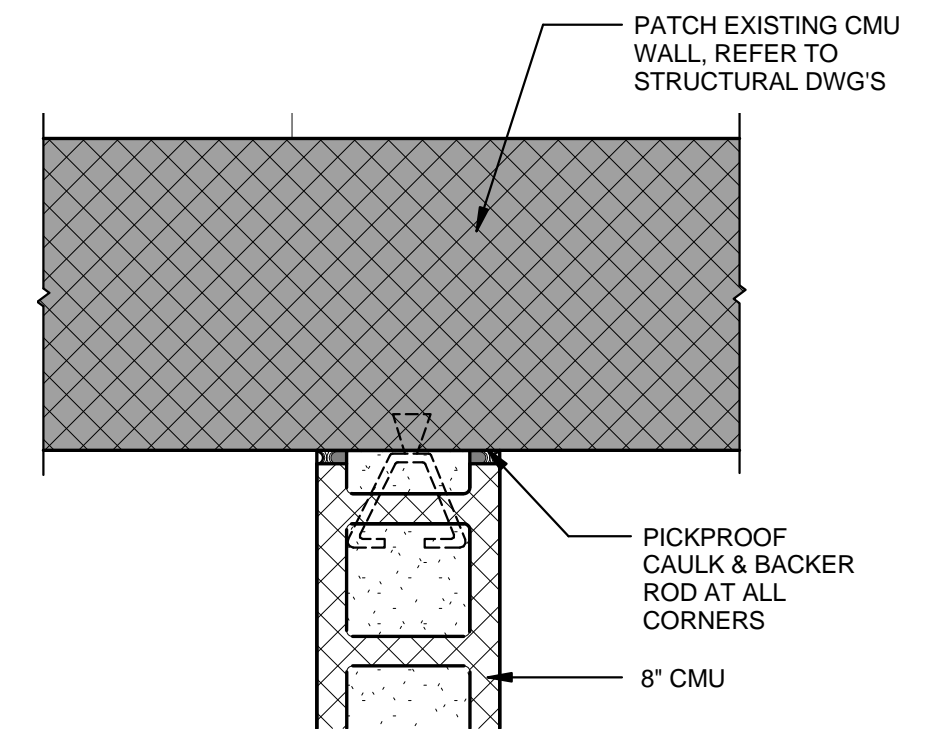
**4 STAFF ENTRY WALL**  
SCALE: 1 1/2" = 1'-0"



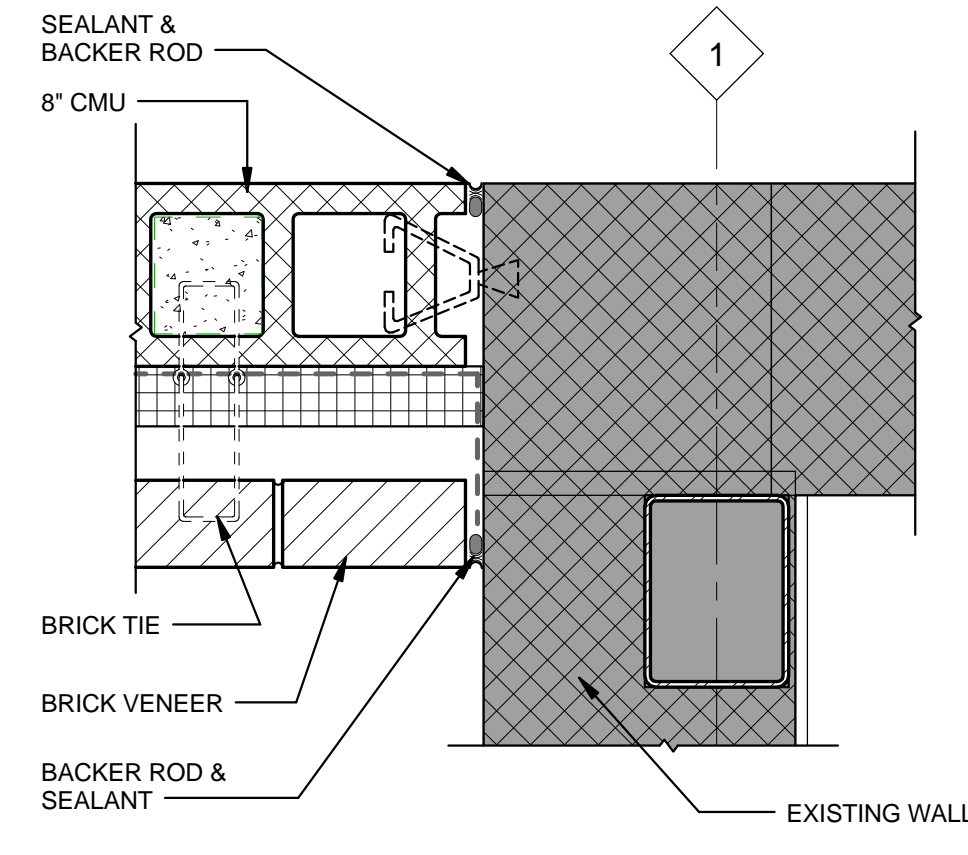
**5 STAFF ENTRY PLAN DETAIL**  
SCALE: 1 1/2" = 1'-0"



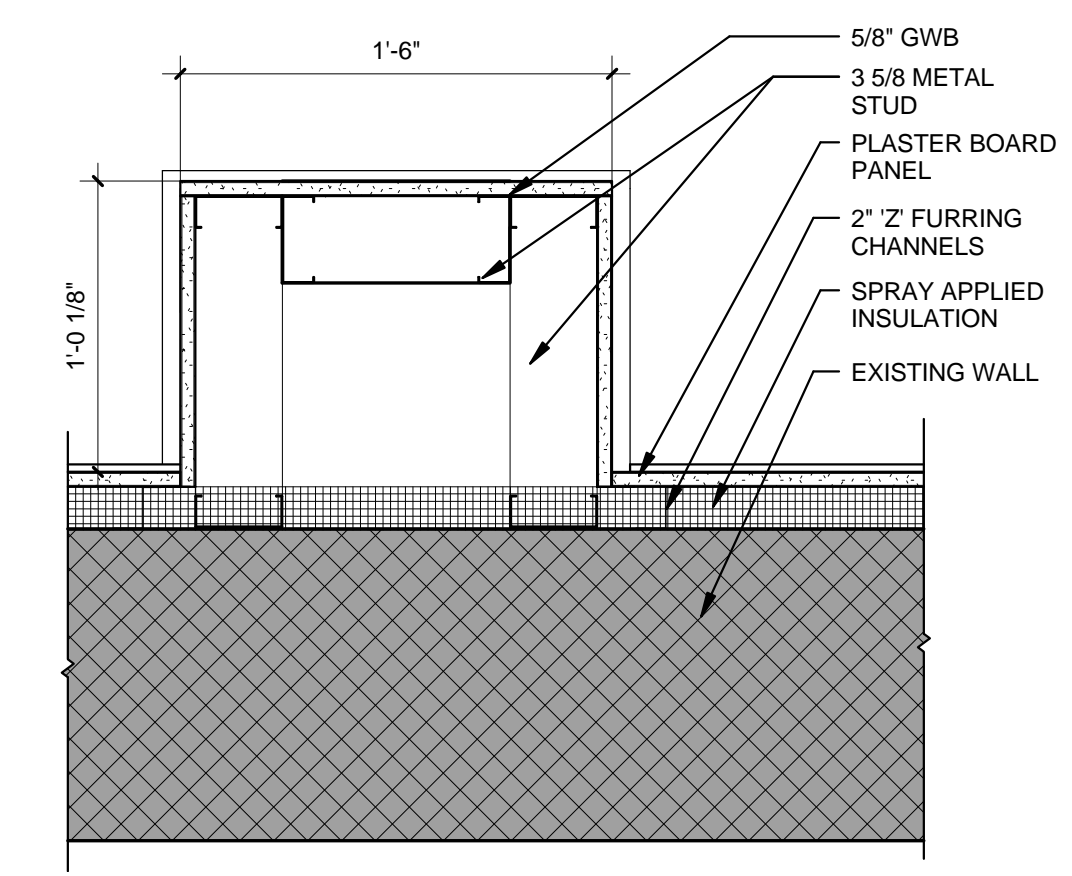
**6 WALL TYPE 3Bx PLAN DETAIL**  
SCALE: 3" = 1'-0"



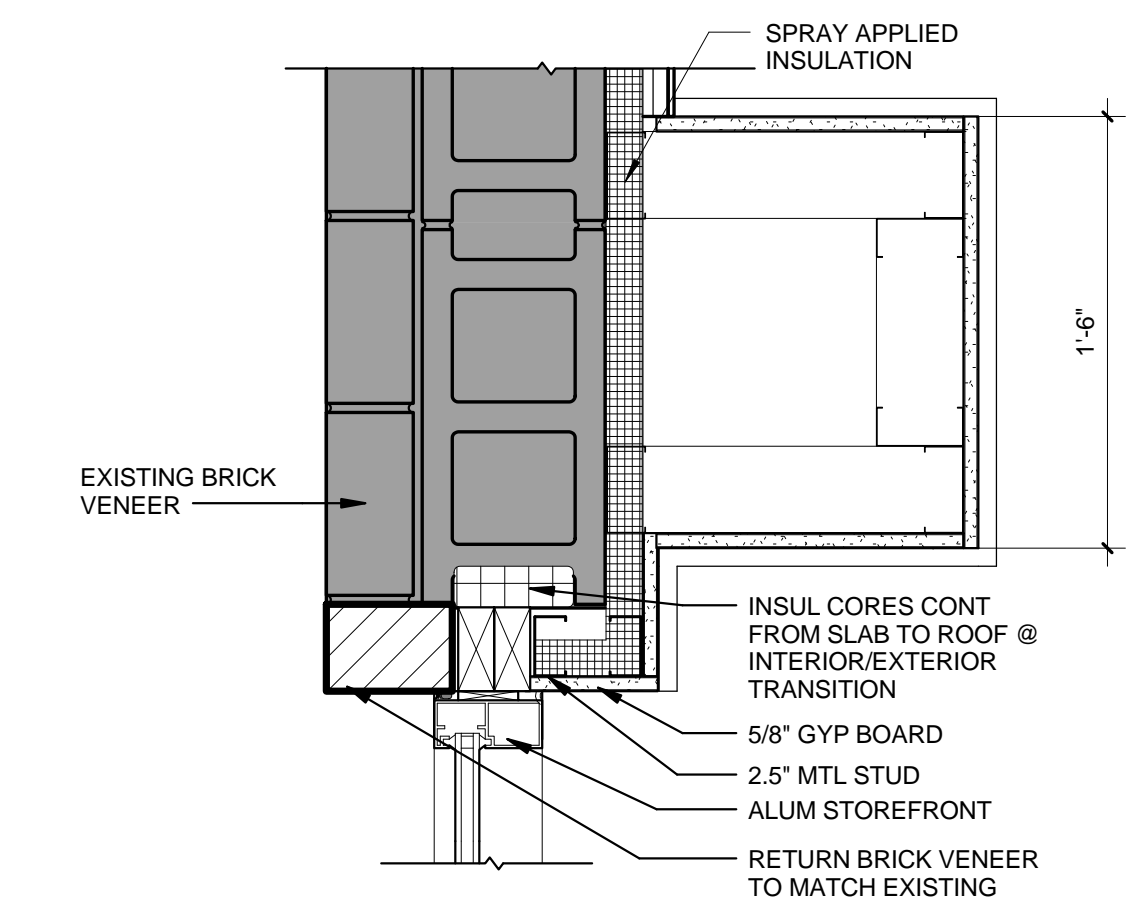
**7 PLAN DETAIL AT CELL'S CMU**  
SCALE: 1 1/2" = 1'-0"



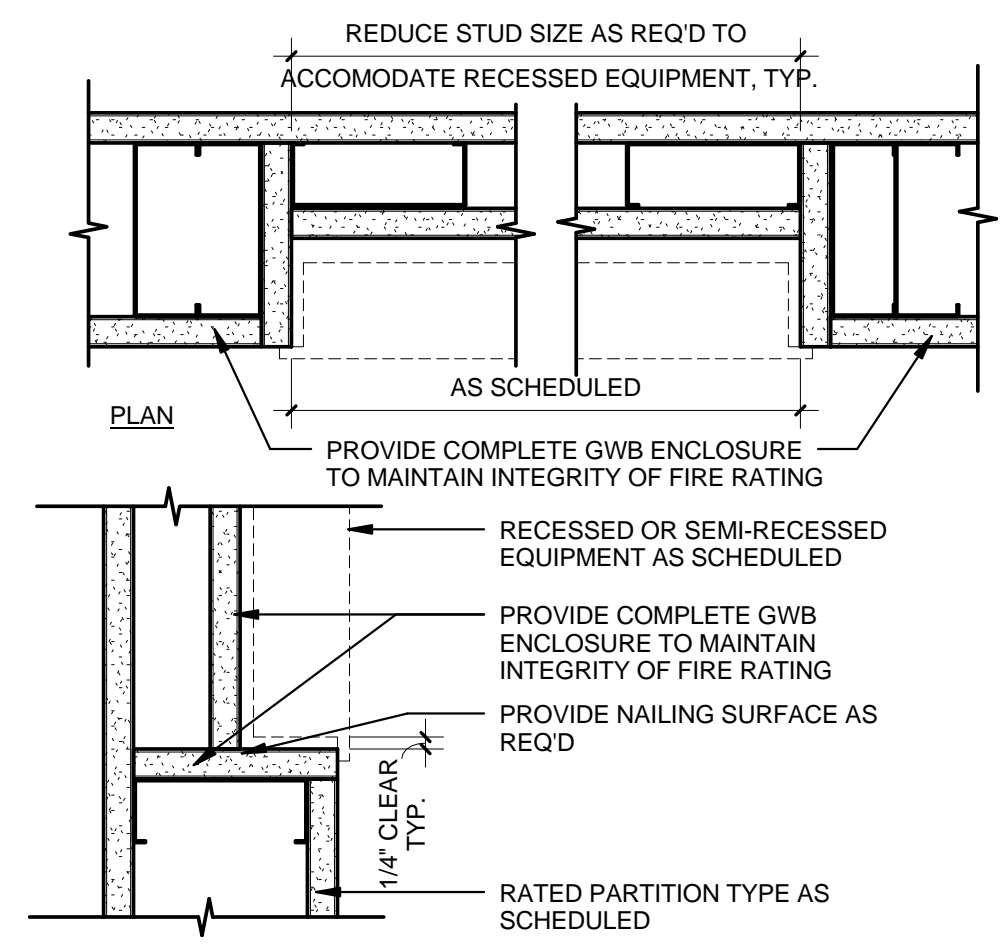
**8 CELL WALL CMU CORNER1**  
SCALE: 1 1/2" = 1'-0"



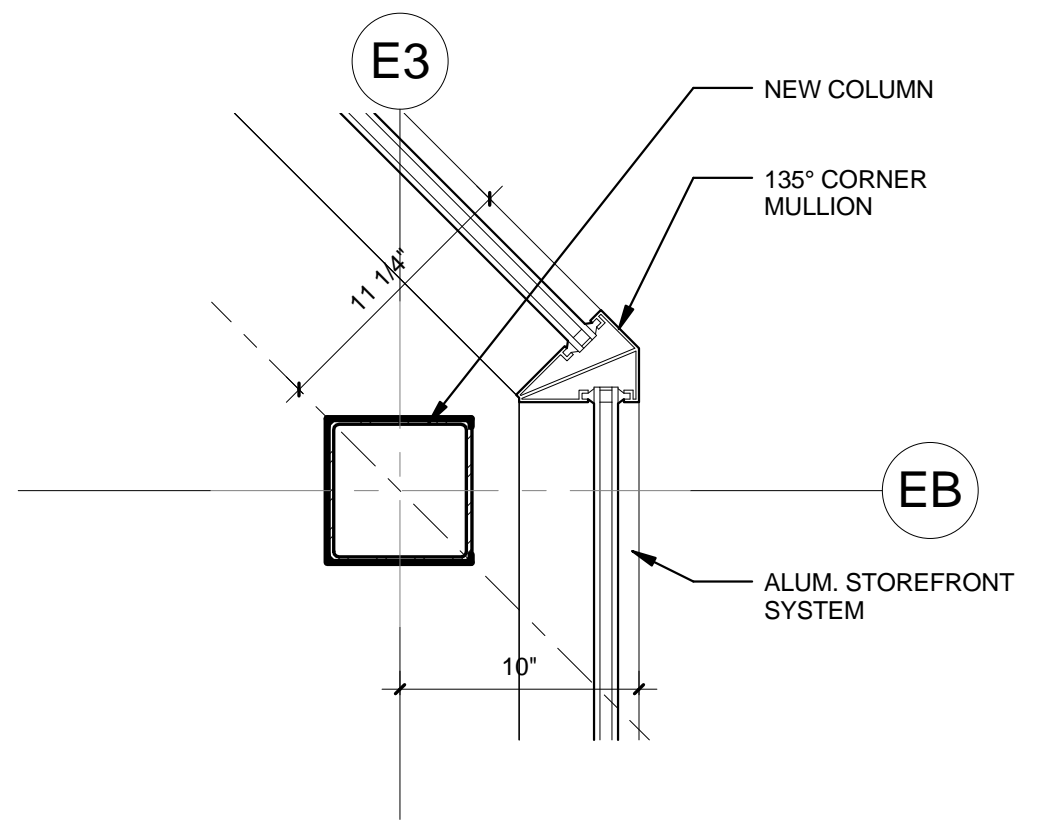
**9 CORRIDOR PILASTER PLAN DETAIL**  
SCALE: 1 1/2" = 1'-0"



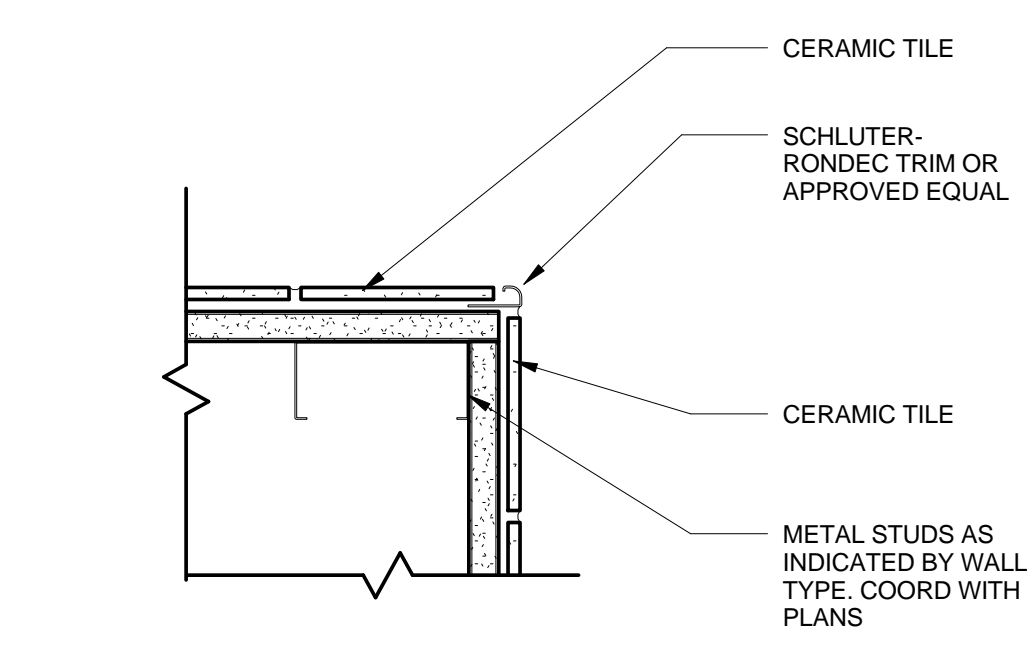
**10 SECONDARY ENTRANCE JAMB**  
SCALE: 1 1/2" = 1'-0"



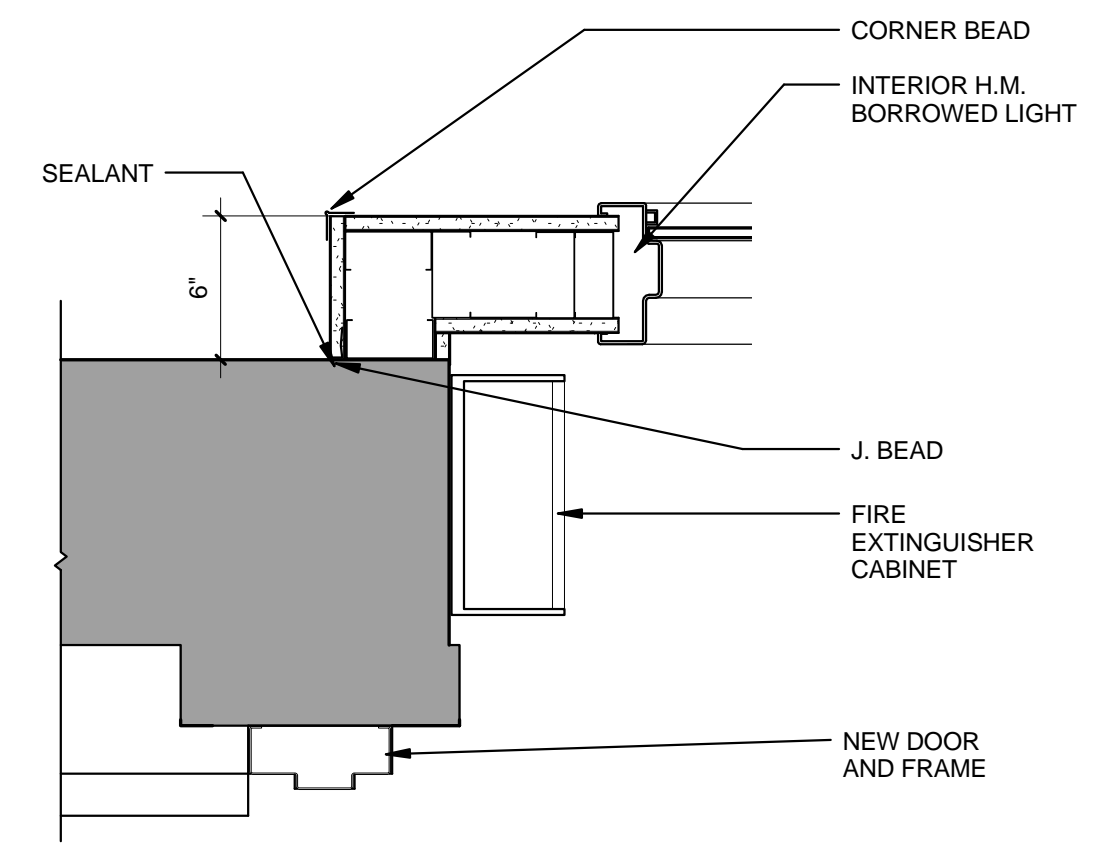
**11 DETAIL @ RECESSED EQPT. @ 1HR RATED WALL**  
SCALE: 3" = 1'-0"



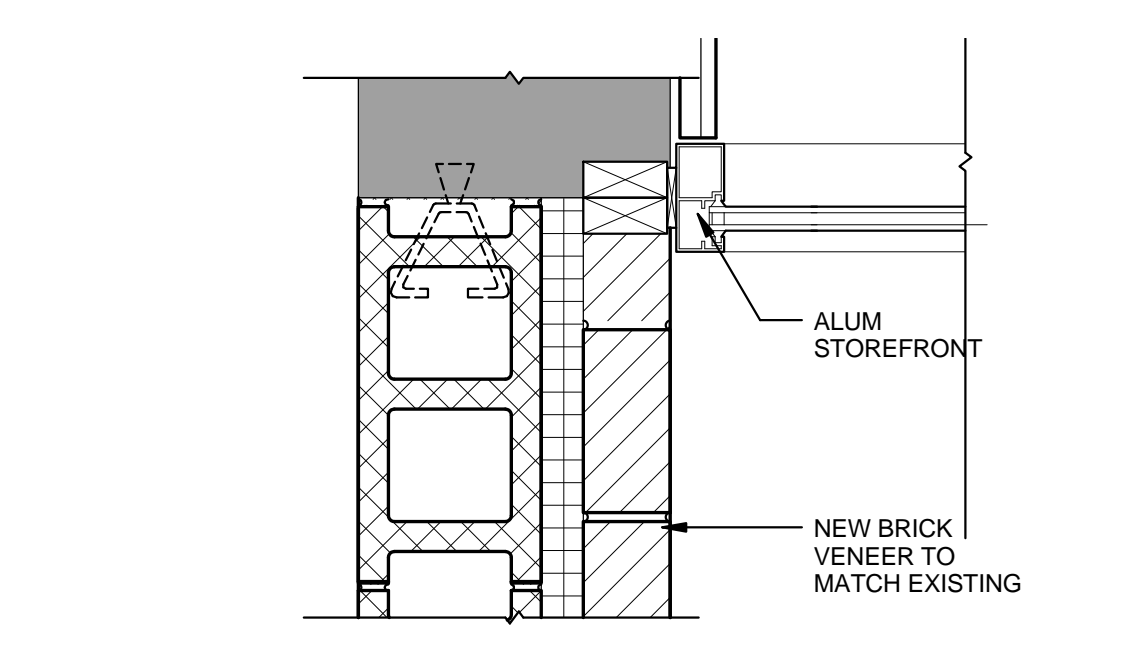
**12 COLUMN STAFF ENTRANCE**  
SCALE: 1 1/2" = 1'-0"



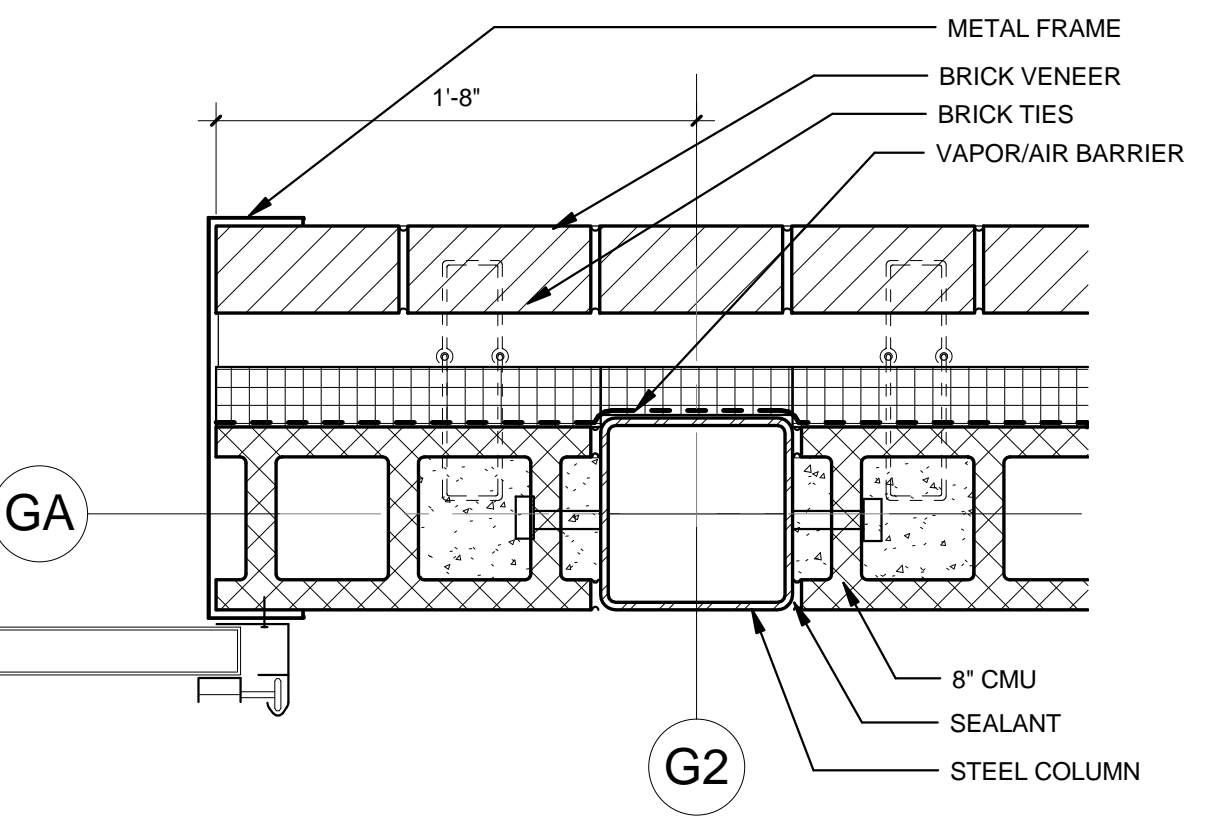
**13 TYPICAL TILE OUTSIDE CORNER**  
SCALE: 3" = 1'-0"



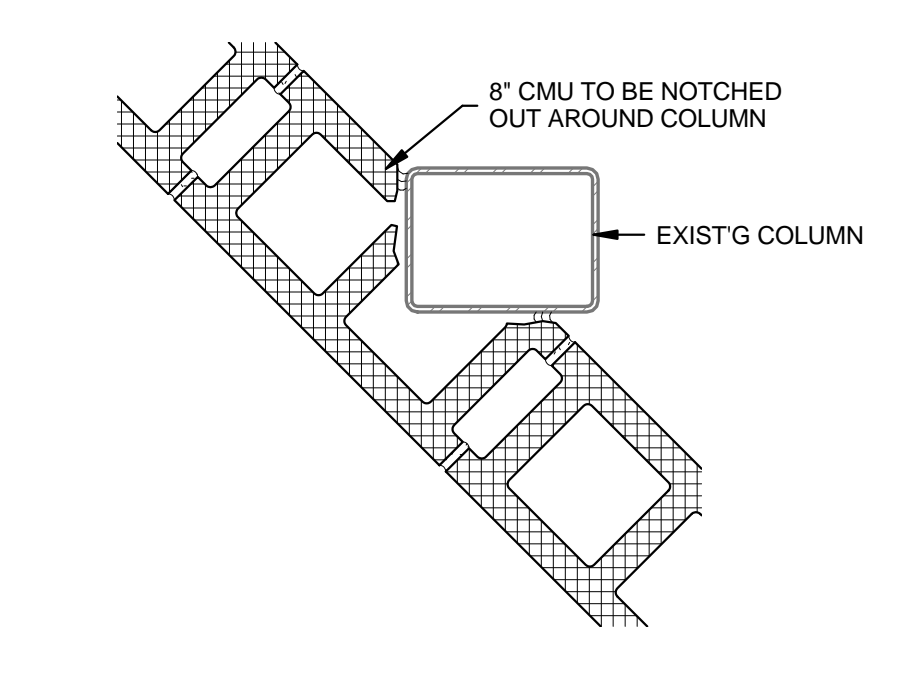
**14 STOREFRONT JAMB AT FITNESS**  
SCALE: 1 1/2" = 1'-0"



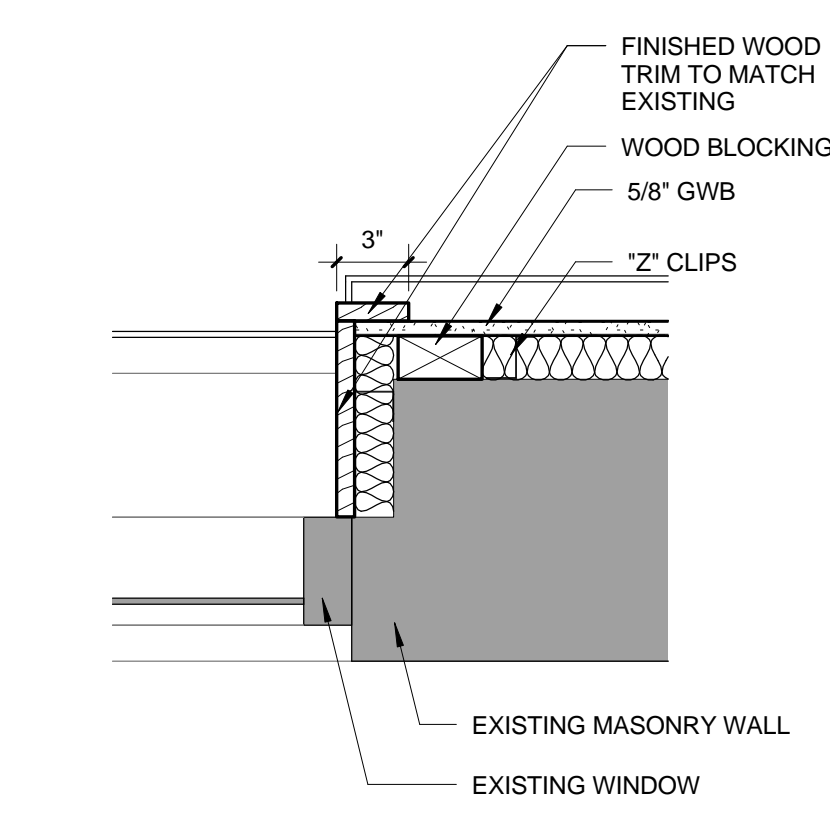
**15 PLAN DETAIL AT MAIN ENTRANCE STOREFRONT**  
SCALE: 1 1/2" = 1'-0"



**16 COLUMN DETAIL AT SALLYPORT**  
SCALE: 1 1/2" = 1'-0"



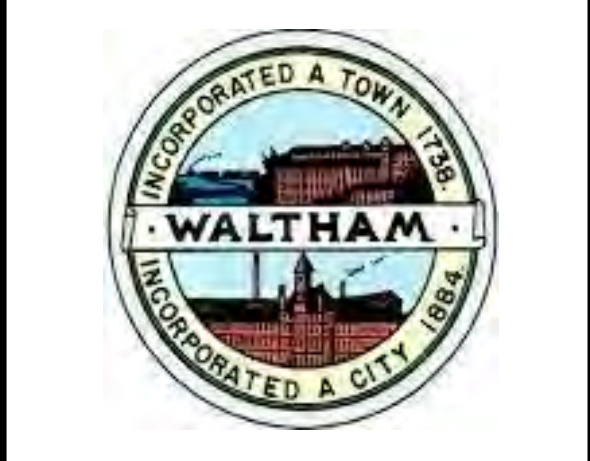
**17 BOOKING CMU DETAIL**  
SCALE: 1 1/2" = 1'-0"



**18 FURRING DETAIL AT EXISTING WINDOWS**  
SCALE: 1 1/2" = 1'-0"

REVISIONS		
Number	Description	Date

ISSUED FOR BID

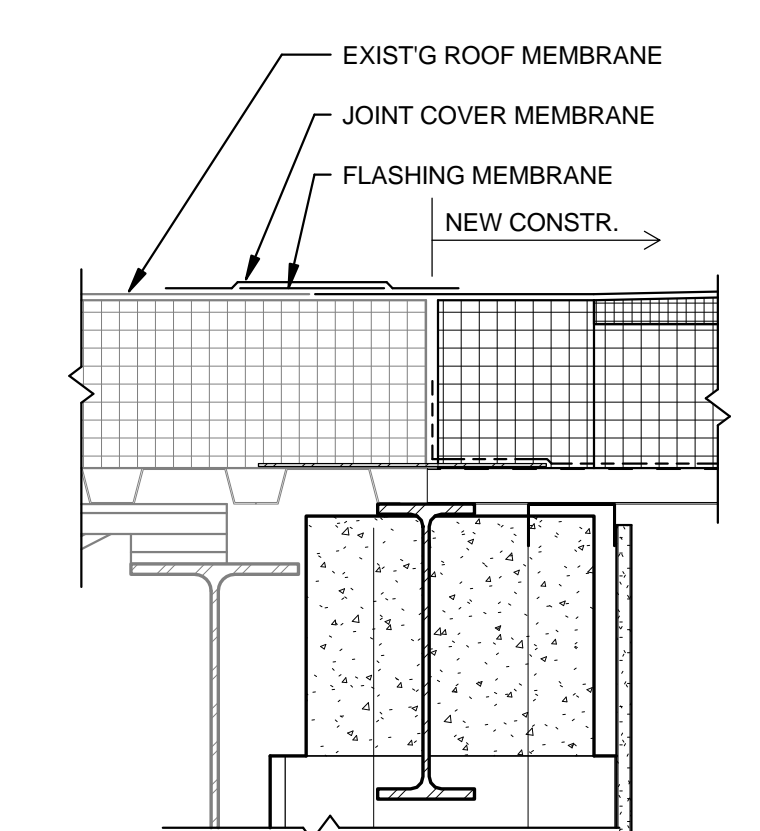


**WALTHAM POLICE STATION RENOVATION**  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

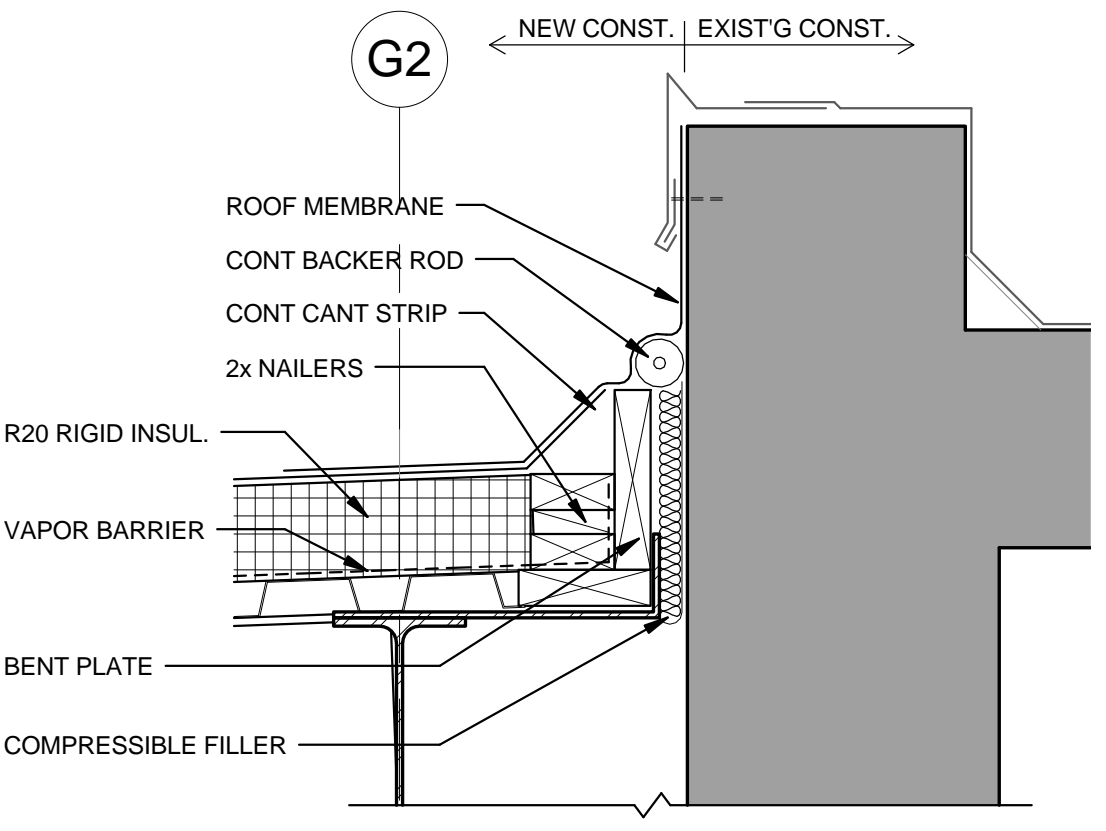
**PLAN DETAILS**  
 PROJECT NUMBER: 19401.01  
 DESIGNED BY: FC  
 DRAWN BY: LR, JR  
 CHECKED BY: FC  
 DATE:  
 SCALE: 2016 As  
 SHEET NUMBER:



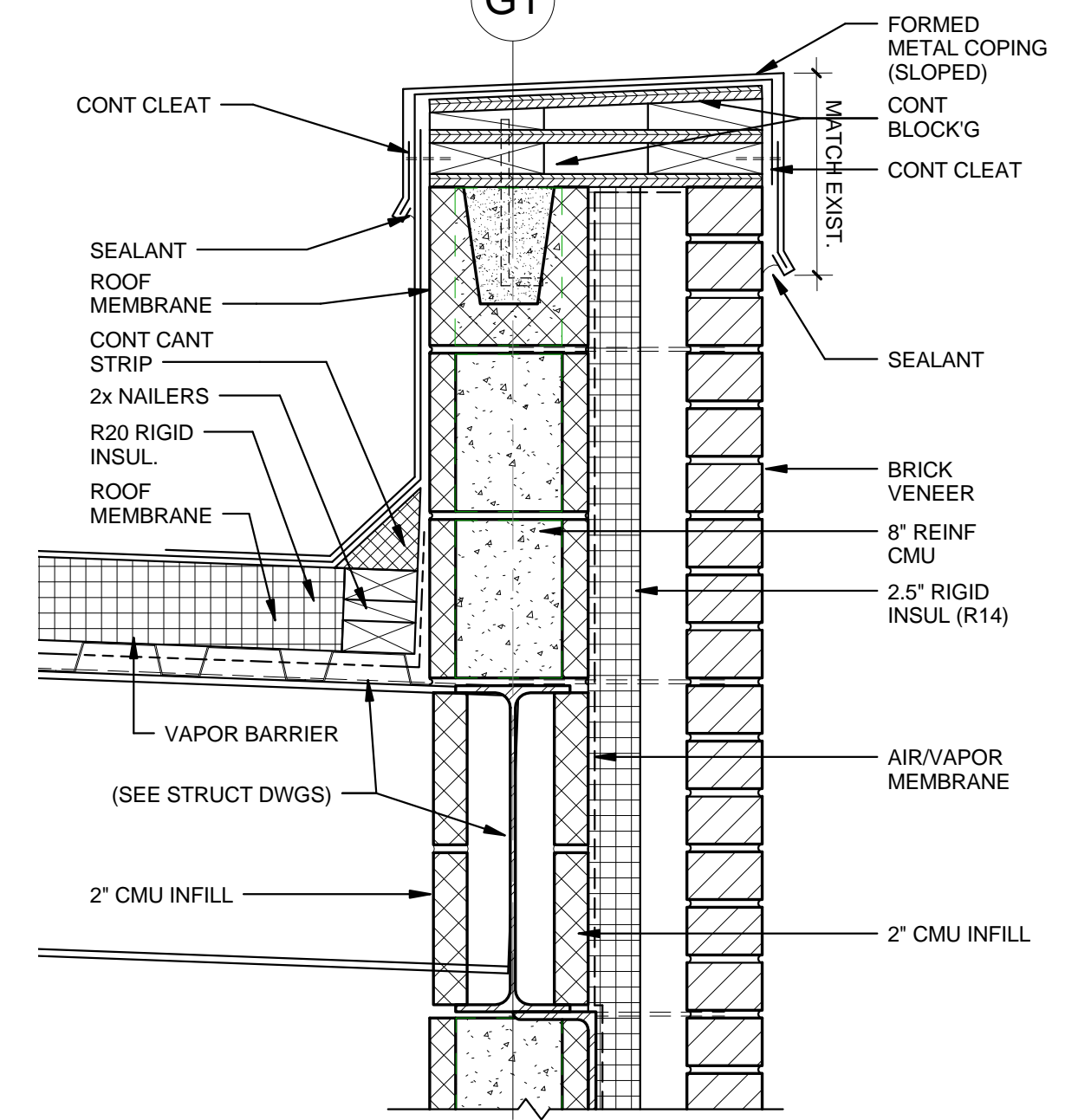
ARCH: \_\_\_\_\_ MECH: \_\_\_\_\_ FIRE: \_\_\_\_\_ PLUM: \_\_\_\_\_ STRUC: \_\_\_\_\_ ELEC: \_\_\_\_\_  
 REVIEWED BY: CIVIL: \_\_\_\_\_ ARCH: \_\_\_\_\_ MECH: \_\_\_\_\_ FIRE: \_\_\_\_\_ PLUM: \_\_\_\_\_ STRUC: \_\_\_\_\_ ELEC: \_\_\_\_\_  
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 PLOTTED: 7/14/2016 11:22:25 PM



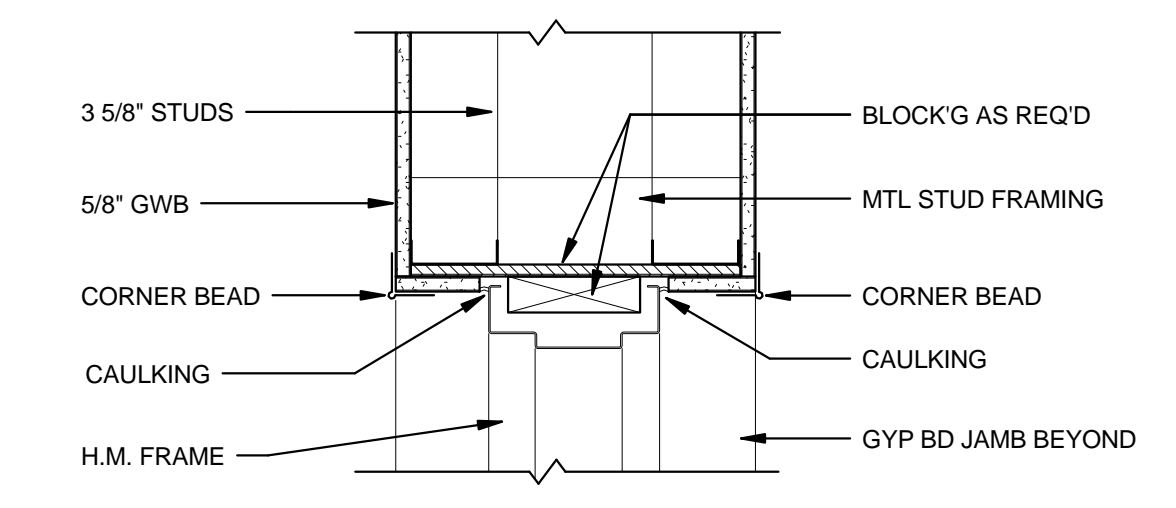
**1** **DETAIL @ NEW / EXISTING ROOF**  
SCALE: 1 1/2" = 1'-0"



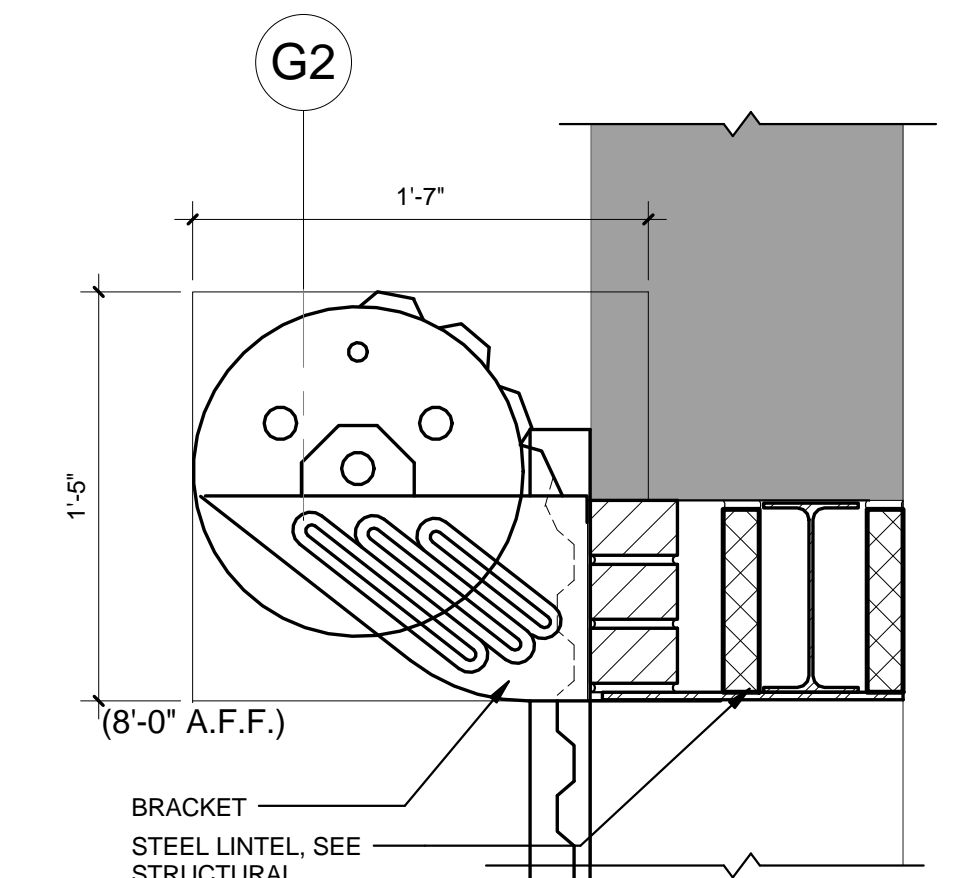
**2** **DETAIL @ EXIST'G WALL**  
SCALE: 1 1/2" = 1'-0"



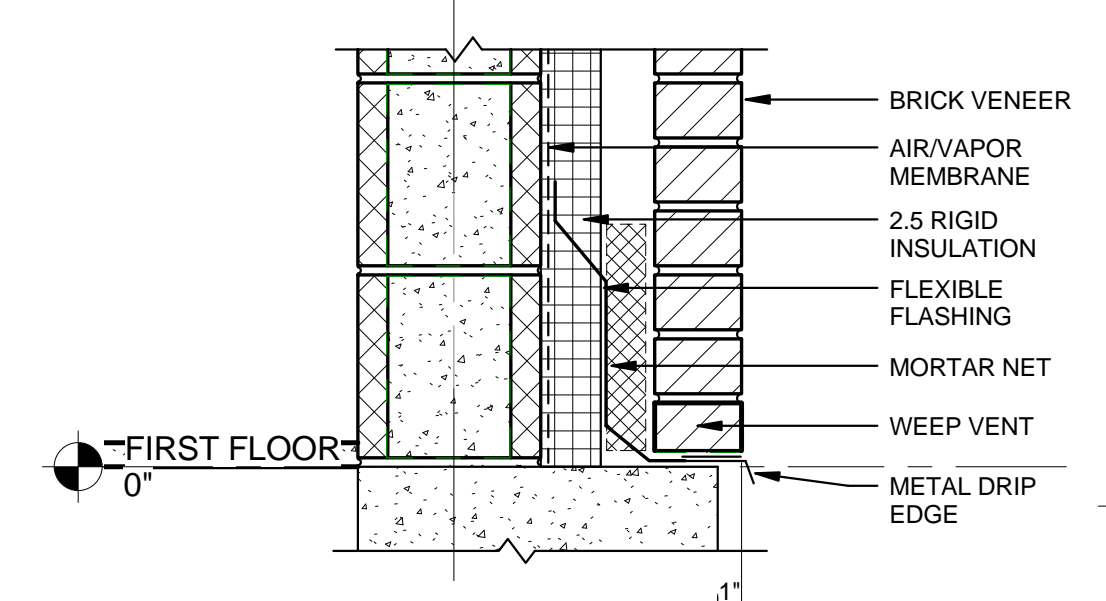
**3** **DETAIL @ HIGH PARAPET**  
SCALE: 1 1/2" = 1'-0"



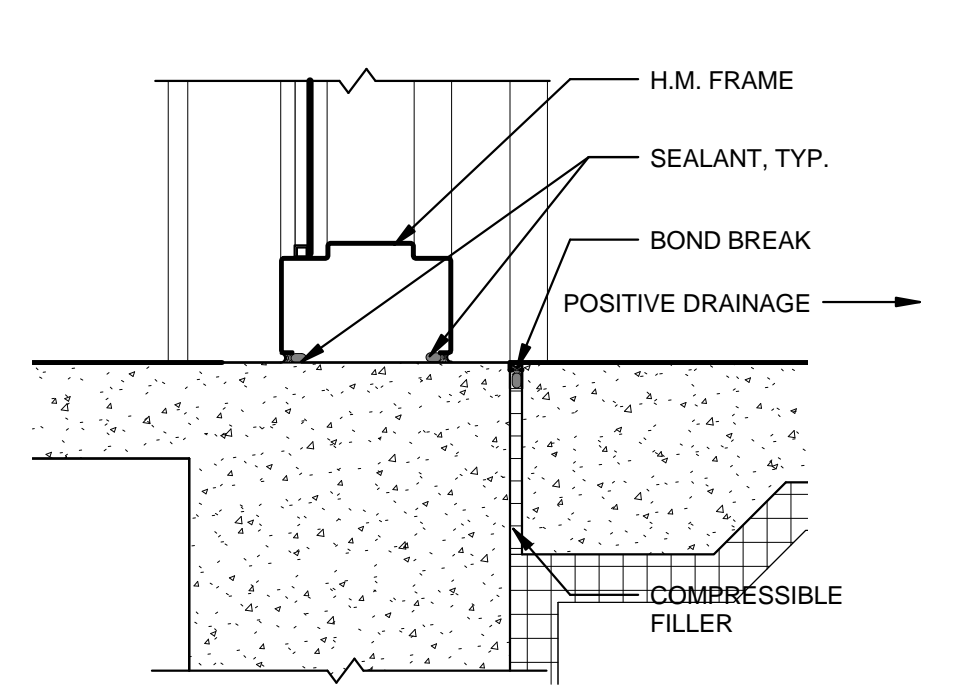
**4** **H.M. HEAD @ STAFF ENTRY SOUTH WALL**  
SCALE: 1 1/2" = 1'-0"



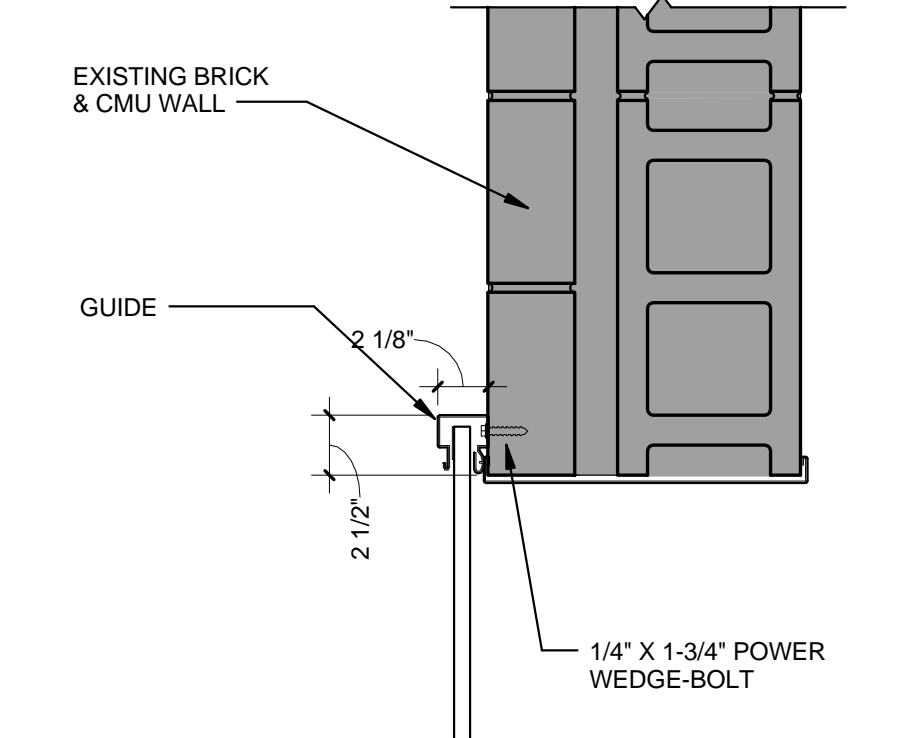
**5** **DETAIL @ ROLL-UP DOOR**  
SCALE: 1 1/2" = 1'-0"



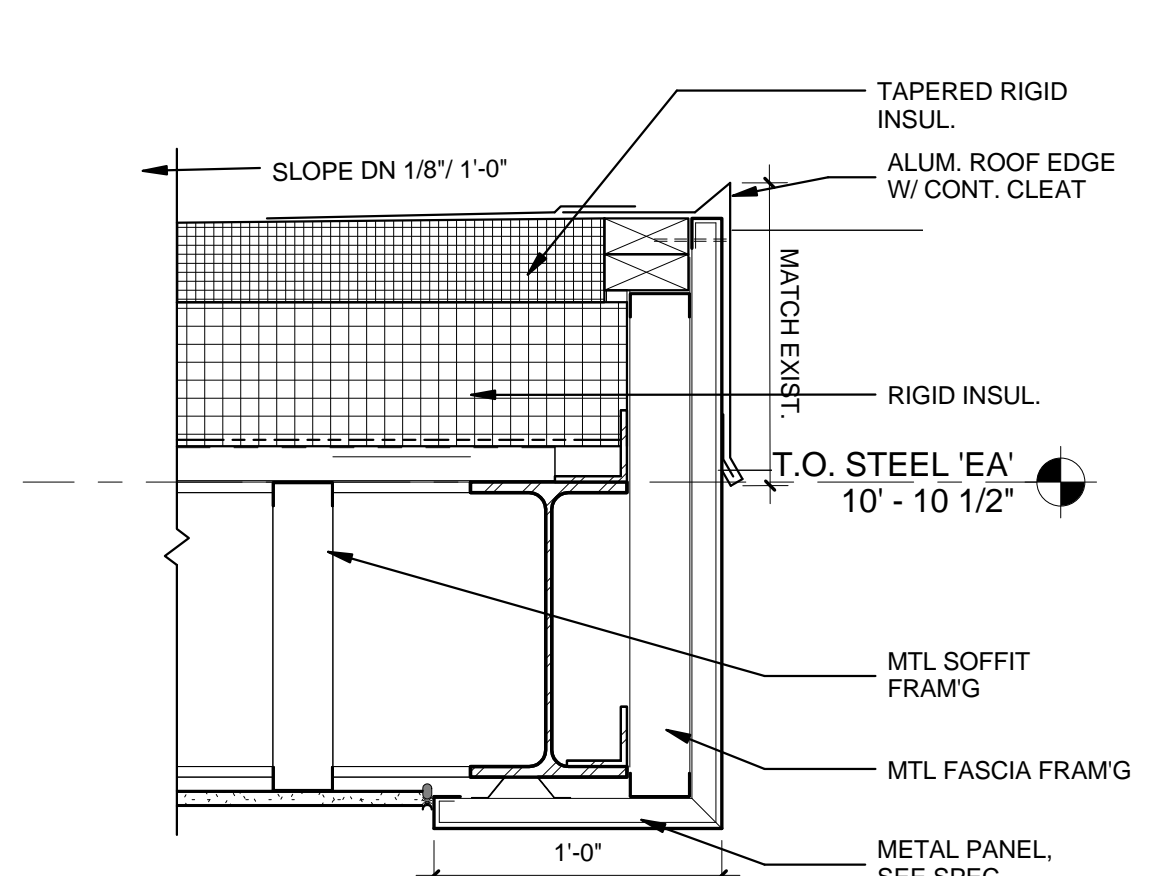
**6** **SALLYPORT WALL BASE**  
SCALE: 1 1/2" = 1'-0"



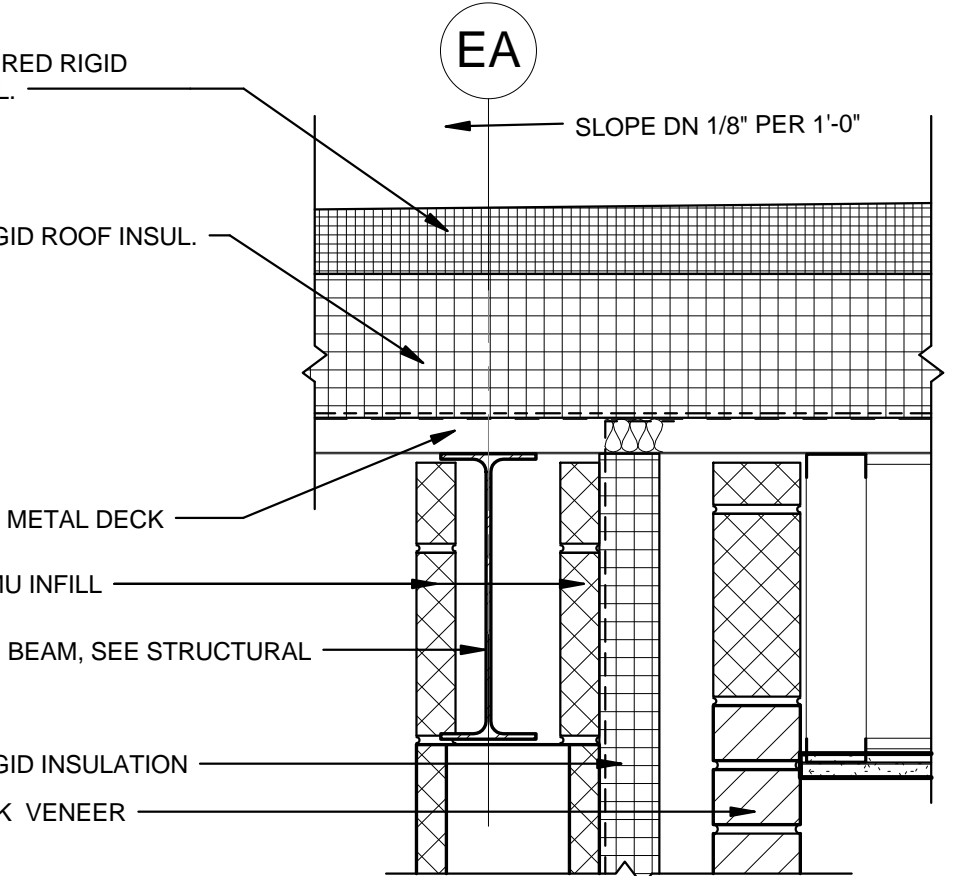
**8** **SILL DETAIL @ STAFF ENTRY SOUTH WALL**  
SCALE: 1 1/2" = 1'-0"



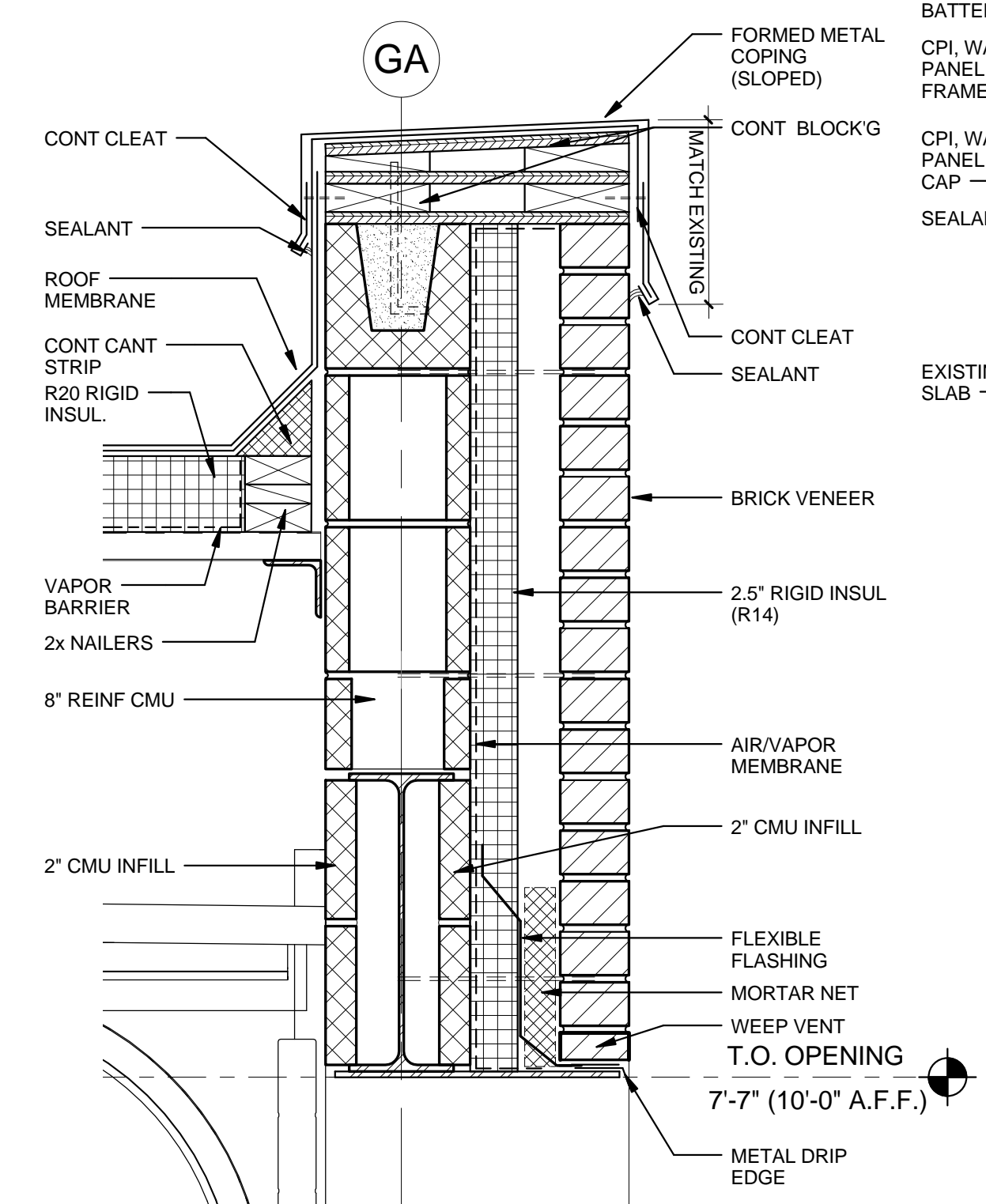
**9** **ROLL-UP DOOR JAMB @ CONCRETE/MASONRY**  
SCALE: 1 1/2" = 1'-0"



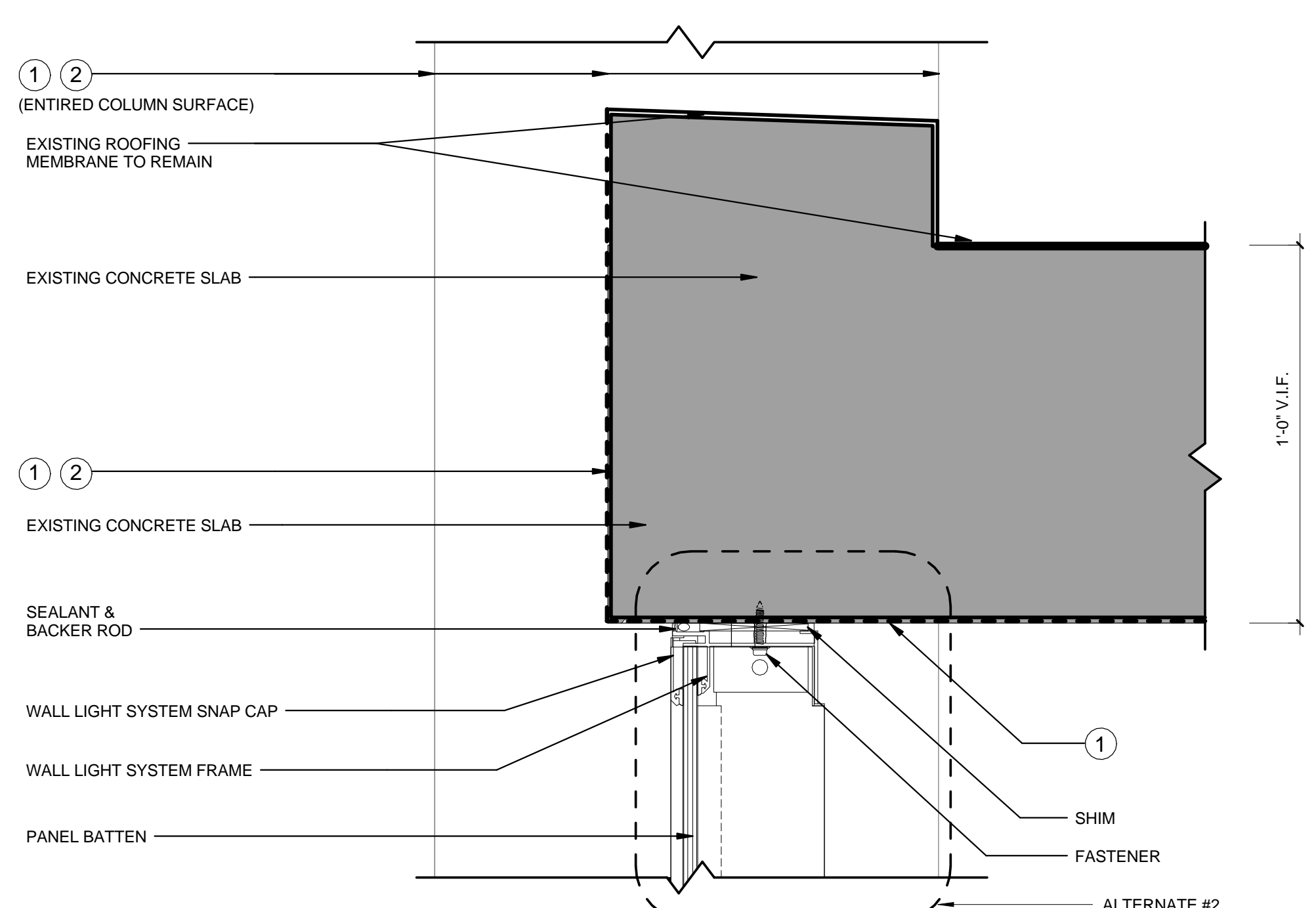
**10** **DETAIL @ CANOPY FASCIA**  
SCALE: 1 1/2" = 1'-0"



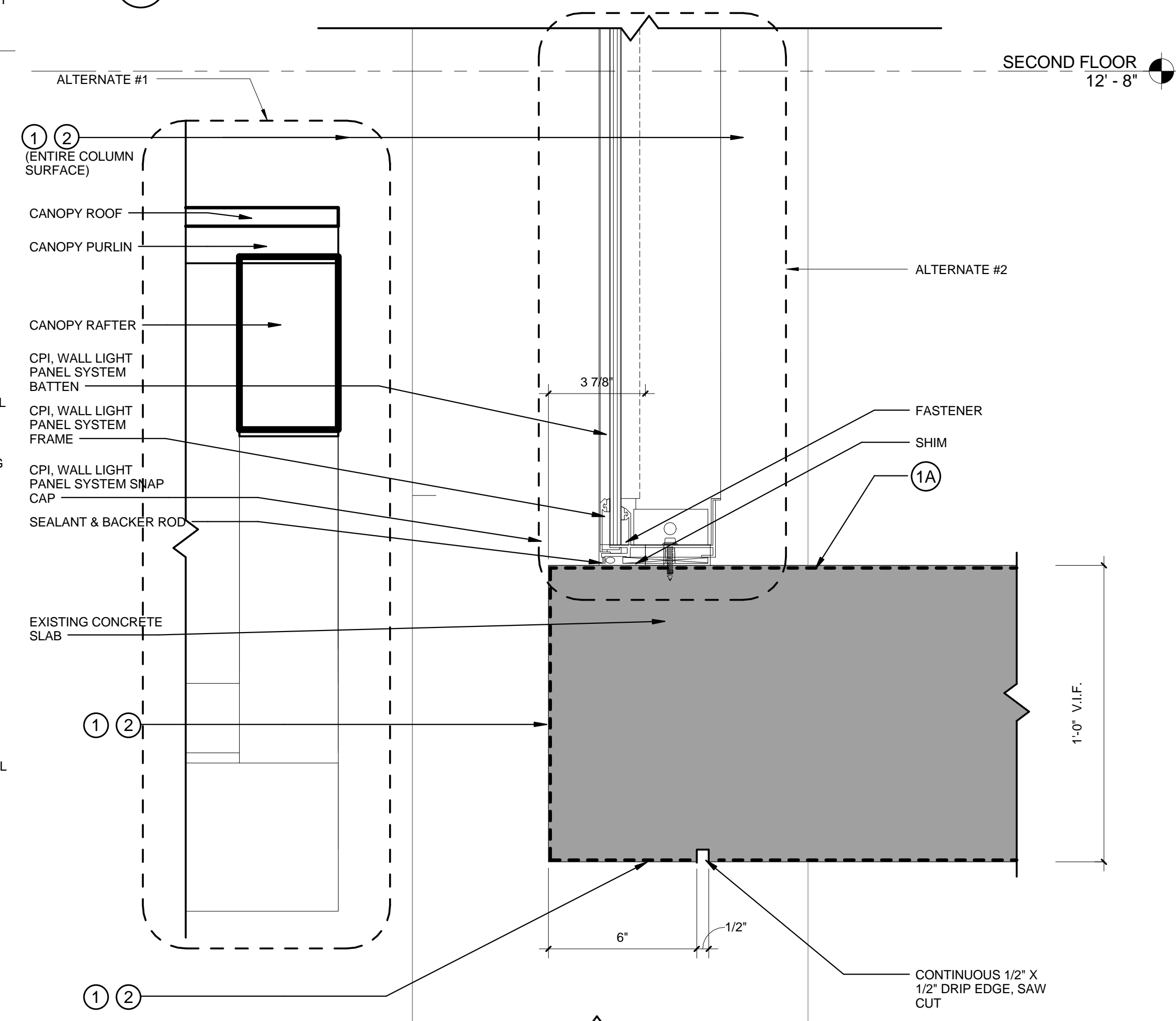
**11** **DETAIL @ STAFF ENTRANCE ROOF/CANOPY**  
SCALE: 1 1/2" = 1'-0"



**12** **SECTIONAL DOOR HEAD**  
SCALE: 1 1/2" = 1'-0"



**7** **ENTRY WALL PANEL HEAD DETAIL**  
SCALE: 3" = 1'-0"



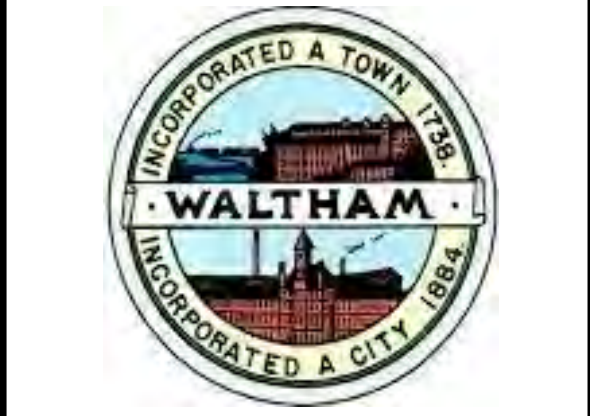
**13** **EXISTING FRONT PRECAST RESTORATION AND ENTRY WALL PANEL BASE DETAIL**  
SCALE: 3" = 1'-0"

**NOTES:**  
 ① APPLY SIKATOP 123 COATING OR EQUAL  
 ② APPLY SIKAGARD 670W OR EQUAL, COLOR TO BE SELECTED BY OWNER  
 FOR CONCRETE SPALL REPAIR DETAILS SEE STRUCTURAL DRAWING S505

**NOTES:**  
 ① APPLY SIKATOP 123 COATING OR EQUAL  
 ①A SIKALASTIC 710 / 715 WITH SIKAFLOOR FTP PRIMER  
 ② APPLY SIKAGARD 670W OR EQUAL, COLOR TO BE SELECTED BY OWNER  
 FOR CONCRETE SPALL REPAIR DETAILS SEE STRUCTURAL DRAWING S505

REVISIONS		
Number	Description	Date

**ISSUED FOR BID**



**WALTHAM POLICE STATION RENOVATION**

155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

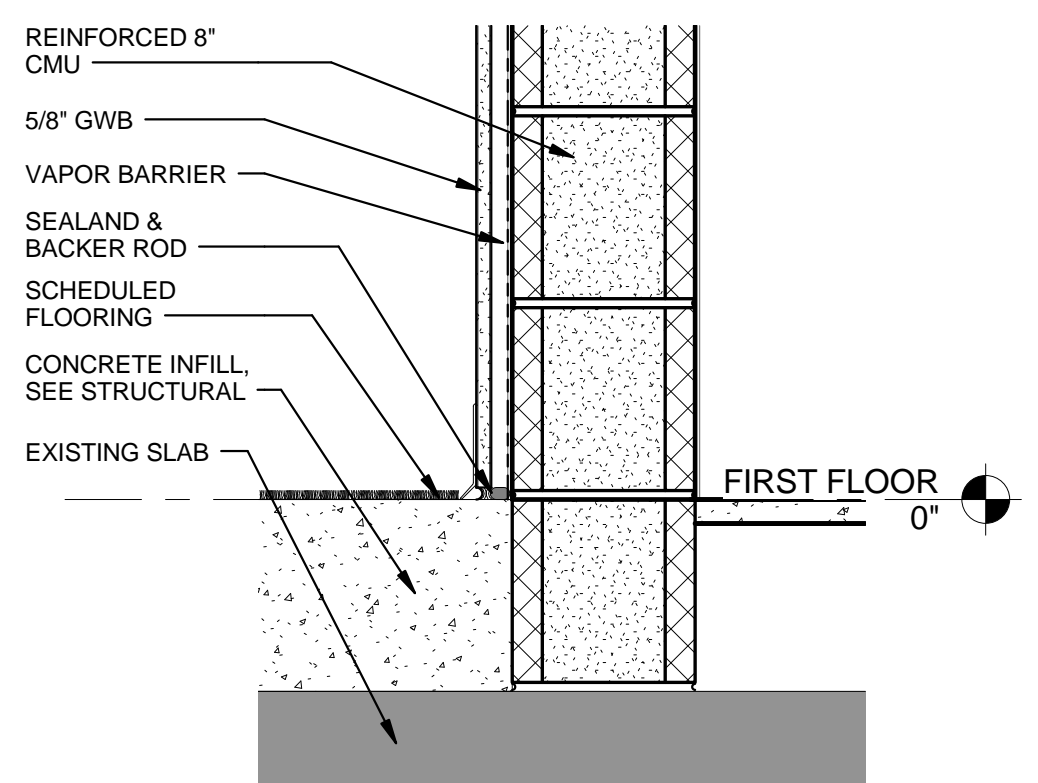
**SECTION DETAILS**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: FC  
 DRAWN BY: LR  
 CHECKED BY: FC  
 DATE:  
 SCALE: 2016 As  
 SHEET NUMBER: 57 OF 157

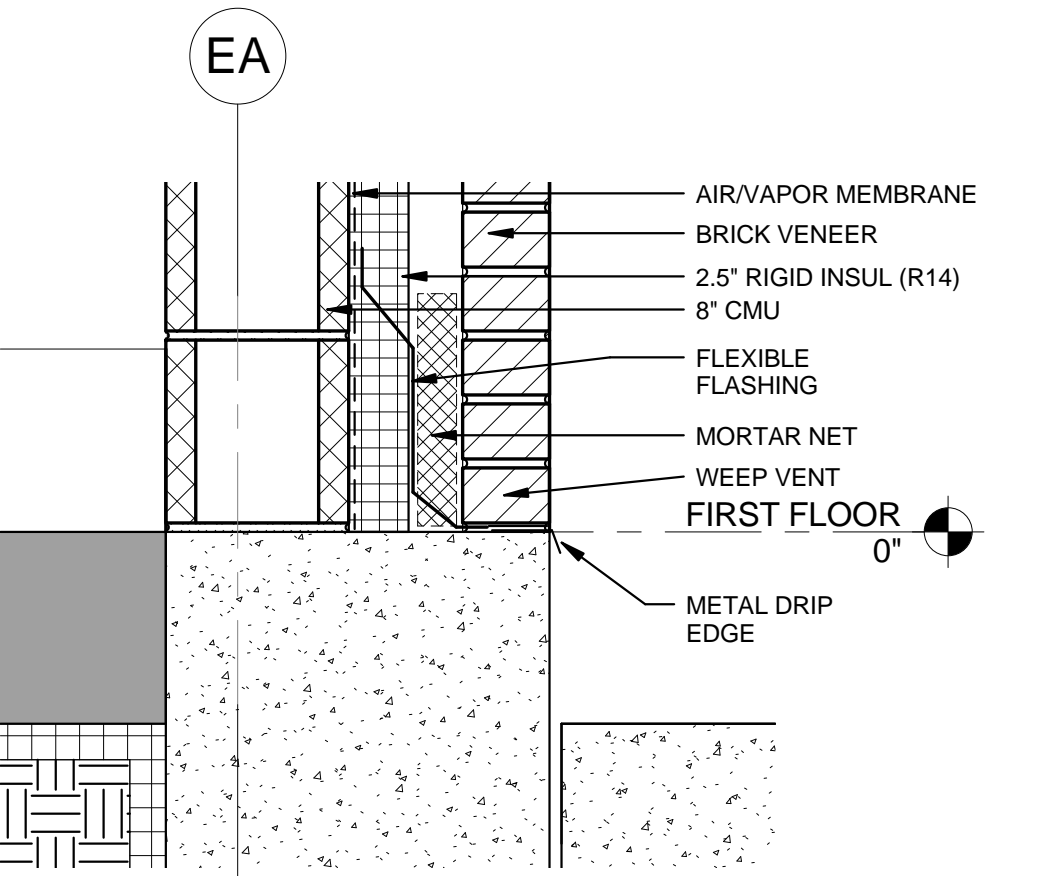
**A531**



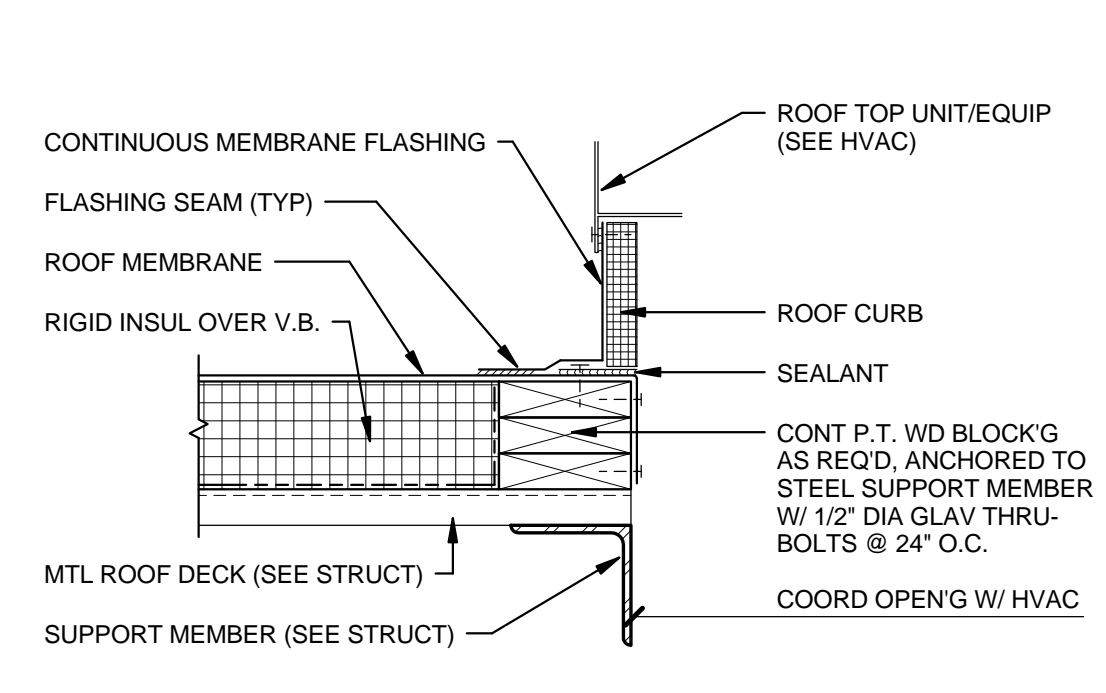
ELEC: \_\_\_\_\_ MECH: \_\_\_\_\_ FIRE: \_\_\_\_\_ PLUM: \_\_\_\_\_ STRUC: \_\_\_\_\_ ARCH: \_\_\_\_\_ CIVIL: \_\_\_\_\_  
 REVIEWED BY: \_\_\_\_\_ PLOTTED: 7/1/2016 10:24:47 AM PROJECT FILE: C:\Users\m.dobson\Documents\19401-Waltham Police Station-ARCHITECTURE\19401-01.dwg



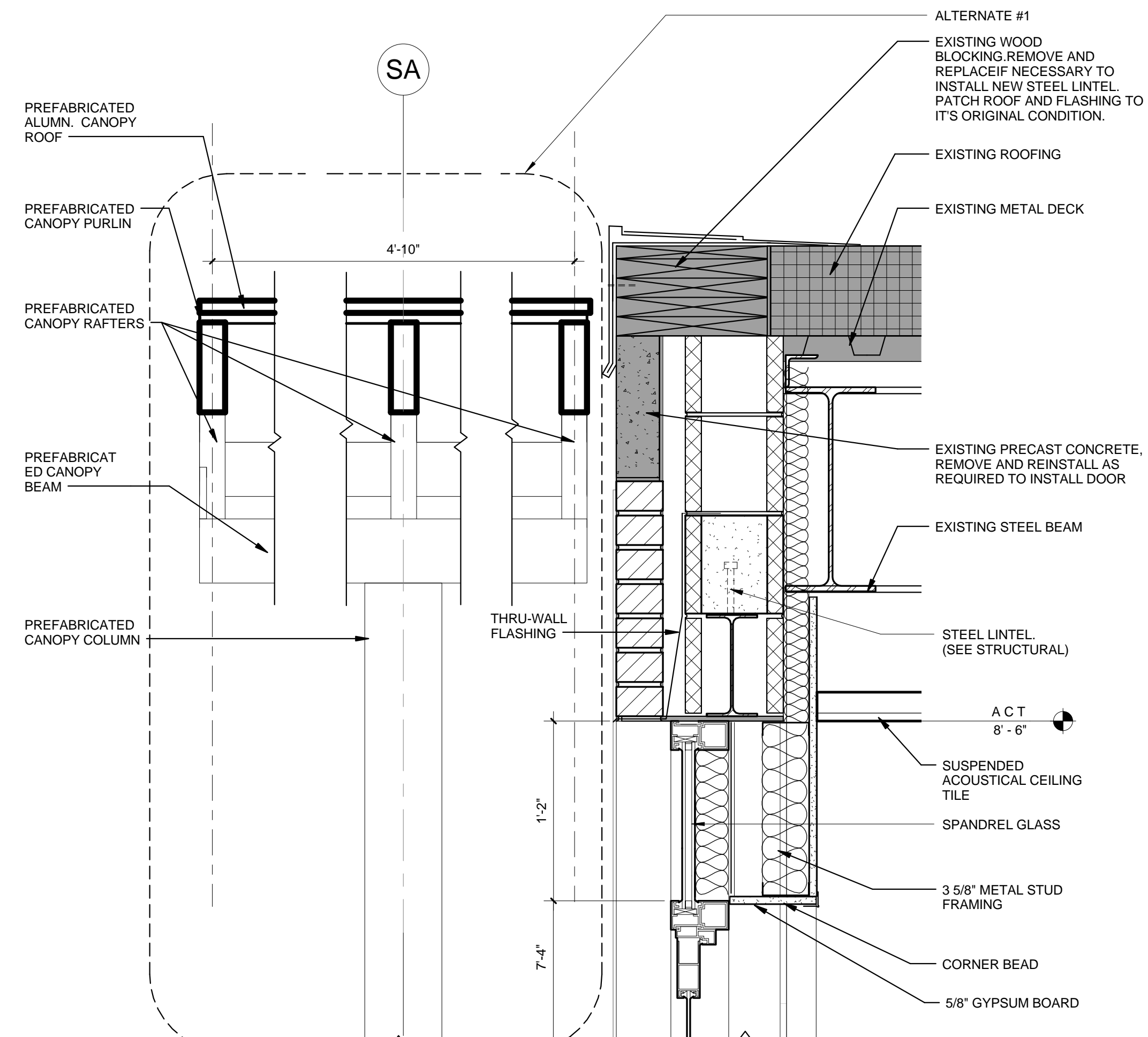
**1 VEHICLE BAY WALL BASE**  
SCALE: 1 1/2" = 1'-0"



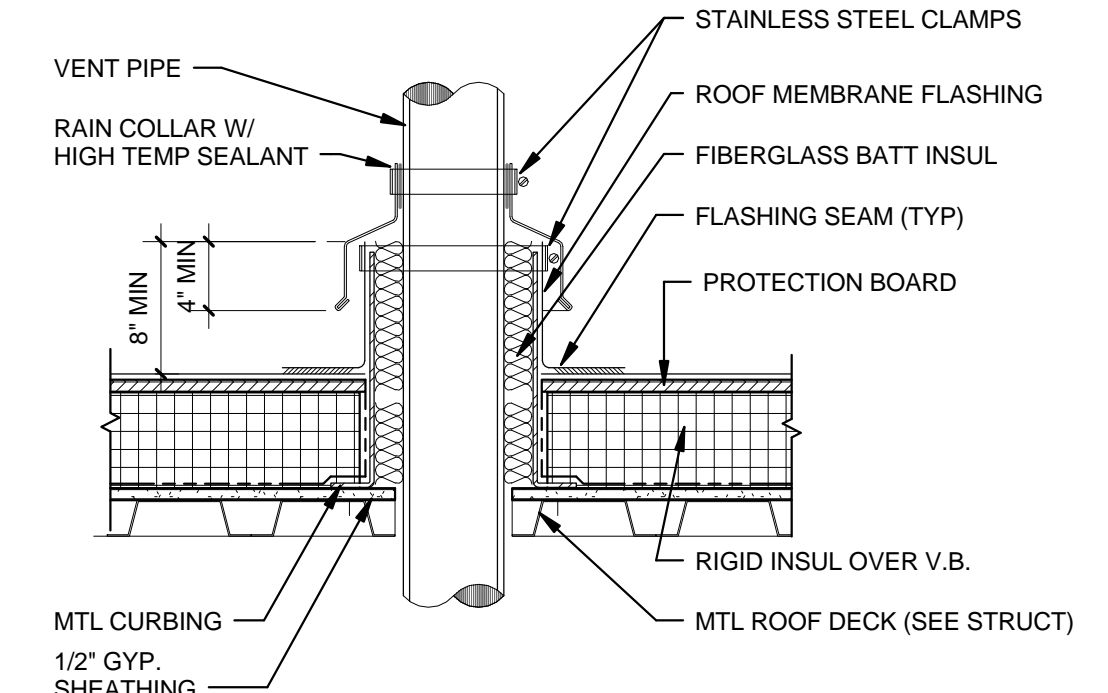
**2 DETAIL @ STAFF ENTRANCE NORTH WALL**  
SCALE: 1 1/2" = 1'-0"



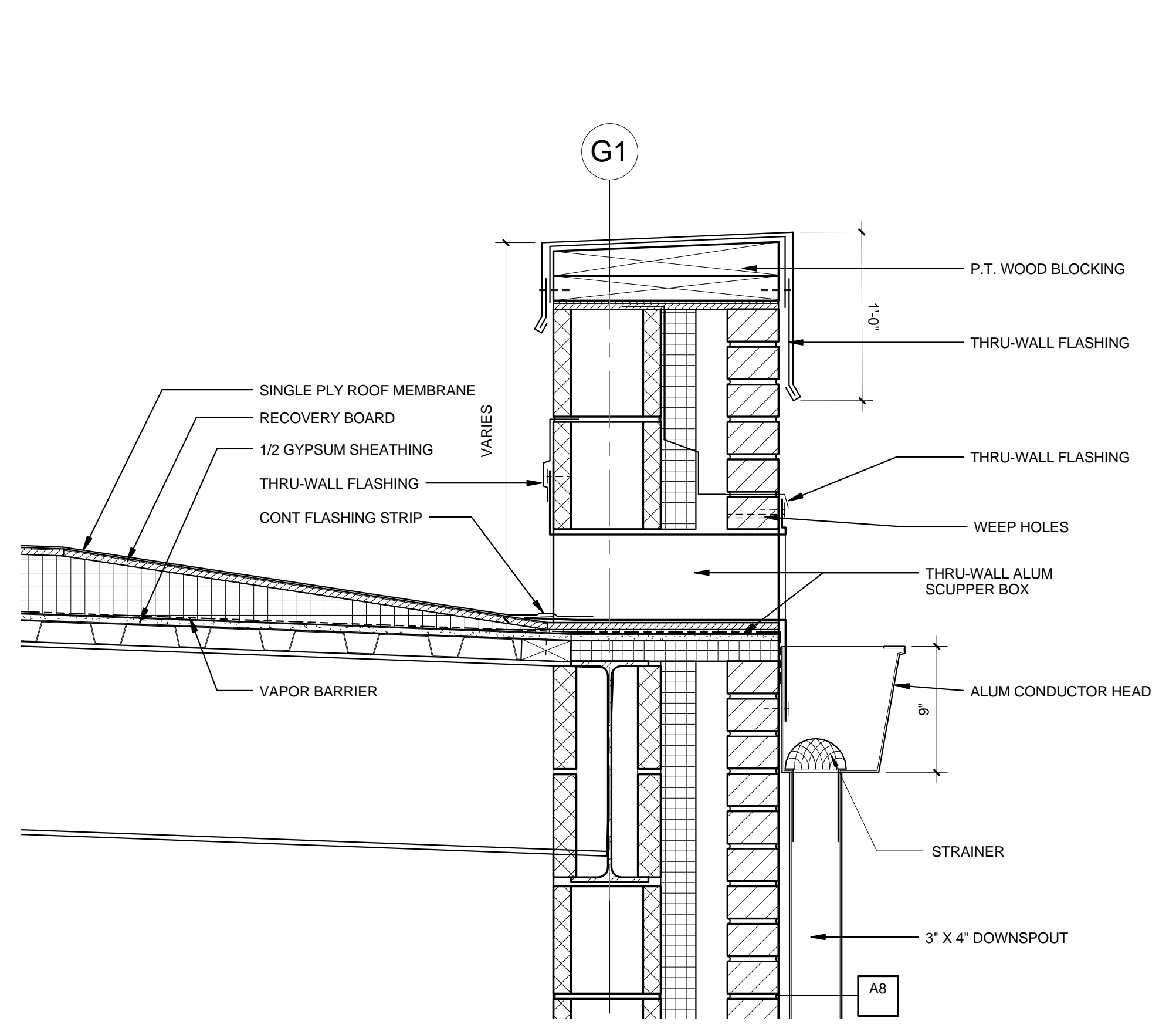
**5 TYP ROOF CURB DETAIL**  
SCALE: 1 1/2" = 1'-0"



**3 CANOPY WALL DETAIL**  
SCALE: 1 1/2" = 1'-0"



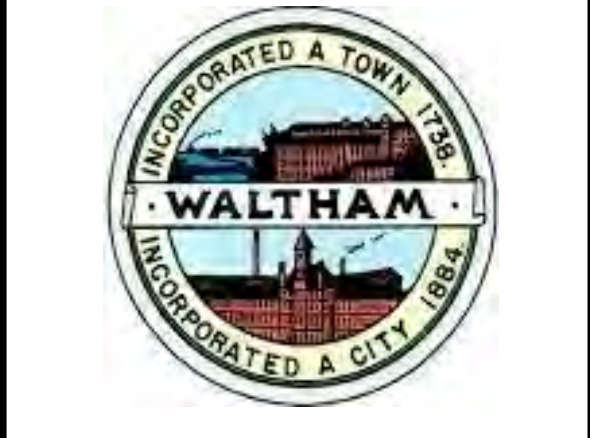
**6 TYP ROOF VENT DETAIL**  
SCALE: 1 1/2" = 1'-0"



**4 SCUPPER DETAIL**  
SCALE: 1 1/2" = 1'-0"

REVISIONS		
Number	Description	Date

ISSUED FOR BID



**WALTHAM POLICE STATION RENOVATION**  
  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**SECTION DETAILS**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: FC  
 DRAWN BY: LR  
 CHECKED BY: FC  
 DATE:  
 SCALE: 2016 1 1/2"  
 SHEET NUMBER: = 1'-0"

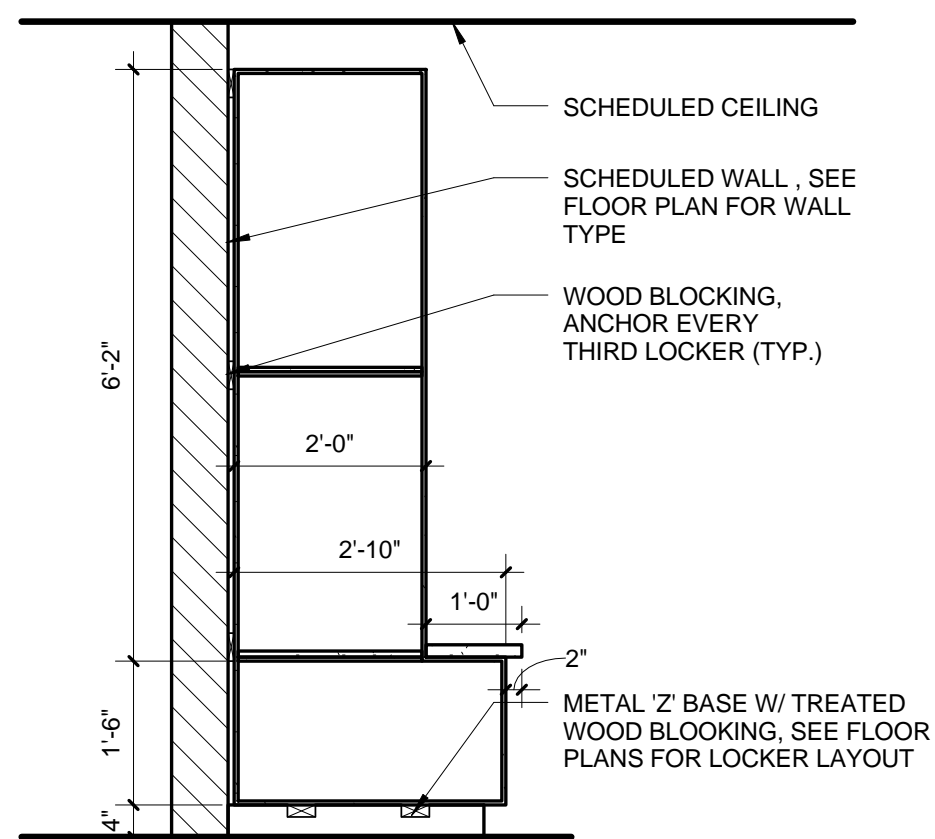
**A532**



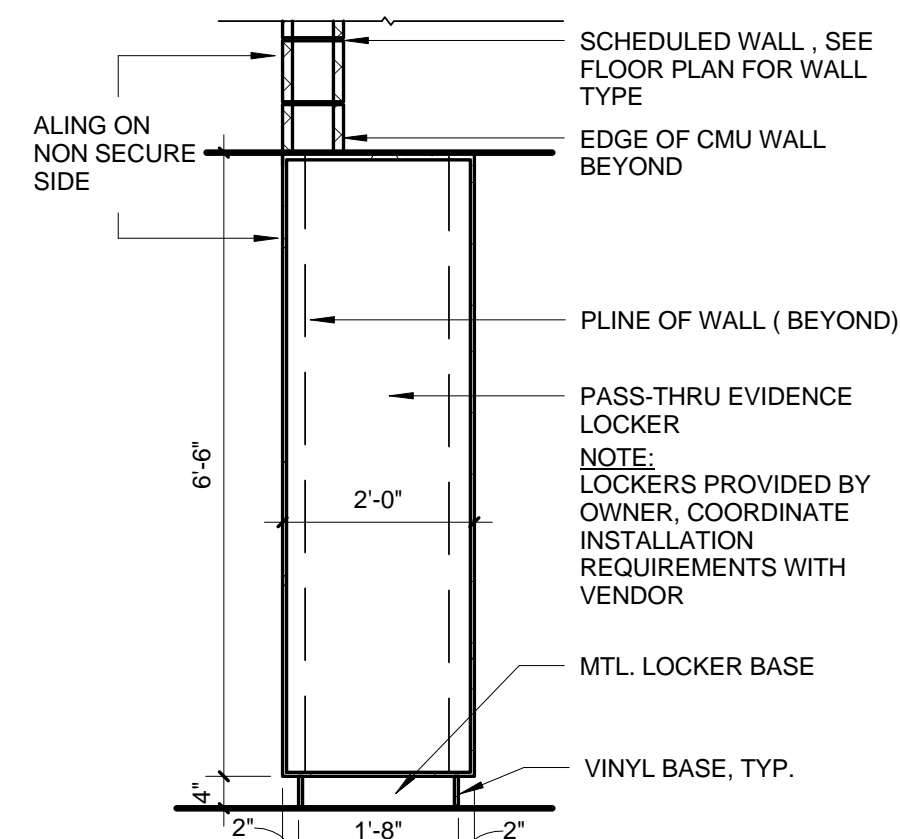




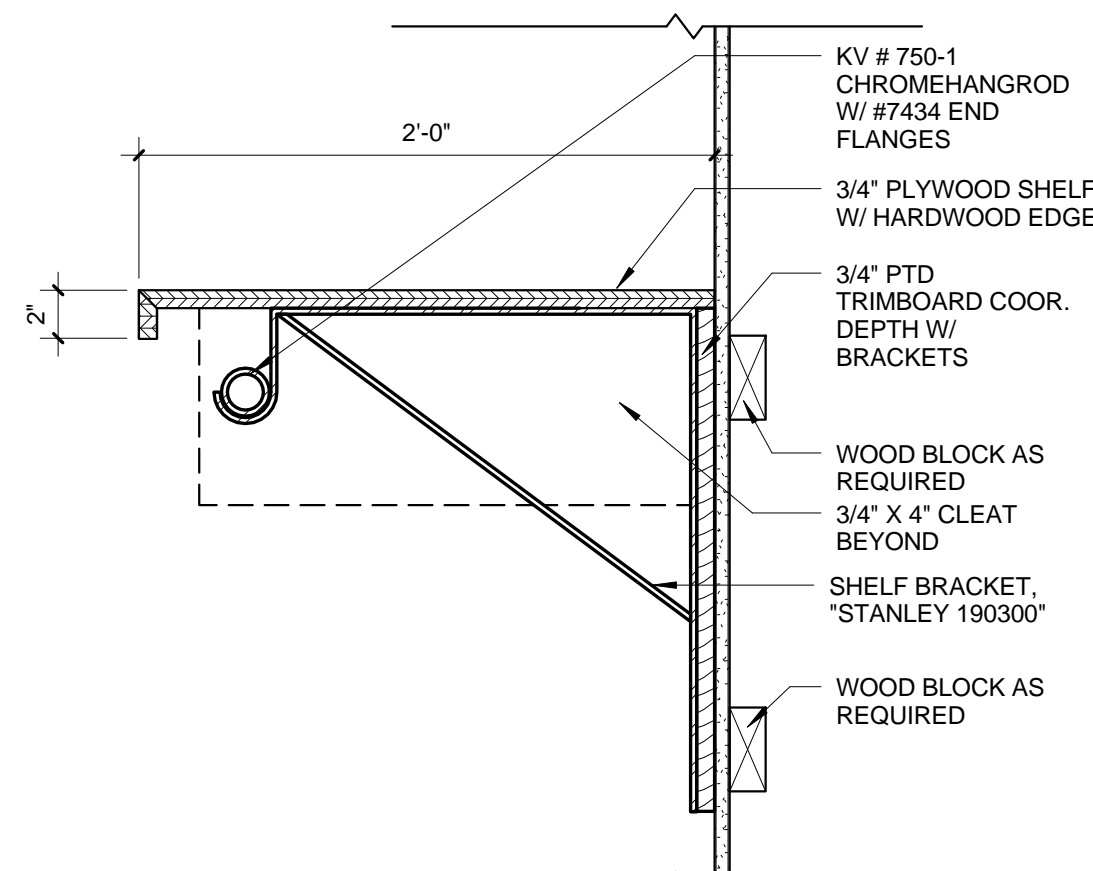
ELEC: MECH: FIRE: PLUMB: STRUC: ARCH: CIVIL: REVIEWED BY: DWL: PLOTTED: 7/14/2016 11:22:52 PM PROJECT FILE: C:\Users\mlogoff\Documents\19401\Waltham Police Station\Architect\A571.dwg



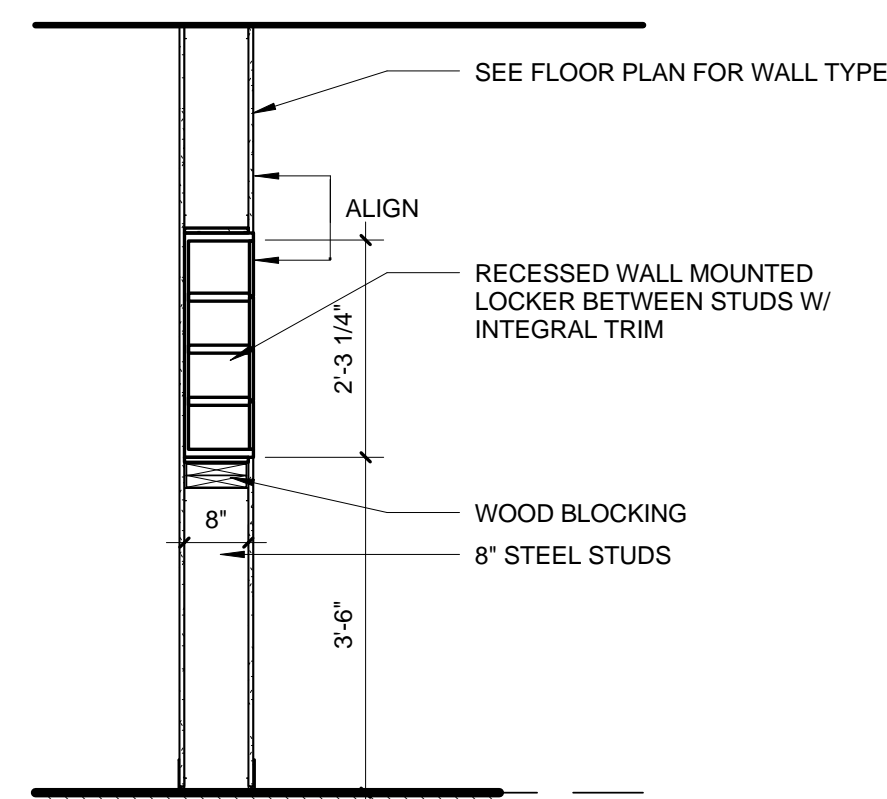
**1 PERSONNEL DUTY LOCKER DETAIL**  
SCALE: 1/2" = 1'-0"



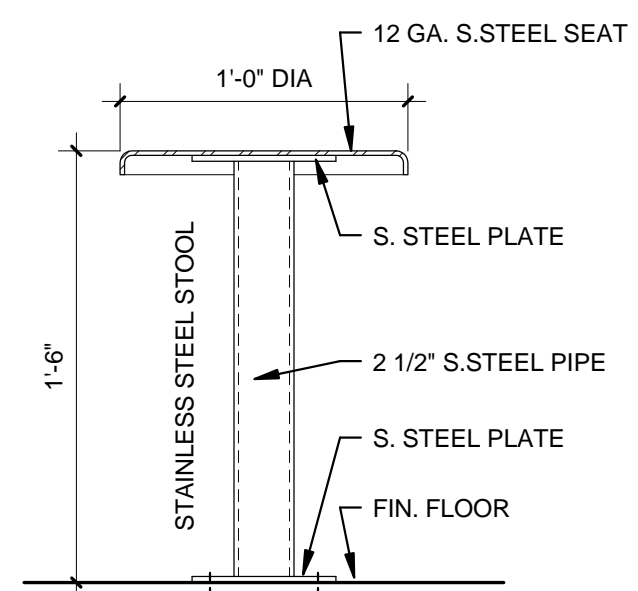
**2 PASS-THRU EVIDENCE LOCKER**  
SCALE: 1/2" = 1'-0"



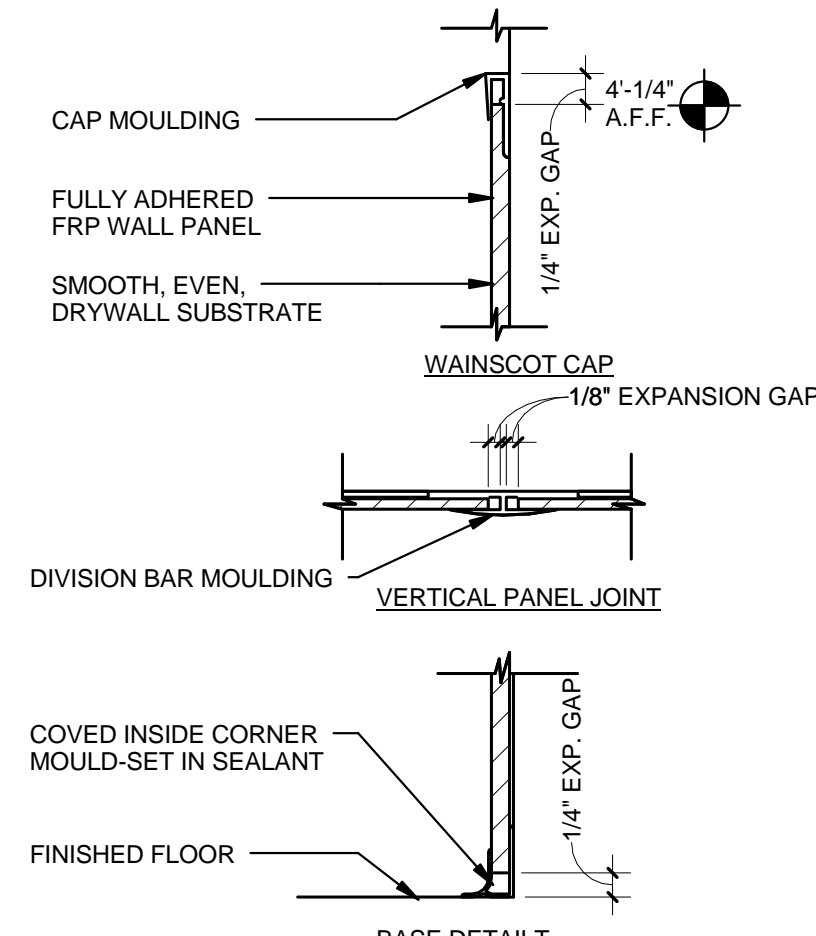
**3 ROD & SHELF DETAIL**  
SCALE: 1 1/2" = 1'-0"



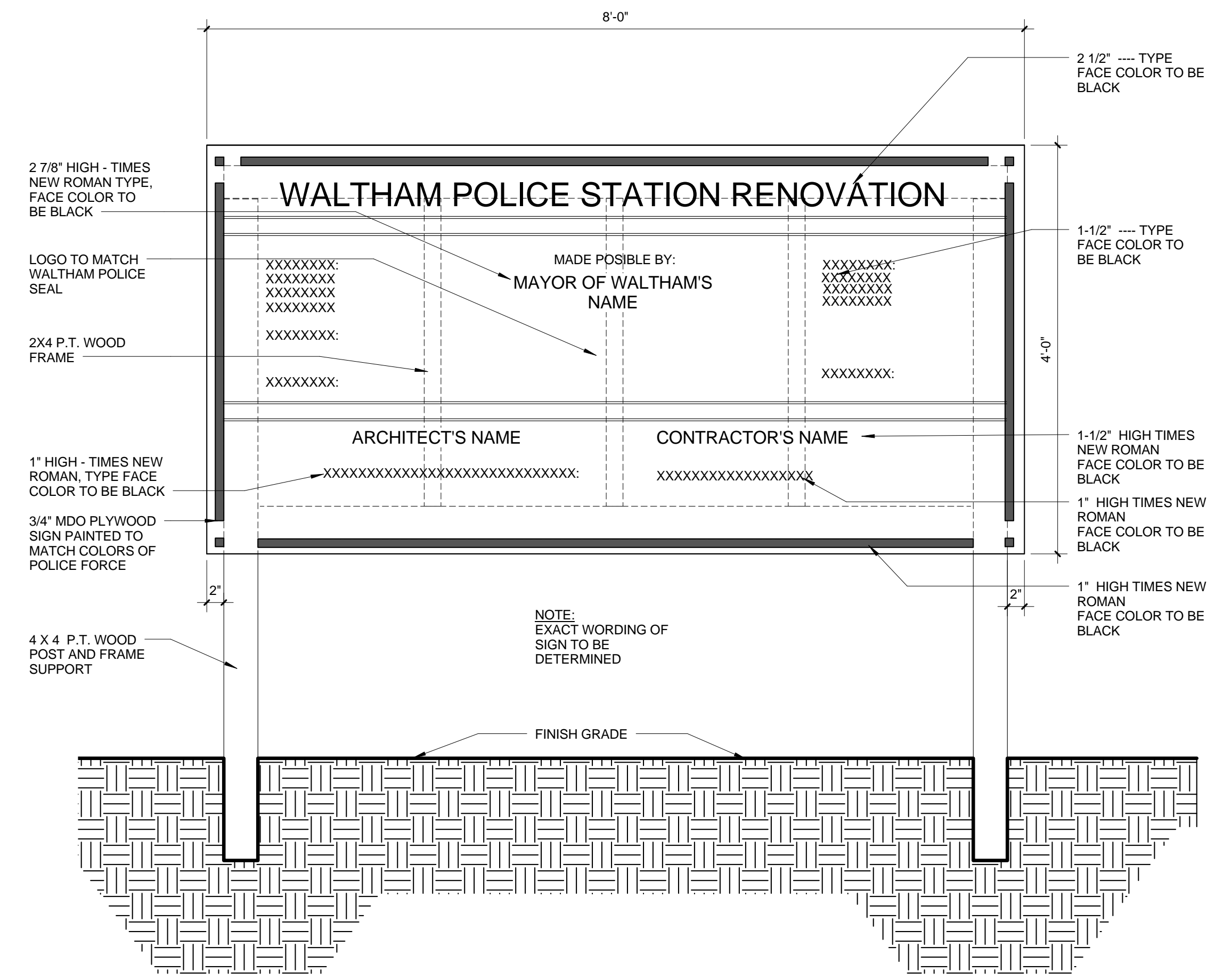
**4 PISTOL LOCKER**  
SCALE: 1/2" = 1'-0"



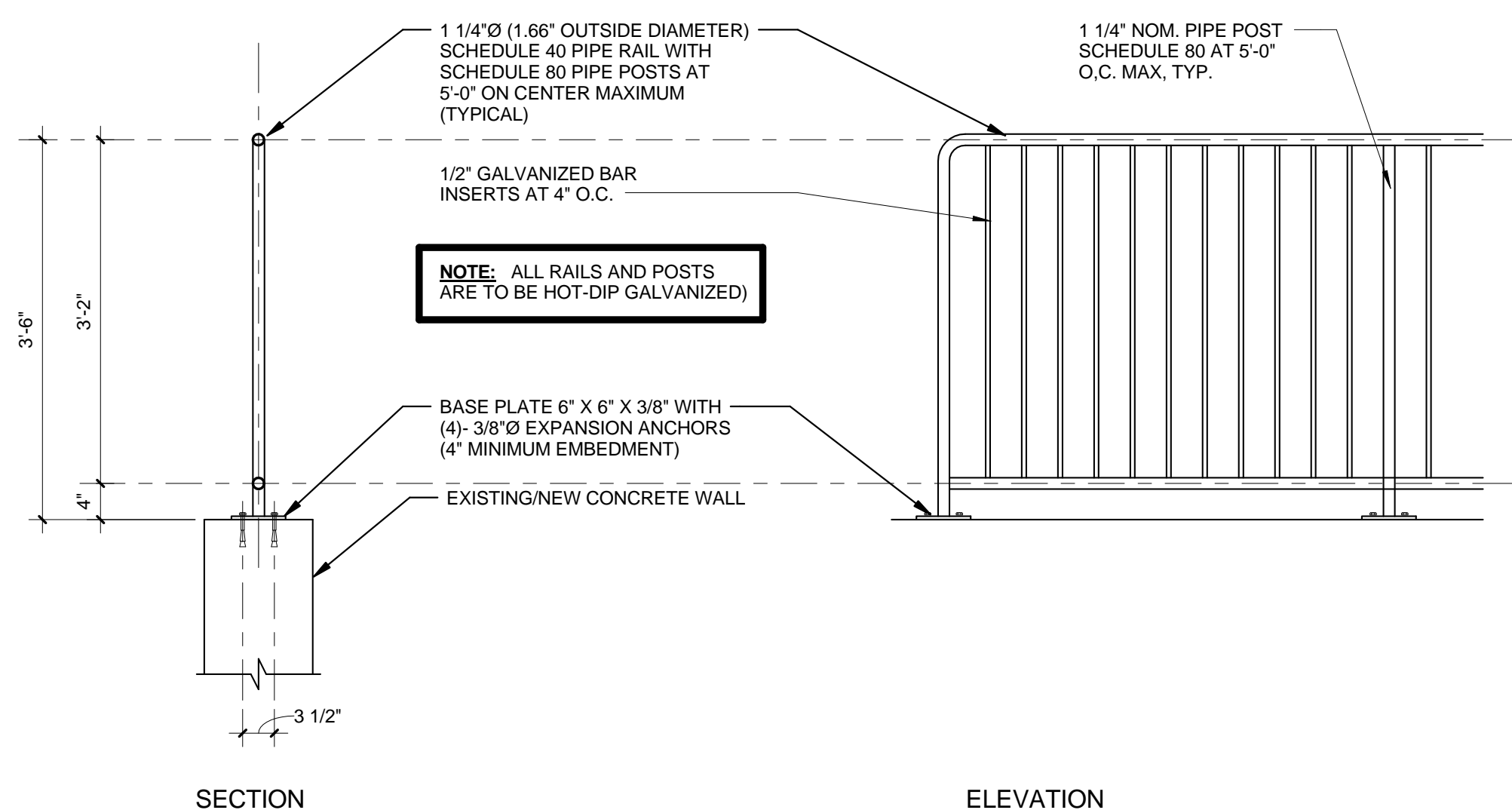
**5 TYPICAL FLOOR MOUNTED STOOL**  
SCALE: 1 1/2" = 1'-0"



**6 FIBERGLASS REINFORCED PLASTIC PANEL**  
SCALE: 6" = 1'-0"



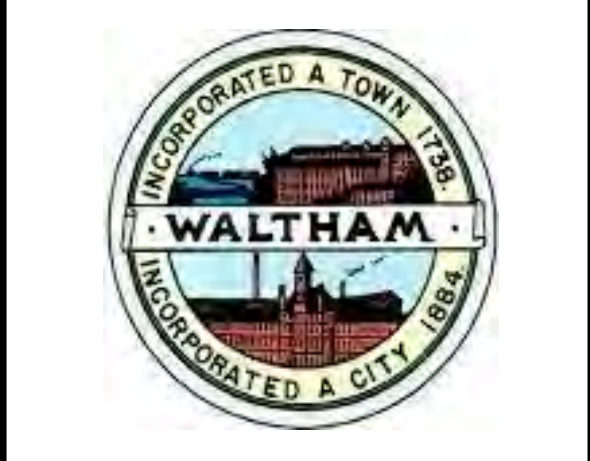
**7 CONSTRUCTION SIGN**  
SCALE: 1" = 1'-0"



**8 TYPICAL GUARDRAIL DETAIL**  
SCALE: 3/4" = 1'-0"

REVISIONS		
Number	Description	Date

ISSUED FOR BID



**WALTHAM POLICE STATION RENOVATION**  
  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

MISCELLANEOUS DETAILS

PROJECT NUMBER: 19401.01  
 DESIGNED BY: FC  
 DRAWN BY: LR  
 CHECKED BY: FC  
 DATE: July-Aug. 2016  
 SCALE: As indicated

SHEET NUMBER:  
A571











## INTERIOR FINISH NOTES

1. G.C. OR THEIR SUBCONTRACTORS SHALL SUBMIT MANUFACTURER'S COLOR SELECTION FOR ALL SPECIFIED MATERIALS. (COLOR SCHEDULE TO BE COMPLETED UPON RECEIPT AND APPROVAL OF ALL SPECIFIED FINISHES)
  2. G.C. OR THEIR SUBCONTRACTORS SHALL INSTALL FRP WOOD BLOCKING AT ALL AREAS INDICATED TO RECEIVE WALL MOUNTED ITEMS, CABINETRY, SHELVING, TOILET ACCESSORIES, ETC.
  3. REFER TO REFLECTED CEILING PLANS, SECTIONS AND DETAILS FOR CEILING HEIGHTS AND SOFFITS.
  4. ALL SPECIFIED FINISHES SHALL BE CONTINUOUS BEHIND ALL MOUNTED OR APPLIED ITEMS, I.E.: MIRRORS, TACK BOARDS, ETC.
  5. FOR MILLWORK FINISHES & DETAILS RE: A801 AND OTHER RELATED DRAWINGS.
  6. SEE FLOOR FINISH PLANS FOR FLOORING PATTERNS.
  7. ALL RESILIENT BASE WILL BE STRAIGHT AT CARPETS AND COVERED AT RESILIENT FLOORING.
  8. PAINT ALL EXPOSED DUCTS, CONDUITS, PIPING, STRUCTURE, ETC. NOT CONCEALED BY ROOM FINISHES. COORDINATE WITH MEP & STRUCTURAL DRAWINGS (NOT FACTORY FINISH)
  9. PAINT ALL STEEL HANDRAILS, RISERS, STAIR STRINGERS AND UNDERSIDE OF STAIR AT ALL EXPOSED AREAS.
  10. G.C. AND THEIR SUBCONTRACTORS SHALL DETERMINE AVAILABILITY OF ALL FINISH MATERIALS. ANY DELIVERY SCHEDULE THAT POTENTIALLY MAY CAUSE COORDINATION PROBLEMS DURING THE CRITICAL PATH OF CONSTRUCTION/INSTALLATION SHALL BE BROUGHT TO ATTENTION OF THE ARCHITECT. EARLY ON, FOR POSSIBLE RE-EVALUATION OF MATERIAL DESIGNATION. THE LACK OF A TIMELY ORDER DOES NOT CONSTITUTE A RE-SELECTION.
  11. A MINIMUM QUANTITY OF TWO (2) 1'-0" X 1'-0" FINISH SAMPLES OF ALL SPECIFIED FINISHES AND CURRENT STOCK CUTTINGS OF ALL SPECIFIED FABRICS SHALL BE PROVIDED FOR APPROVAL PRIOR TO ORDERING.
  12. G.C. AND THEIR SUBCONTRACTORS SHALL ASSURE THAT NO ELECTRIC RECEPTACLE OR TELECOMMUNICATIONS OUTLET COVERPLATES HAVE BEEN INSTALLED PRIOR TO COMPLETION OF APPLICATION OF ANY WALL FINISH MATERIALS. ANY SUCH COVERPLATES OR SURFACE HARDWARE, ETC., IN PLACE, SHALL BE REMOVED PRIOR TO WALL FINISH APPLICATION.
  13. UPON COMPLETION OF FINISH PHASE OF JOB, G.C. SHALL REMOVE ALL PAINT, WALLCOVERING PASTE, ETC., FROM WHERE IT HAS SPILLED, SPLASHED, OR SPATTERED.
  14. ALL FINISH FLOORING MATERIAL INSTALLATION SHALL BE PER MANUFACTURERS RECOMMENDATION. SEAMS SHALL BE TIGHT/INVISIBLE. G.C. OR THEIR SUBCONTRACTORS SHALL PROVIDE AND MAINTAIN ADEQUATE PROTECTION FOR ALL NEWLY INSTALLED FLOORING MATERIALS FOR THE DURATION OF CONSTRUCTION AND REMOVE PROTECTION ONLY IMMEDIATELY BEFORE JOB COMPLETION. FLOOR WILL BE THOROUGHLY CLEANED OF ALL ADHESIVE, GROUT, CONSTRUCTION STAINS, ETC.
  15. PROVIDE MOISTURE MITIGATION UNDERLAYERMENT UNDERNEATH ALL VCT AND PAINTED FLOORING AT FIRST FLOOR (TYPE 1), SECOND FLOOR USE TYPE 2 UNDERLAYERMENT.
- TYPE 1 UNDERLAYERMENT: MOISTURE CONTROL UNDERLAYERMENTS AND PATCHING COMPOUNDS: TWO-COAT 100% SOLID EPOXY MOISTURE MANAGEMENT SYSTEM WHERE MOISTURE EMISSIONS FROM NEW AND EXISTING CONCRETE SLABS EXCEEDS TILE MANUFACTURER'S REQUIREMENTS OR APPROVED BY TILE MANUFACTURER FOR APPLICATIONS RECOMMENDED BY THE FLOORING MANUFACTURER.
1. SIMILAR TO ARDEX MC PLUS.
  2. OR EQUAL.
- TYPE 2 UNDERLAYERMENT: TROWELABLE UNDERLAYERMENTS AND PATCHING COMPOUNDS: LATEX-MODIFIED, PORTLAND-CEMENT-BASED FORMULATION PROVIDED OR APPROVED BY TILE MANUFACTURER FOR APPLICATIONS RECOMMENDED BY THE FLOORING MANUFACTURER.
1. SIMILAR TO LEVELASTIC.
  2. SIMILAR TO GYP-CRETE.
  3. SIMILAR TO ARDEX K-15.
  4. OR EQUAL.
16. G.C. AND THEIR SUBCONTRACTORS ARE RESPONSIBLE FOR ALL FLASH PATCHING AND TO HAVE THE FLOOR IN A CONDITION TO RECEIVE FLOORING MATERIALS.
  17. CARPET SUPPLIER/INSTALLER SHALL PROVIDE CURRENT STOCK SAMPLES OF SPECIFIED CARPET FINISHES FOR APPROVAL PRIOR TO ORDERING. PROVIDE TRANSITION STRIPS AS SPECIFIED OR NECESSARY (VINYL, IF NOT SPECIFIED).
  18. G.C. AND VENDORS/SUBCONTRACTORS ARE RESPONSIBLE FOR FIELD VERIFICATION OF ALL DIMENSIONS, QUANTITIES ETC., OF THEIR RESPECTIVE WORK.
  19. FOR FLOOR MATERIAL CHANGE LOCATIONS, SEE FLOOR PLANS, THRESHOLD DETAILS AND/OR FLOOR FINISH PLANS
  20. FOR WALL MATERIAL FINISH CHANGE LOCATIONS, SEE INTERIOR WALL ELEVATIONS
  21. FOR ADDITIONAL WORK REQUIRED, SEE INTERIOR WALL ELEVATIONS
  22. PROVIDE SPLASH TRIM AT ALL WALLS ADJACENT TO COUNTER TOPS U.O.N. TYPICAL
  23. PROVIDE BASE FINISH AT TOE KICKS OF ALL CABINETRY KITCHENS & VANITIES
  24. PROVIDE BASE FINISH AT ALL FINISH CABINETRY END PANELS
  25. PROVIDE WALL BASE BEHIND ALL REFRIGERATORS, RANGE AND OTHER APPLIANCES. PROVIDE PAINTED FINISH AND CAULKING.
  26. PROVIDE PAINTED FINISH AND CAULKING BEHIND SINKS, TYP
  27. NOT ALL WALL OBJECTS MAY BE SHOWN. COORDINATE WITH MECHANICAL, PLUMBING, ELECTRICAL DRAWINGS. ALSO REFER TO ARCHITECTURAL DWGS & SPECIFICATIONS FOR ADDITIONAL ITEMS
  28. INSULATE ALL EXPOSED PIPES AND SINK BOTTOM WITH TRAP WRAP PROTECTIVE KIT
  29. ALL WINDOW SILLS SHALL BE SOLID, CLEAR FINISHED MAPLE UNLESS NOTED OTHERWISE.
  30. PAINT CONCRETE BLOCK AND PAINT PIERS AT COLUMNS AND PROVIDE SEALED CONCRETE AT STAIR TREADS AND PAINT ALL EXPOSED STAIR STRUCTURE AND RAILINGS.
  31. FOR TOILET ACCESSORIES SCHEDULE SEE A701.
  32. PAINT CONCRETE BLOCK AND PAINT PIERS AT COLUMNS AND PROVIDE SEALED CONCRETE AT STAIR TREADS AND PAINT ALL EXPOSED STAIR STRUCTURE AND RAILINGS.
  33. FIELD PAINT ALL EXPOSED FRAMING, STEEL AND IRON WORK, BARE AND COVERED PIPES, HANGERS, PLYWOOD, CMU, STEEL DECK, RAILING, UNDERNEATH THE STAIRS AND PRIMED METAL SURFACES OF MECHANICAL AND ELECTRICAL WORK.
  34. ALL CORRIDOR WALLS SHALL RECEIVE ABUSE RESISTANT, HIGH IMPACT GYPSUM BOARD.

## INTERIOR FINISH ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE
CPT	CARPET TILES
CT	CERAMIC TILE
EPX	EPOXY
E.T.R.	EXISTING TO REMAIN
GWB	GYPSUM WALL BOARD
PP	PORCELAIN PAVERS
PTD	PAINTED
RES	RESINOUS FLOORING
RUB	RUBBER BASE
ST	SPORTS TILE FLOORING
VCT	VINYL COMPOSITE TILE

## FINISH MATERIAL SCHEDULE

MARK	DESCRIPTION	MANUF. LINE	COLOR
CT-1	CERAMIC TILE	DALTILE, NATURAL HUES-FLOOR TILE 6x6	TBD
CT-2	CERAMIC TILE	DALTILE, NATURAL HUES-WALL BASE	TBD
CT-3	CERAMIC TILE	DALTILE, NATURAL HUES-WALL TILE 6x6	TBD
CPT	CARPET TILE	MANNINGTON, MODERN WEAR	TBD
EPX	EPOXY PAINT	SEE SPECIFICATIONS	TBD
MC-PTD-1	MULTI-COLORED PAINT		TBD
PAR-1	SOLID WOOD PARQUET	ARMSTRONG, URETHANE PARQUET	TBD
PP	PORCELAIN PAVER TILE	DALTILE, COLOUR SCHEME	TBD
PTD	PAINT	SHERWIN WILLIAMS	TBD
RES-1	RESILIENT FLOORING	DUR-A-FLEX, DUR-A-QUARTZ	TBD
RES-2	RESILIENT WALL BASE	DUR-A-FLEX, DUR-A-QUARTZ	TBD
RUB-1	RUBBER FLOORING		TBD
RUB-2	RUBBER WALL BASE		TBD
ST-1	SPORTS TILE FLOORING	JOHNSONITE, TRIUMPH SPORTS RUBBER TILE	TBD
VCT-1	VINYL COMPOSITION TILE	ARMSTRONG, IMPERIAL TEXTURE	TBD
WAIN-1	WAINSCOTTING		TBD
WD-1	WOOD WALL BASE		TBD

## ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS				CEILING		NOTES
				NORTH	SOUTH	EAST	WEST	FINISH	HEIGHT	
	ELEV.	E.T.R.	E.T.R.	E.T.R.	E.T.R.	E.T.R.	E.T.R.	EXPOSED	10'-0"	
	ELEV.	E.T.R.	E.T.R.	E.T.R.	E.T.R.	E.T.R.	E.T.R.	EXPOSED	10'-0"	
	ELEV.	E.T.R.	E.T.R.	E.T.R.	E.T.R.	E.T.R.	E.T.R.	EXPOSED	10'-0"	
	VESTIBULE	E.T.R.	WD	PTD	PTD	PTD	PTD	ACT	8'-0"	
001	RANGE	CONC	E.T.R.	E.T.R.	E.T.R.	E.T.R.	E.T.R.	E.T.R.	10'-0"	
002	EVIDENCE STORAGE	VCT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-0"	
003	EVIDENCE STORAGE	VCT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-0"	
004	ARMORY	VCT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-0"	
005	RANGE OFFICE	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-0"	
006	STORAGE	VCT	RUB-2	PTD	PTD	PTD	PTD	ACT	7'-9"	
007	MACHINE ROOM	E.T.R.	E.T.R.	PTD	PTD	PTD	PTD	E.T.R.	9'-0"	
008	JAN	VCT	RUB-2	PTD	PTD	PTD	PTD	ACT	7'-8"	
009	STORAGE	VCT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-0"	FRP PANEL AT MOP SINK
010	FEMALE LOCKER ROOM	EPX	RUB-2	PTD/CT-3	PTD	PTD/CT-3	PTD	EXPOSED PAINTED	9'-0"	PROVIDE SPRAY ACOUSTICAL INSULATION ON CEILING
011	F. TOILET	CT-1	CT-2	PTD/CT-3	PTD/CT-3	PTD/CT-3	PTD/CT-3	GWB	8'-0"	
012	MECHANICAL ROOM	CONC	RUB-2	PTD	PTD	PTD	PTD	EXPOSED	9'-4"	
013	TEL/DATA	CONC	RUB-2	PTD	PTD	PTD	PTD	EXPOSED	9'-4"	
014	ELECTRICAL	CONC	RUB-2	PTD	PTD	PTD	PTD	EXPOSED	9'-4"	
015	FITNESS	ST	RUB-2	PTD	PTD	PTD	PTD	EXPOSED	10'-0"	
016	M. TOILET	CT-1	CT-2	PTD/CT-3	PTD/CT-3	PTD/CT-3	PTD/CT-3	GWB	8'-0"	
017	MALE LOCKER ROOM	EPX	RUB-2	PTD	PTD	PTD	PTD	EXPOSED	9'-0"	PROVIDE SPRAY ACOUSTICAL INSULATION ON CEILING
018	CORR.	VCT	WAIN	PTD	PTD	PTD	PTD	ACT/GWB	8'-0"	
019	CORR.	VCT	WAIN	PTD	PTD	PTD	PTD	ACT/GWB	8'-0"	
101	VEHICLE BAYS	E.T.R.	E.T.R.	PTD	PTD	PTD	PTD	EXPOSED	10'-0"	
102	STORAGE	CONC	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-6"	
103	STORAGE	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-6"	
104	TRAINING ROOM	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-6"	
105	STORAGE	VCT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-6"	
106	CORR.	VCT	WD	PTD	PTD	PTD	PTD	ACT	8'-6"	
107	REPORT	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	9'-0"	
108	ROLL CALL	VCT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-6"	
109	INTERVIEW	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-6"	
110	BREAK ROOM/ KITCHEN	VCT	RUB-2	PTD	PTD	PTD	PTD	ACT/GWB	8'-6"	
111	TRAINING AUXILIARY OFF.	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	9'-0"	
112	PATROL AREA	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-6"	
113	FEMALE	CT-1	CT-2	CT-3	CT-3	CT-3	CT-3	ACT	9'-0"	
114	MALE	CT-1	CT-2	CT-3	CT-3	CT-3	CT-3	ACT	9'-0"	
115	LOBBY	PP	WD	PTD	PTD	PTD	PTD	ACT/GWB	9'-0"	
115A	CORRIDOR	PP	WD	PTD	PTD	PTD	PTD	ACT/GWB	9'-0"	
116	PATROL RECEPTION	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	9'-0"	
117	CAPTAIN	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	9'-0"	
118	SUPERVISORS OFFICE	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	9'-0"	
119	GUN STOR.	VCT	RUB-2	PTD	PTD	PTD	PTD	ACT	9'-0"	
120	MALE	CT-1	CT-2	CT-3	CT-3	CT-3	CT-3	ACT	9'-0"	
121	FEMALE	CT-1	CT-2	CT-3	CT-3	CT-3	CT-3	ACT	9'-0"	
122	KITCHENETTE	VCT	RUB-2	PTD	PTD	PTD	PTD	ACT	9'-0"	
123	COMM. SERV. RECEPTION	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	9'-0"	
124	CONFERENCE	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	9'-0"	
125	COMMUNITY SERVICE	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	9'-0"	
126	STORAGE	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	9'-0"	
127	CAPTAIN	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	9'-0"	
128	LIEUTENANT	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	9'-0"	
129	ARCHIVE	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-6"	
132	ELEC	VCT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-0"	
133	STAFF ENTRANCE	VCT	WD	PTD	PTD	PTD	PTD	ACT/GWB	9'-0"	
134	JAN.	VCT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-0"	FRP PANEL AT MOP SINK
135	MAINTENANCE OFFICE	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-0"	
136	WOMEN	RES-1	RES-2	EPX	EPX	EPX	EPX	SECURITY CEILING	8'-0"	
136A	CELL 9	RES-1	RES-2	EPX	EPX	EPX	EPX	DETENTION CEILING	8'-0"	
136B	CELL 10	RES-1	RES-2	EPX	EPX	EPX	EPX	DETENTION CEILING	8'-0"	
136C	CELL 11	RES-1	RES-2	EPX	EPX	EPX	EPX	DETENTION CEILING	8'-0"	
137	SHOWER	RES-1	RES-2	EPX	EPX	EPX	EPX	DETENTION CEILING	8'-0"	
138	INTERV.	VCT	RUB-2	PTD	PTD	PTD	PTD	SECURITY CEILING	8'-0"	
139	INTERV.	RES-1	RES-2	EPX	EPX	EPX	EPX	SECURITY CEILING	8'-0"	
140	SHOWER	RES-1	RES-2	EPX	EPX	EPX	EPX	DETENTION CEILING	8'-0"	
141	VEST.	RES	RES-2	EPX	EPX	EPX	EPX	DETENTION CEILING	8'-0"	
142	JUVENILE/ ACCESS.	RES-1	RES-2	EPX	EPX	EPX	EPX	DETENTION CEILING	8'-0"	
143	MALE	RES-1	RES-2	EPX	EPX	EPX	EPX	SECURITY CEILING	8'-0"	
143A	CELL 1	RES-1	RES-2	EPX	EPX	EPX	EPX	DETENTION CEILING	8'-0"	
143B	CELL 2	RES-1	RES-2	EPX	EPX	EPX	EPX	DETENTION CEILING	8'-0"	
143C	CELL 3	RES-1	RES-2	EPX	EPX	EPX	EPX	DETENTION CEILING	8'-0"	
143D	CELL 4	RES-1	RES-2	EPX	EPX	EPX	EPX	DETENTION CEILING	8'-0"	
144	MALE	RES-1	RES-2	EPX	EPX	EPX	EPX	SECURITY CEILING	8'-0"	
144A	CELL 5	RES-1	RES-2	EPX	EPX	EPX	EPX	DETENTION CEILING	8'-0"	
144B	CELL 6	RES-1	RES-2	EPX	EPX	EPX	EPX	DETENTION CEILING	8'-0"	
144C	CELL 7	RES-1	RES-2	EPX	EPX	EPX	EPX	DETENTION CEILING	8'-0"	
144D	CELL 8	RES-1	RES-2	EPX	EPX	EPX	EPX	DETENTION CEILING	8'-0"	
145	BOOKING	RES-1	RES-2	EPX	EPX	EPX	EPX	SECURITY CEILING	8'-6"	
145A	BOOKING A	RES-1	RES-2	EPX	EPX	EPX	EPX	SECURITY CEILING	8'-6"	
146	STORAGE	RES-1	RES-2	EPX	EPX	EPX	EPX	SECURITY CEILING	8'-0"	
147	PROCESSING	RES-1	RES-2	EPX	EPX	EPX	EPX	DETENTION CEILING	8'-0"	
148	ANIMAL HOLD	E.T.R.	N/A	PTD	PTD	PTD	PTD	EXPOSED	10'-0"	
149	SALLY PORT	E.T.R.	N/A	PTD	PTD	PTD	PTD	EXPOSED	10'-0"	
150	MOTORCYCLE/BIKE STORAGE	CONC	N/A	PTD	PTD	PTD	PTD	EXPOSED	10'-0"	
151	CORR.	VCT	WAIN	PTD	PTD	PTD	PTD	ACT	8'-6"	
151A	CORR.	VCT	WAIN	PTD	PTD	PTD	PTD	ACT	9'-0"	
201	ASSIGNMENT AREA	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-6"	
202	CAPTAIN	CPT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-6"	
203	FEMALE	CT-1	CT-2	CT-3	CT-3	CT-3	CT-3	ACT	8'-0"	
204	MALE	CT-1	CT-2	CT-3	CT-3	CT-3	CT-3	ACT	8'-0"	
205	JAN.	VCT	WD	PTD	PTD	PTD	PTD	ACT	8'-6"	FRP PANEL AT MOP SINK
206	PLANNING	CPT	WD	PTD	PTD	PTD	PTD	ACT	8'-6"	
207	CONFERENCE	CPT	WD	PTD	PTD	PTD	PTD	ACT	8'-6"	
208	DEPUTY CHIEF	CPT	WD	PTD	PTD	PTD	PTD	ACT	8'-6"	
209	ADMIN OFFICE	E.T.R.	E.T.R.	PTD	PTD	PTD	PTD	ACT	8'-6"	
210	CHIEF'S OFFICE	E.T.R.	E.T.R.	PTD	PTD	PTD	PTD	ACT	8'-6"	
211	ADMIN OFFICE	E.T.R.	E.T.R.	PTD	PTD	PTD	PTD	ACT	8'-6"	
212	ADMIN.	CPT	WD	PTD	PTD	PTD	PTD	ACT	8'-6"	
213	STORAGE	VCT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-0"	
214	SUPPLY / STORAGE	VCT	RUB-2	PTD	PTD	PTD	PTD	ACT	8'-0"	
215	DETECTIVE OFFICE	CPT	WD	PTD	PTD	PTD	PTD	ACT	8'-6"	BASE TO MATCH EXISTING
216	STORAGE	VCT	WD	PTD	PTD	PTD	PTD	GWB	8'-6"	BASE TO MATCH EXISTING
217	DETECTIVE	CPT	WD	PTD	PTD	PTD	PTD	ACT	8'-6"	BASE TO MATCH EXISTING
218	CONFERENCE	E.T.R.	E.T.R.	PTD	PTD	PTD	PTD	ACT	8'-6"	
219	LAB	VCT	WD	PTD	PTD	PTD	PTD	ACT	8'-6"	
220	CORR.	VCT	WAIN	PTD	PTD	PTD	PTD	ACT	8'-6"	
221	SERGEANTS OFFICE	CPT	WD	PTD	PTD	PTD	PTD	ACT	8'-6"	BASE TO MATCH EXISTING
222	INTERVIEW ROOM	CPT	WD	PTD						



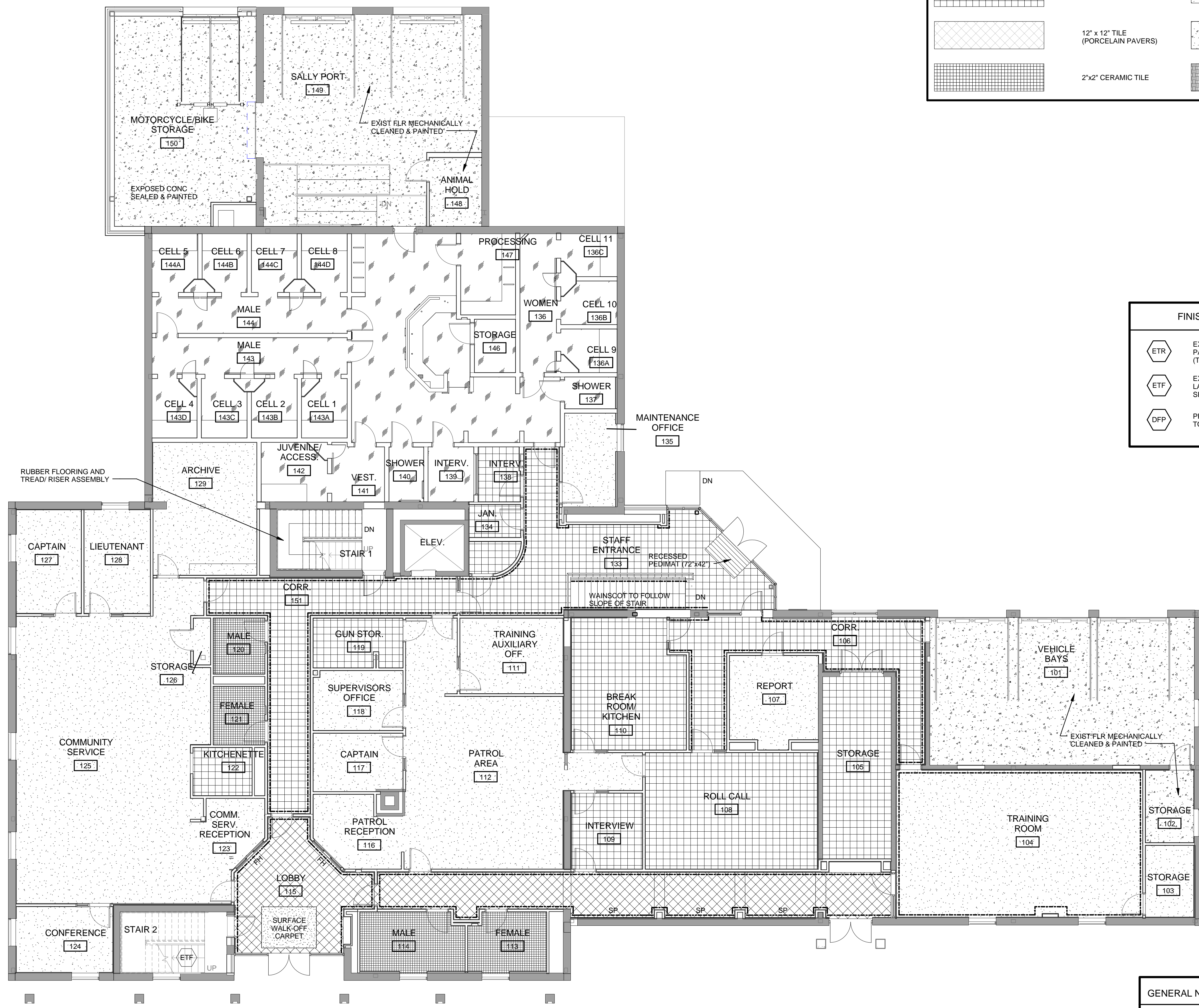








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### FINISH FLOOR LEGEND

	24" x 24" SPORTS FLOORING TILE		RESINOUS FLOORING
	12" x 12" VCT FLOOR TILE		24" x 24" CARPET TILE
	12" x 12" TILE (PORCELAIN PAVERS)		PAINTED EXPOSED CONCRETE
	2"x2" CERAMIC TILE		WOOD PARQUET FLOOR (TO MATCH EXIST)

### WALL FINISH LEGEND

	TYP WOOD WAINSCOTING (12/A704)
	WOOD WAINSCOTING (FLR TO CEILING)
	SCULPTURED PANEL BOARD (7/A704)

### FINISH KEYNOTES

	EXISTING FLOORING TO REMAIN: PATCH FLOORING & BASE IMPACTED BY RENOVATION (TO MATCH EXIST)
	EXISTING TERRAZZO FLOOR COVERING @ STAIR LANDING & TREADS TO BE REPAIRED/REFINISHED & SEALED.
	PREPARE EXIST SLAB (PREVIOUSLY DEMO FLOORING) TO RECEIVE NEW VCT

**GENERAL NOTES:**

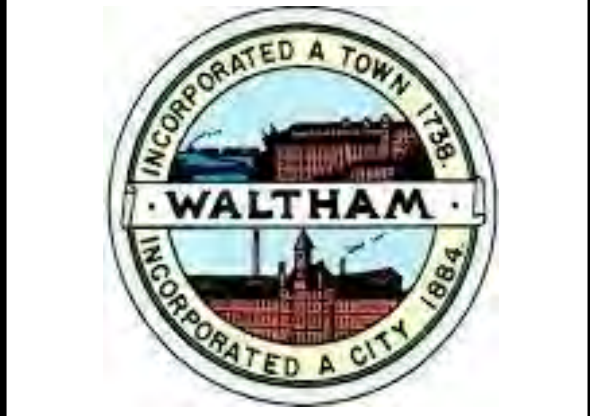
- \* EXTEND ALL FLOORING UNDER CASEWORK, CABINETS ETC
- \* PROVIDE 7" WIDE MARBLE THRESHOLD AT C.T. FLOOR TRANSITION
- \* VCT FLOORING SHALL CONSIST OF A 3-COLOR BLEND, EXACT LAYOUT SHALL BE DETERMINED DURING CONSTRUCTION
- \* REFER TO SPECIFICATIONS FOR PROPER FLOORING PREPARATION
- \* PROVIDE ALUM STRIP AT ALL FLOOR MATERIAL TRANSITIONS.

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

**CDR MAGUIRE**  
Architects / Engineers / Planners  
211 Congress Street, 11th Floor  
Boston, Massachusetts 02110  
TEL: (617) 778-1440  
www.cdmaguire.com

REVISIONS		
Number	Description	Date

ISSUED FOR BID



**WALTHAM POLICE STATION RENOVATION**

155 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS

**FIRST FLOOR FINISH PLAN**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: Designer  
 DRAWN BY: MR  
 CHECKED BY: Checker  
 DATE: July-Aug. 2016  
 SCALE: As indicated

SHEET NUMBER:  
A631



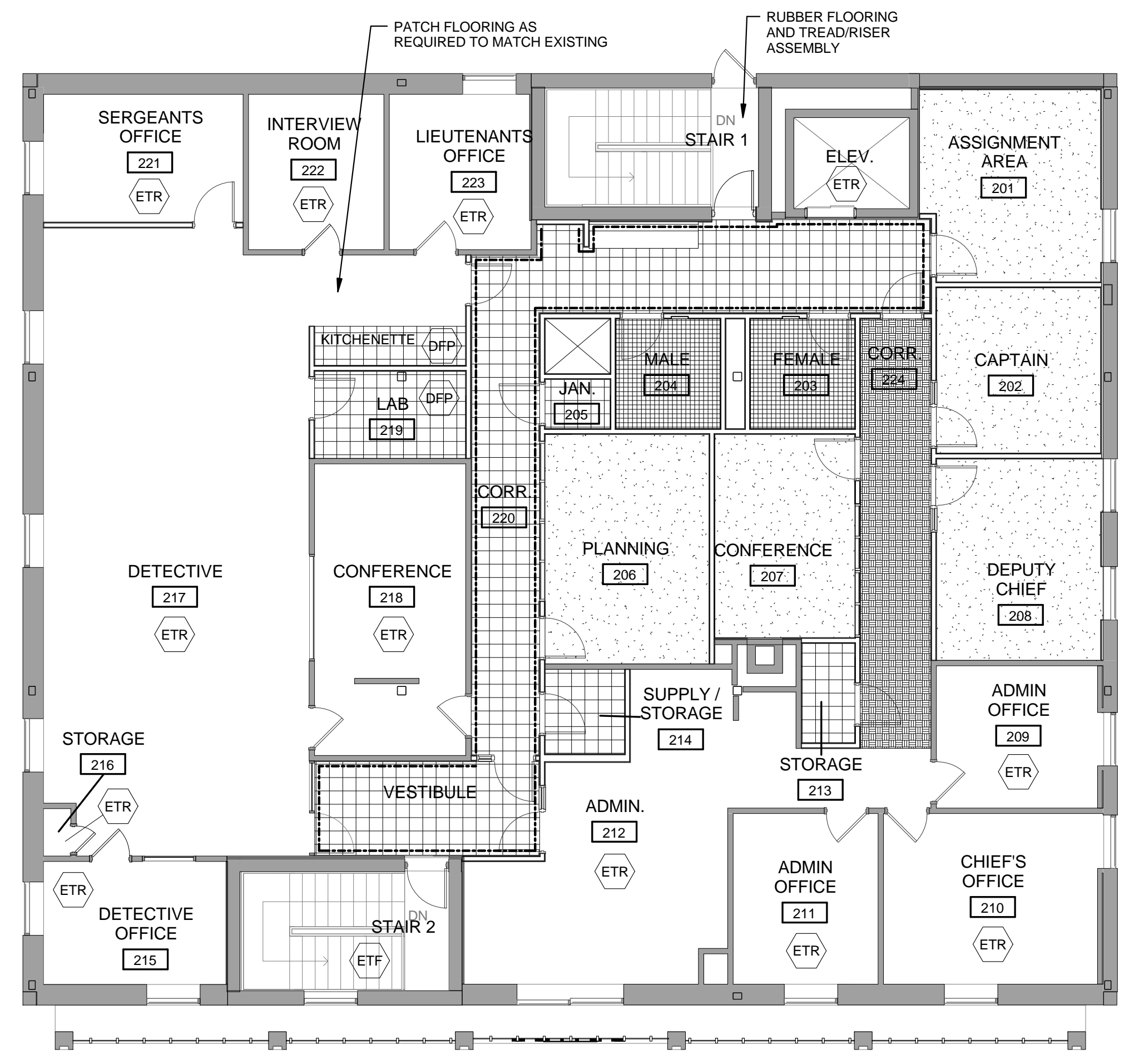
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### FINISH FLOOR LEGEND

	24" x 24" SPORTS FLOORING TILE		RESINOUS FLOORING
	12" x 12" VCT FLOOR TILE		24" x 24" CARPET TILE
	12" x 12" TILE (PORCELAIN PAVERS)		PAINTED EXPOSED CONCRETE
	2"x2" CERAMIC TILE		WOOD PARQUET FLOOR (TO MATCH EXIST)

### WALL FINISH LEGEND

	TYP WOOD WAINSCOTING (12/A704)
	WOOD WAINSCOTING (FLR TO CEILING)
	SCULPTURED PANEL BOARD (7/A704)



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

### FINISH KEYNOTES

	EXISTING FLOORING TO REMAIN: PATCH FLOORING & BASE IMPACTED BY RENOVATION (TO MATCH EXIST)
	EXISTING TERRAZZO FLOOR COVERING @ STAIR LANDING & TREADS TO BE REPAIRED/REFINISHED & SEALED.
	PREPARE EXIST SLAB (PREVIOUSLY DEMO FLOORING) TO RECEIVE NEW VCT

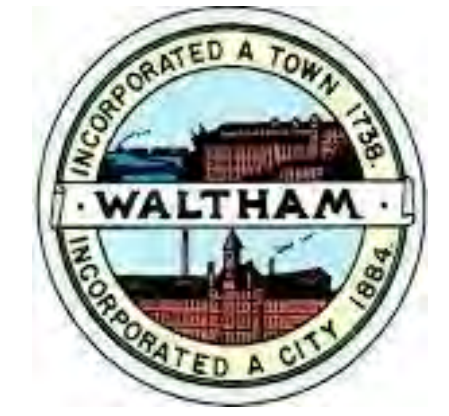
**GENERAL NOTES:**

- \* EXTEND ALL FLOORING UNDER CASEWORK, CABINETS ETC
- \* PROVIDE 7" WIDE MARBLE THRESHOLD AT C.T. FLOOR TRANSITION
- \* VCT FLOORING SHALL CONSIST OF A 3-COLOR BLEND, EXACT LAYOUT SHALL BE DETERMINED DURING CONSTRUCTION
- \* REFER TO SPECIFICATIONS FOR PROPER FLOORING PREPARATION
- \* PROVIDE ALUM STRIP AT ALL FLOOR MATERIAL TRANSITIONS.

### REVISIONS

Number	Description	Date

ISSUED FOR BID



**WALTHAM POLICE STATION RENOVATION**  
  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

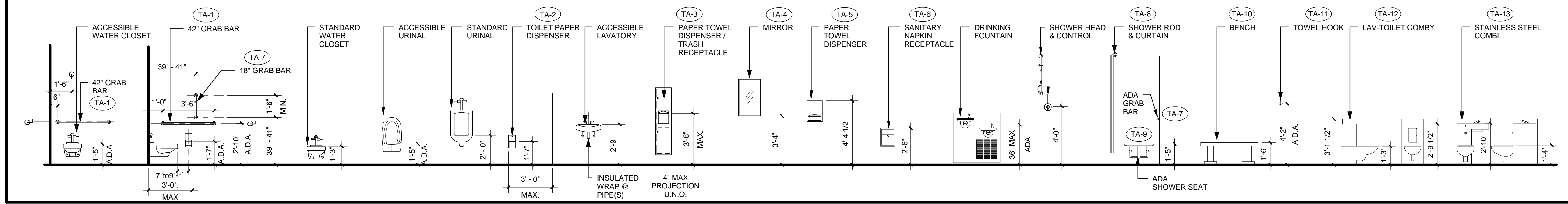
## SECOND FLOOR FINISH PLAN

PROJECT NUMBER: 19401.01  
 DESIGNED BY: FC  
 DRAWN BY: MR  
 CHECKED BY: FC  
 DATE:  
 SCALE: 2016 As indicated  
 SHEET NUMBER:

A632



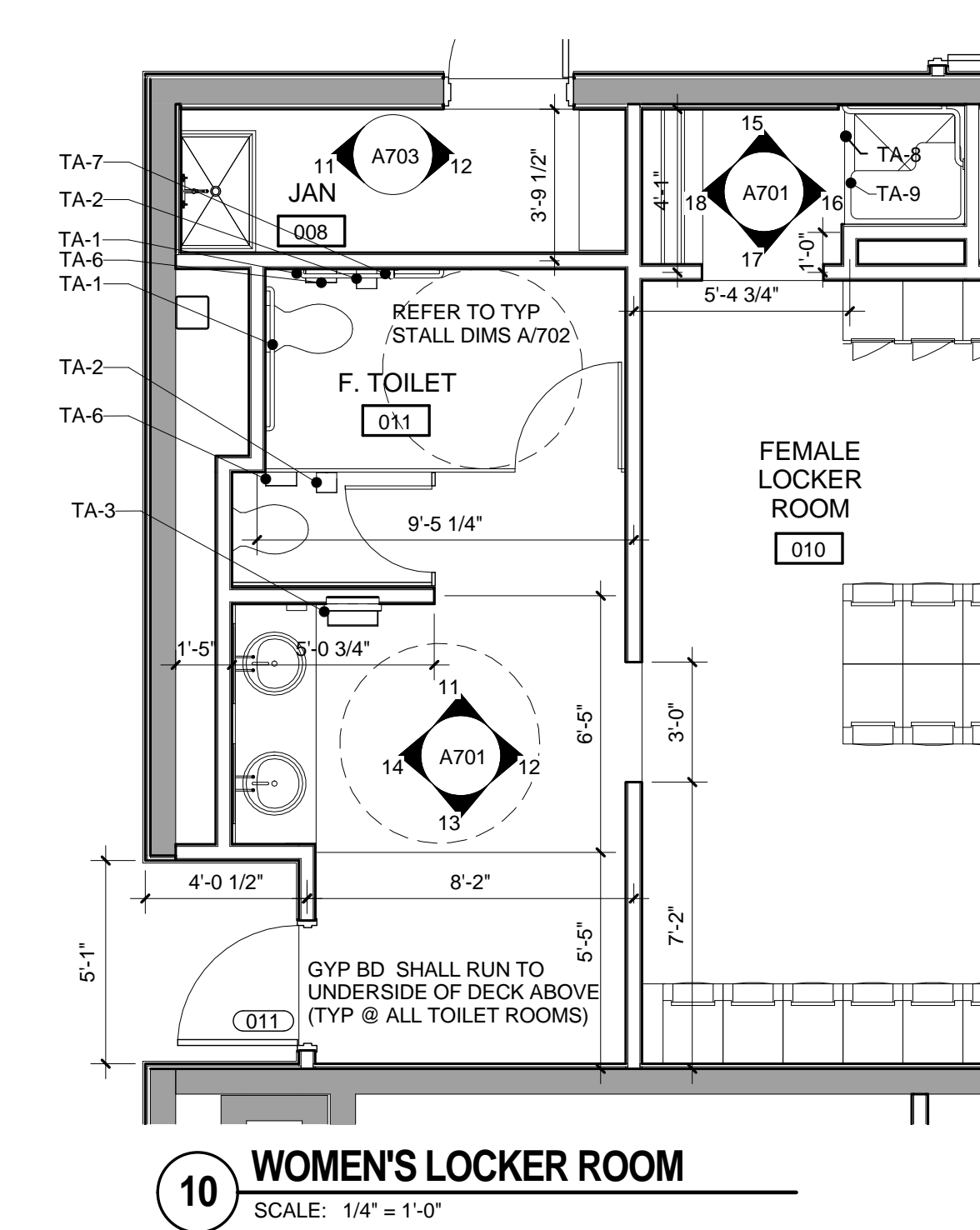
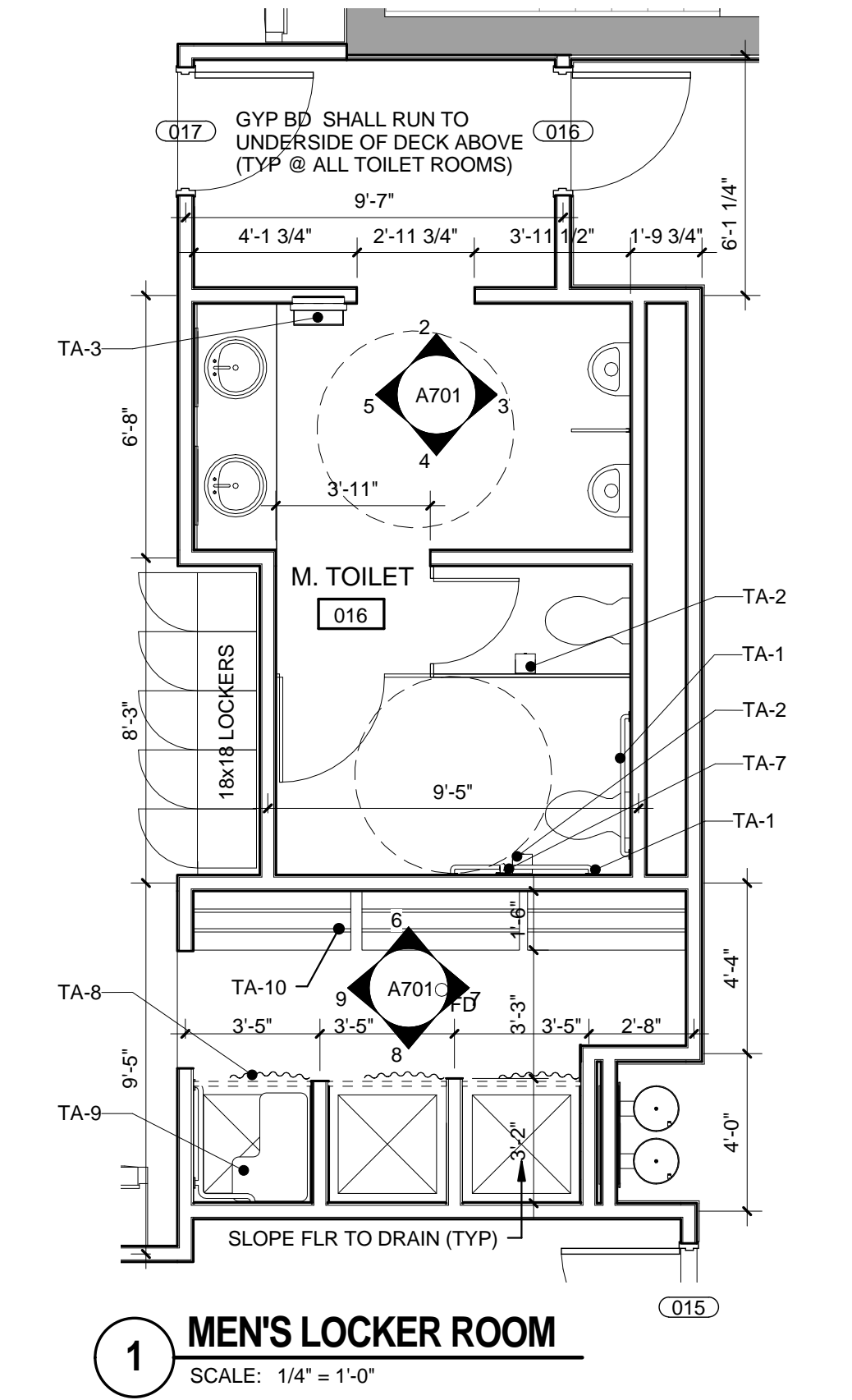
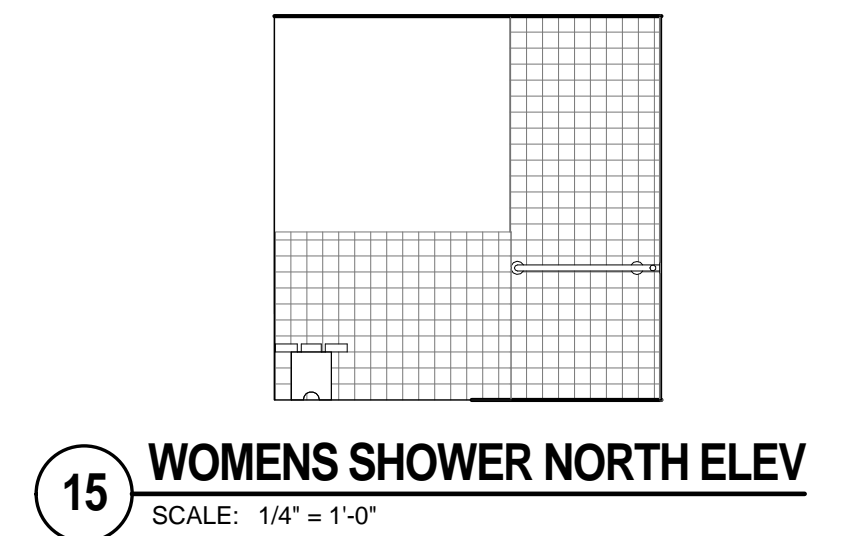
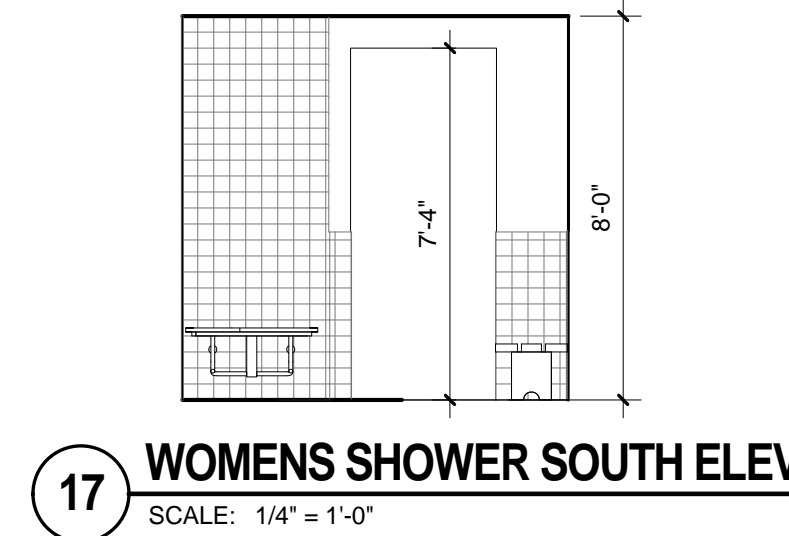
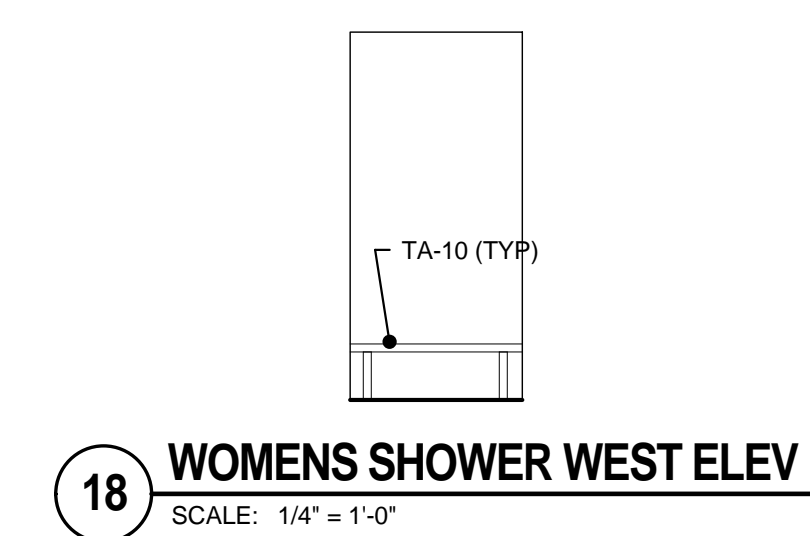
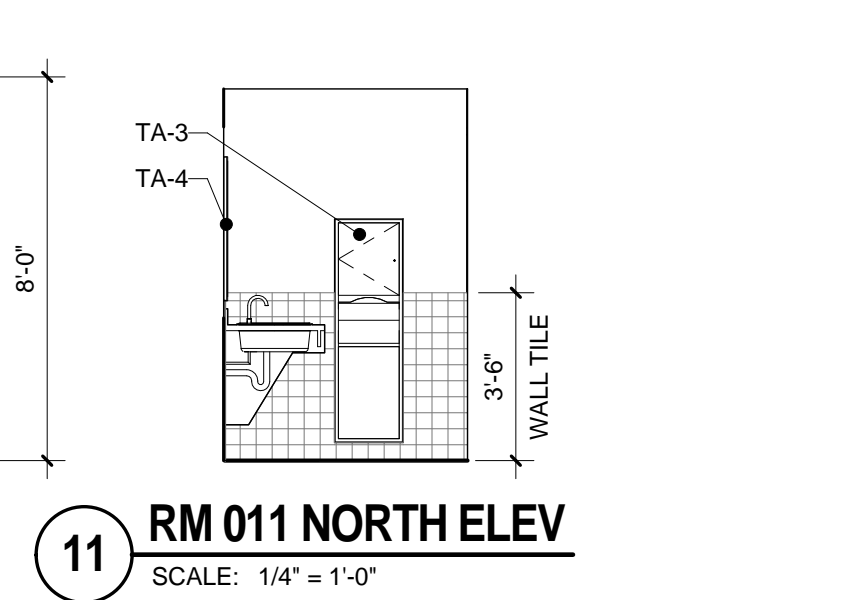
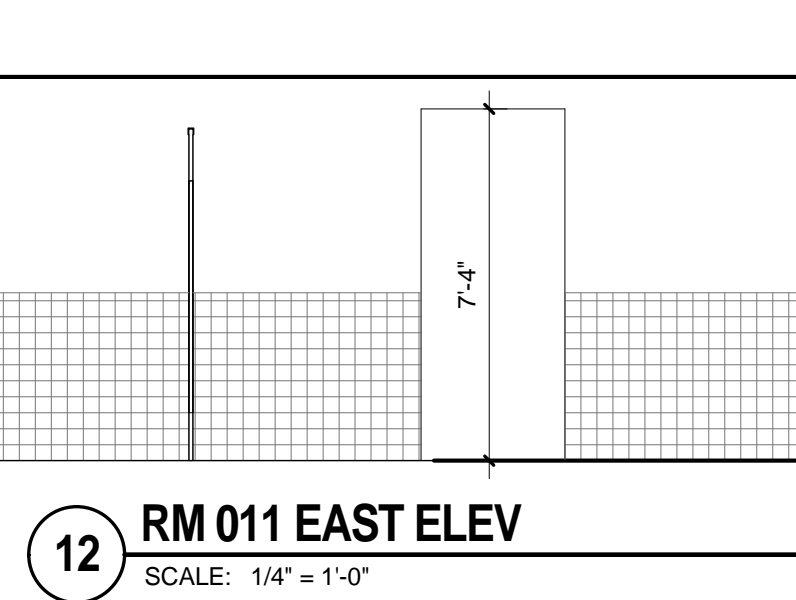
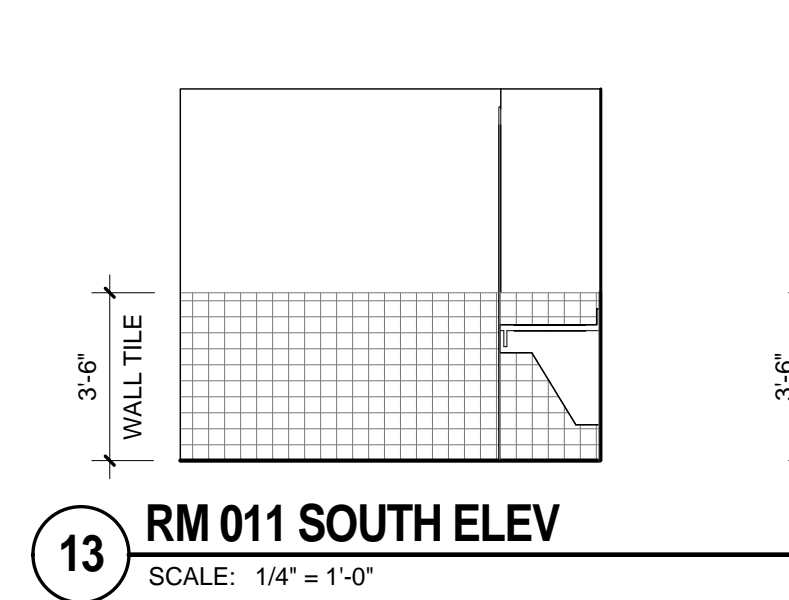
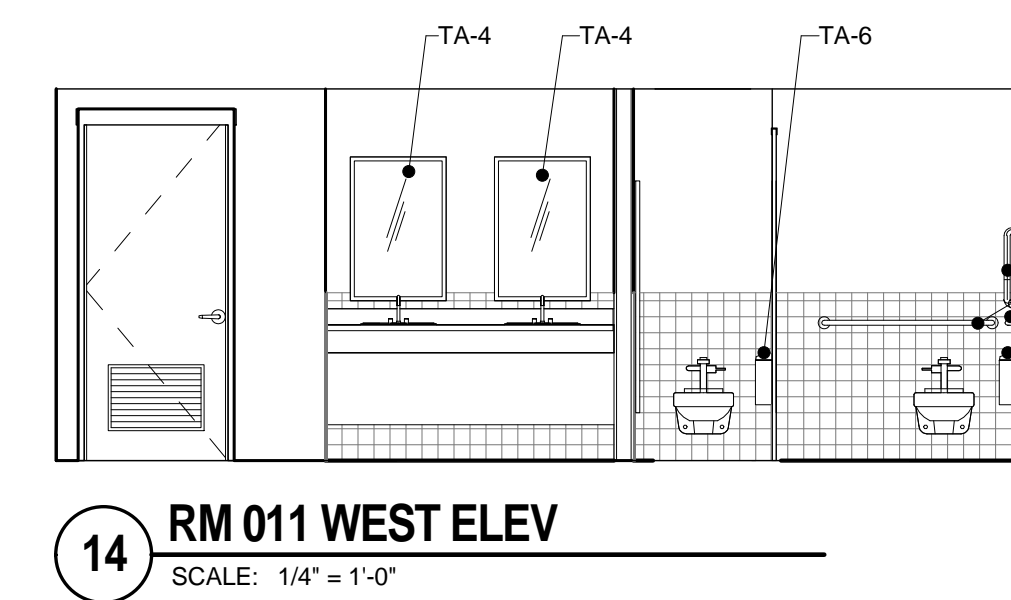
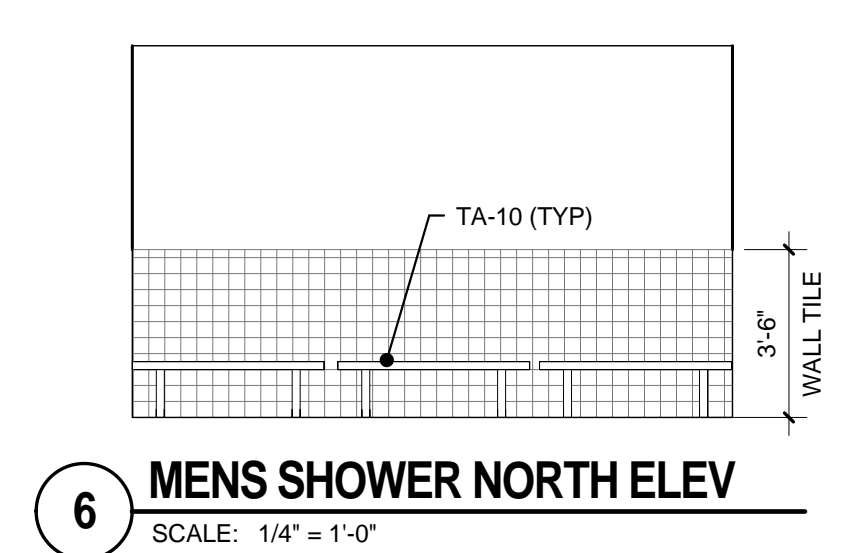
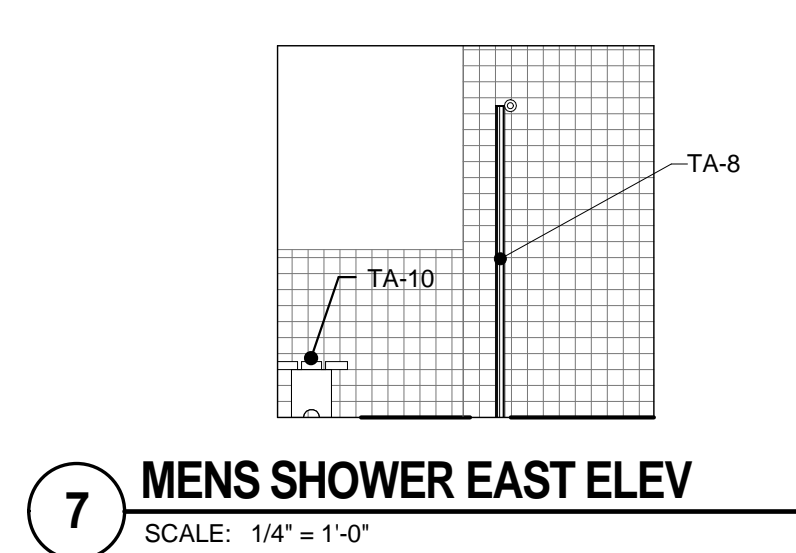
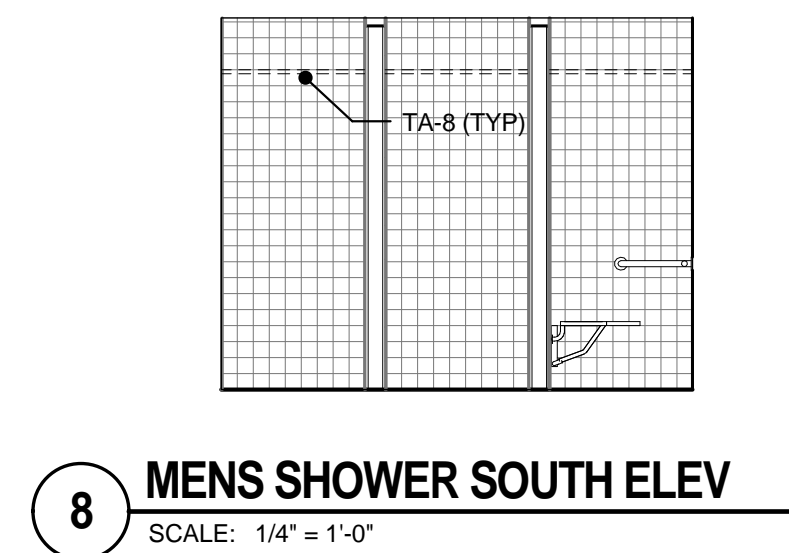
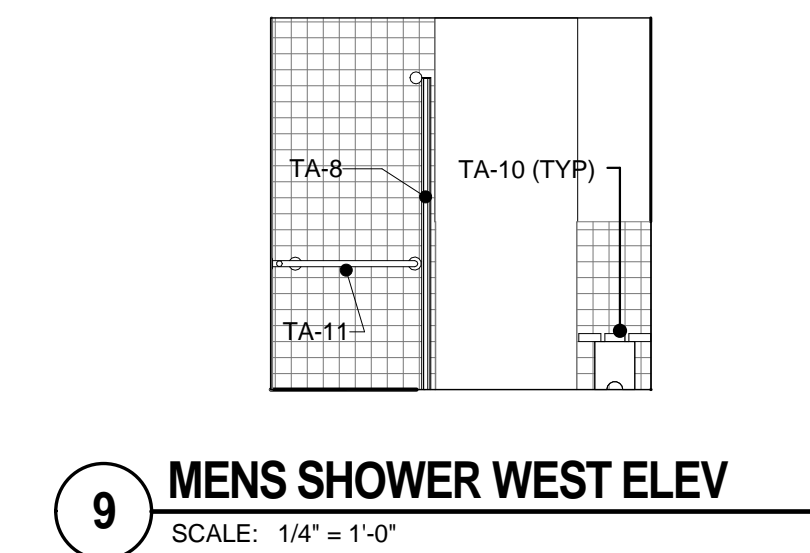
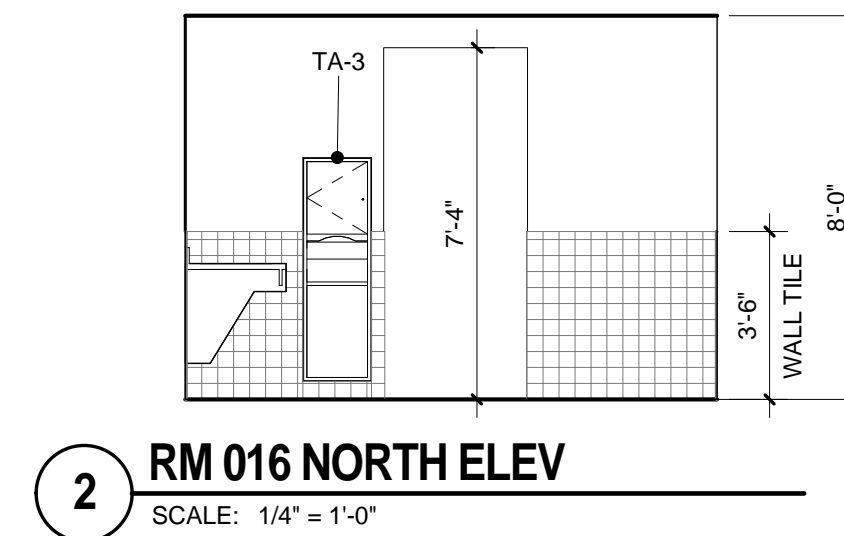
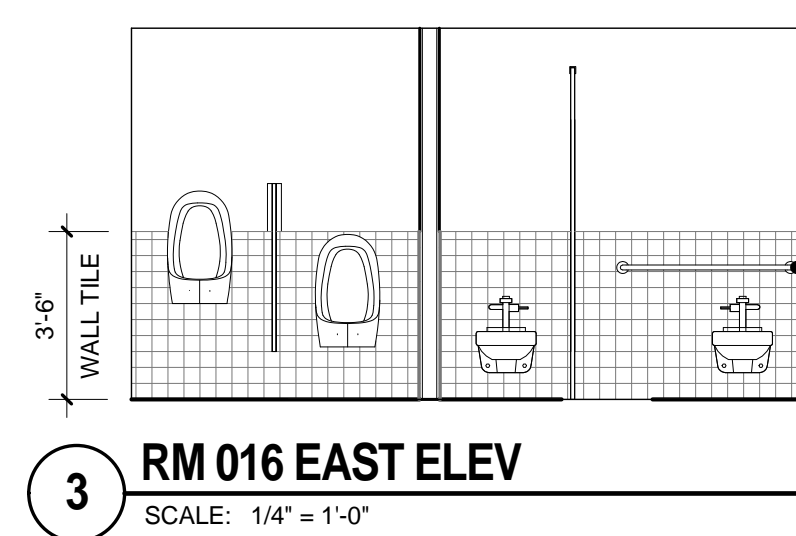
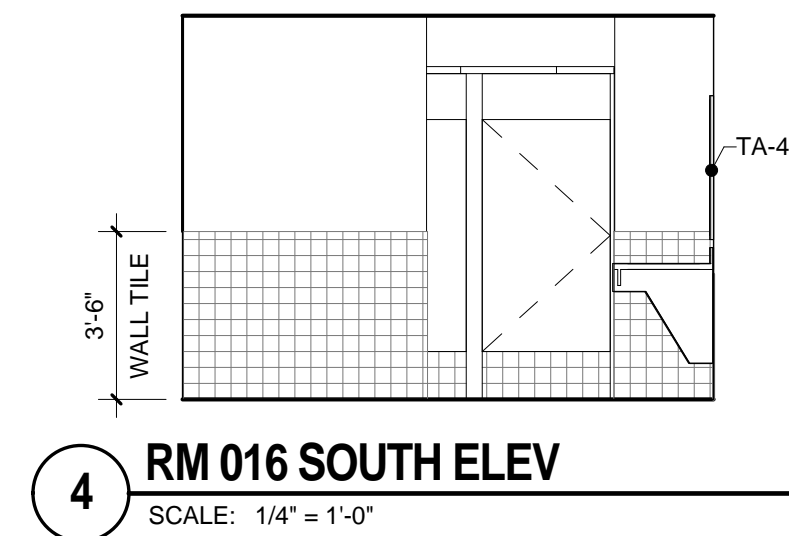
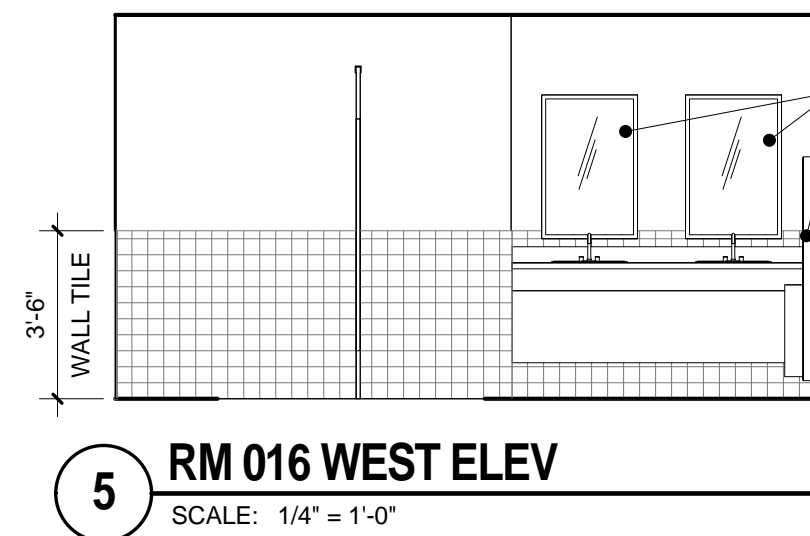
# TOILET ROOM ACCESSORY LEGEND & MOUNTING HEIGHTS



TOILET ROOM ACCESSORY SCHEDULE		
TYPE MARK	FIXTURE	BOBRICK MODEL NUMBER
TA-1	GRAB BAR	42" BOBRICK #B6806
TA-2	TOILET PAPER DISPENSER	BOBRICK #B4388
TA-3	PAPER TOWEL & TRASH RECEPTAL	BOBRICK B3942
TA-4	MIRROR	BOBRICK #B290
TA-5	PAPER TOWEL DISPENSER	BOBRICK #B359
TA-6	SANITARY NAPKIN DISPOSAL	BOBRICK #B354
TA-7	ADA VERTICAL GRAB BAR	18" BOBRICK #B5806
TA-8	SHOWER ROD WITH CURTAIN	BOBRICK #B6047(ROD) #B243 (CURTAIN)
TA-9	SHOWER SEAT	#B517 - RT HANDED #B518 - LT HANDED
TA-11	GRAB BAR-CORNER	B-6806 Series

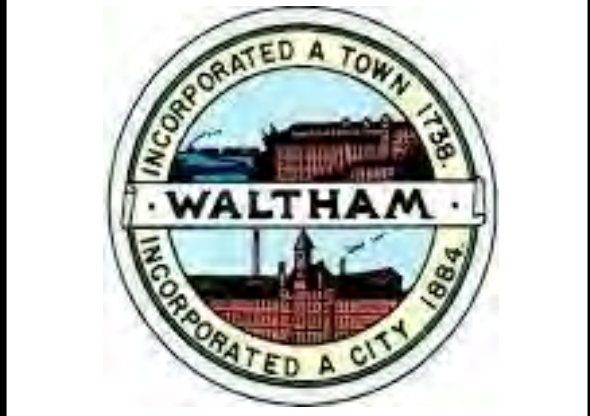
## SHEET NOTES:

- REFER TO SHEET A602 FOR FINISH MATERIAL SCHEDULE.
- REFER TO SHEET A101 FOR GENERAL PLAN NOTES.
- REFER TO STRUCTURAL DWGS FOR CUTTING & PATCHING OF CONC SLAB



REVISIONS		
Number	Description	Date

ISSUED FOR BID



WALTHAM POLICE STATION RENOVATION  
155 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS

## TOILET ROOM PLANS AND ELEVATIONS

PROJECT NUMBER: 19401.01  
DESIGNED BY: FC  
DRAWN BY: EKM  
CHECKED BY: FC  
DATE: July-Aug. 2016  
SCALE: 1/4" = 1'-0"

SHEET NUMBER:  
**A701**

ELEC: \_\_\_\_\_ MECH: \_\_\_\_\_ FIRE: \_\_\_\_\_ PLUM: \_\_\_\_\_ STRUC: \_\_\_\_\_ ARCH: \_\_\_\_\_ CIVIL: \_\_\_\_\_  
 PROJECT FILE: C:\Users\mgoff\Documents\19401\Waltham Police Station\ARCHITECTURE\_Mfgoff.rvt  
 PLOTTED: 7/14/2016 11:23:01 AM

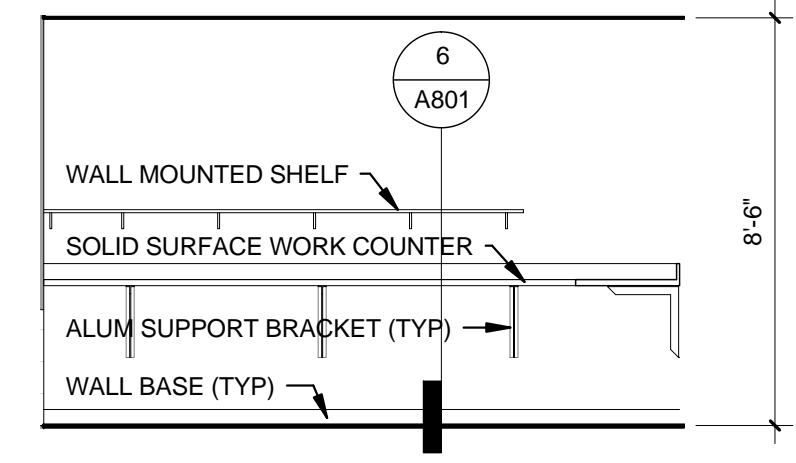




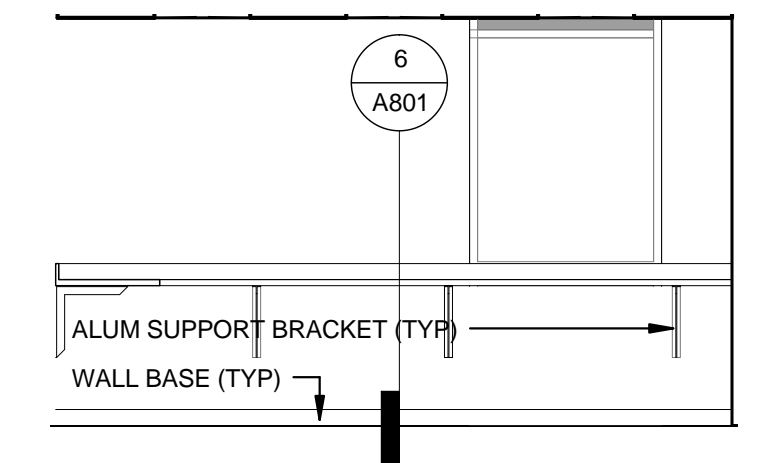




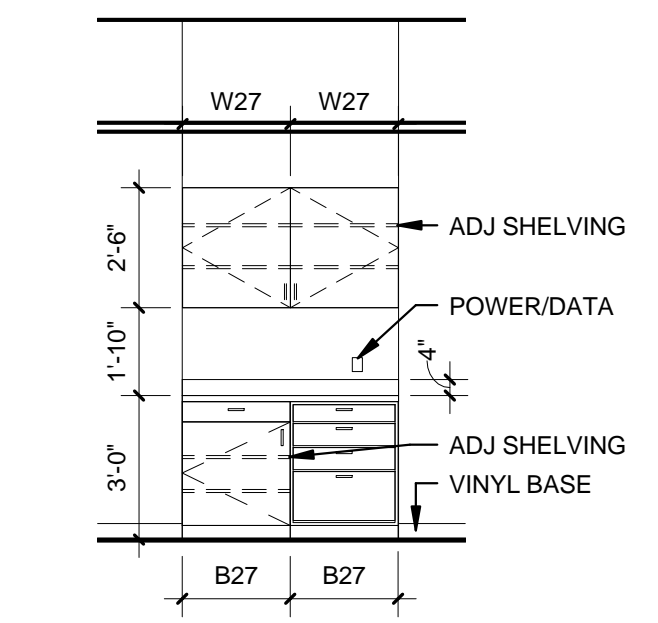




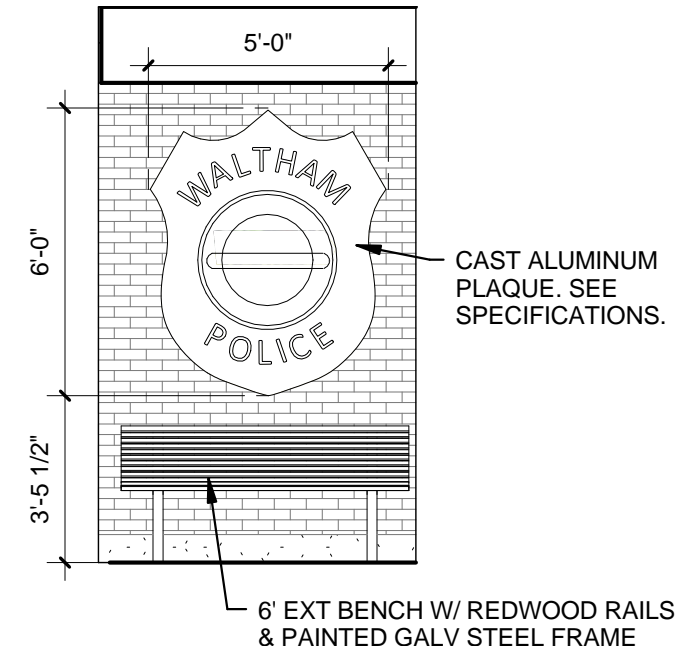
**1 ASSIGNMENT 201 NORTH**  
 SCALE: 1/4" = 1'-0"



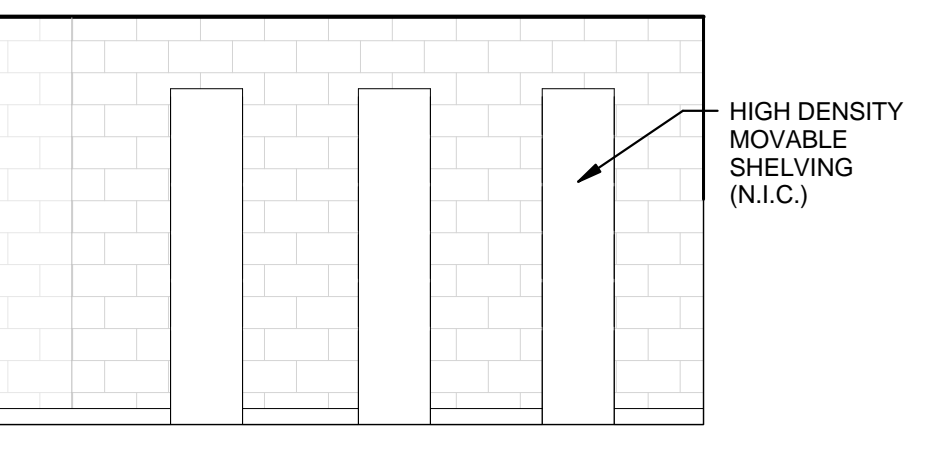
**2 ASSIGNMENT 201 EAST**  
 SCALE: 1/4" = 1'-0"



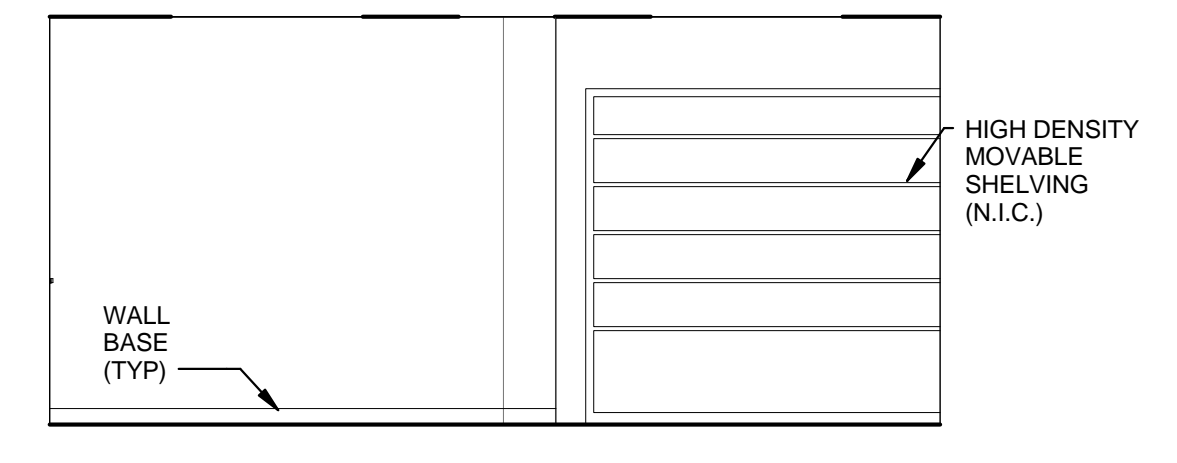
**3 REPORT RM ELEV**  
 SCALE: 1/4" = 1'-0"



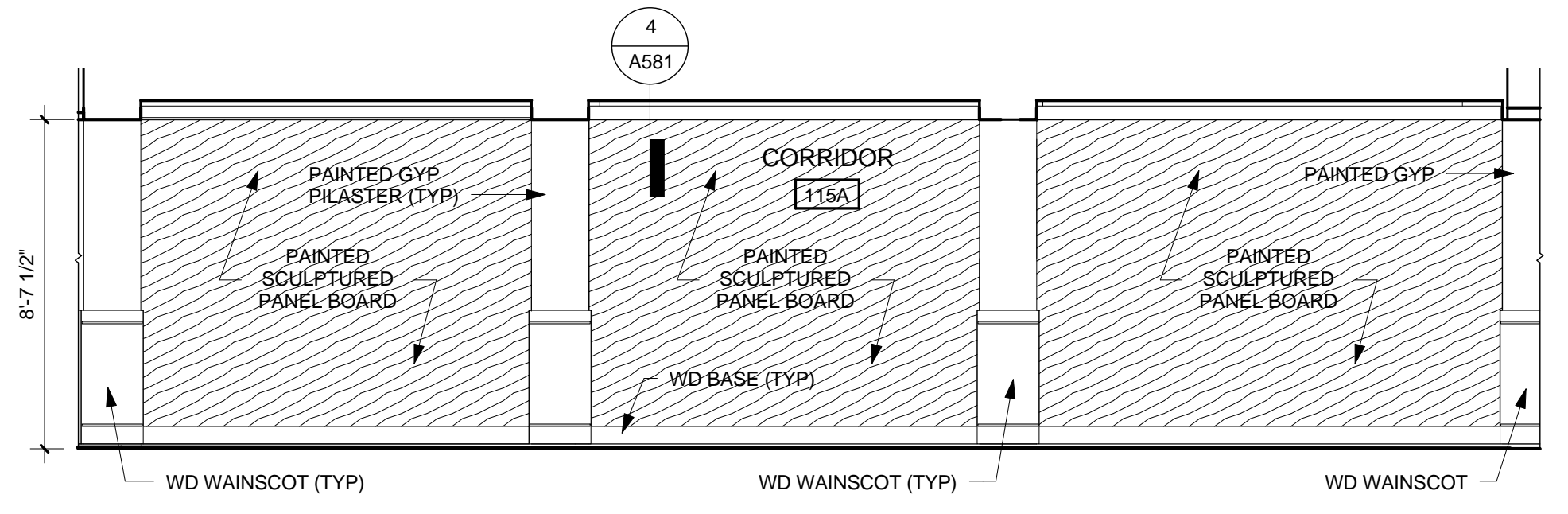
**4 DECORATIVE SIGNAGE**  
 SCALE: 1/4" = 1'-0"



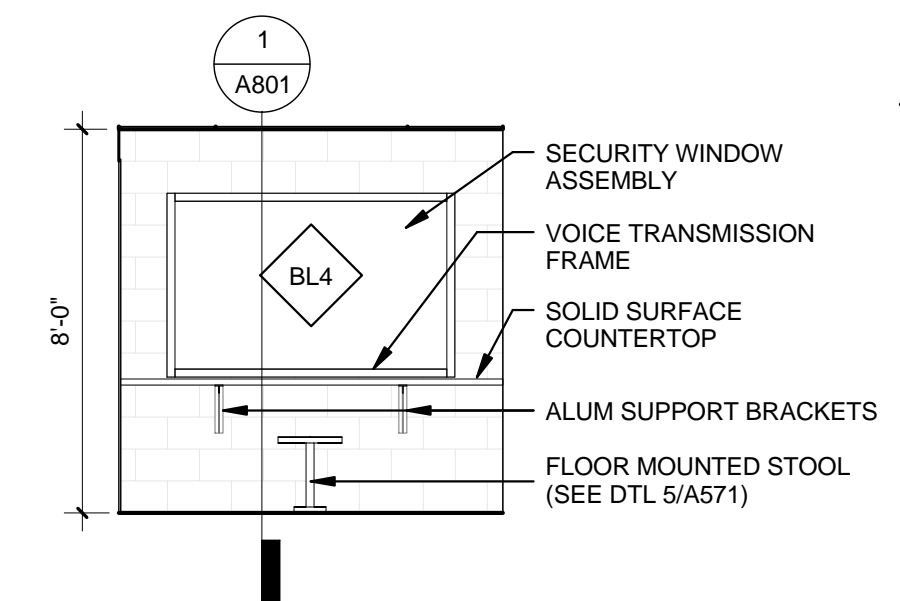
**5 ARCHIVES NORTH ELEVATION**  
 SCALE: 1/4" = 1'-0"



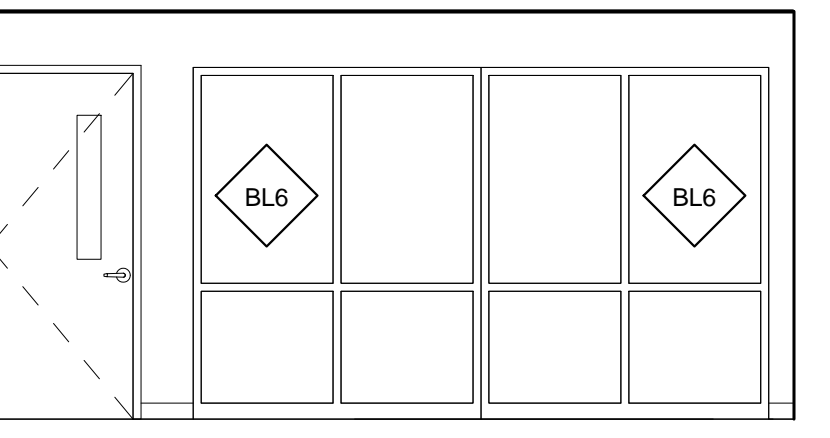
**6 ARCHIVE WEST ELEVATION**  
 SCALE: 1/4" = 1'-0"



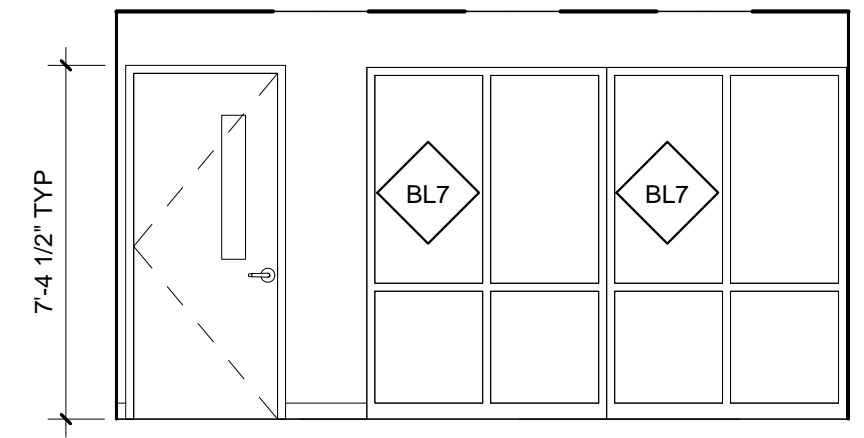
**7 CORRIDOR 115A ELEV**  
 SCALE: 1/4" = 1'-0"



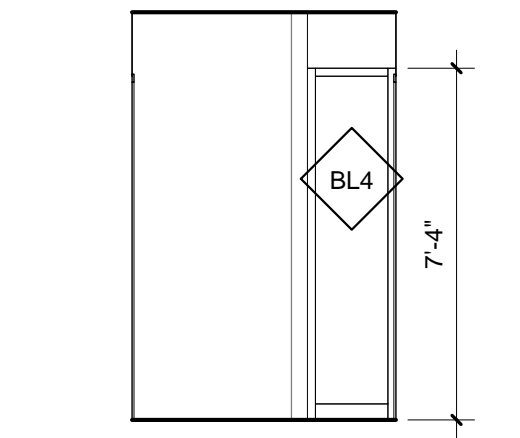
**8 INTERVIEW 139 EAST**  
 SCALE: 1/4" = 1'-0"



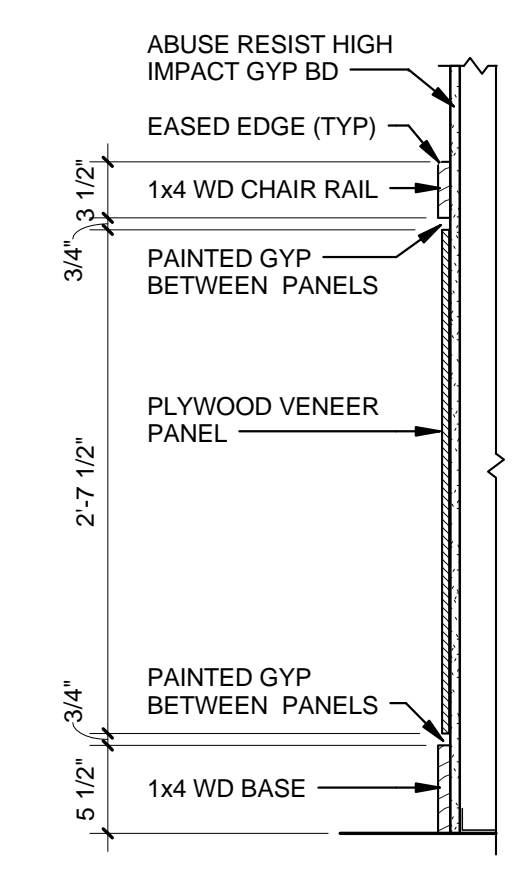
**9 TRAINING AUXILIARY OFFICE**  
 SCALE: 1/4" = 1'-0"



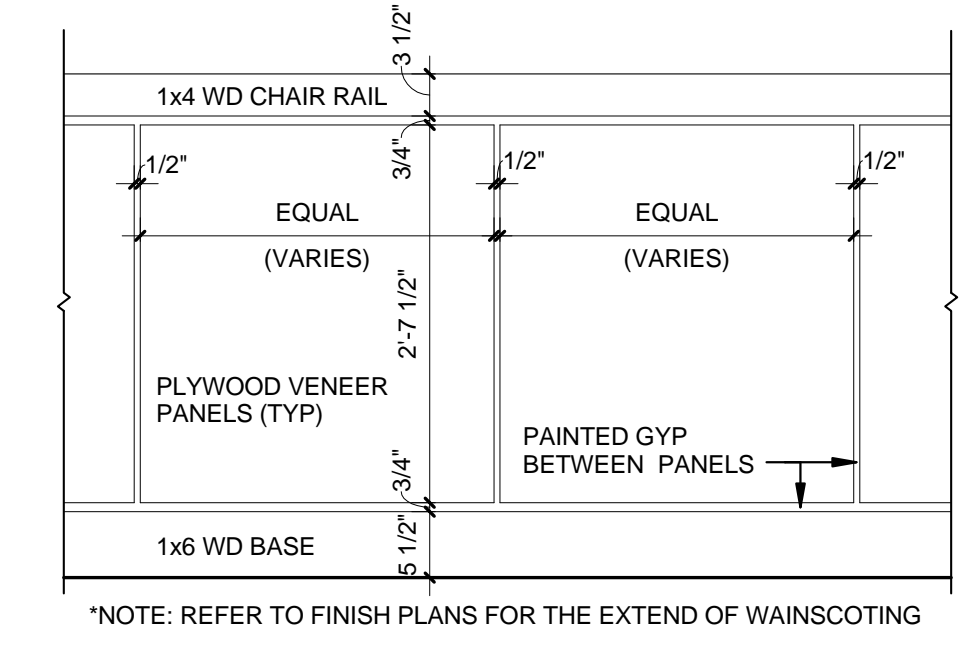
**10 PLANNING OFFICE**  
 SCALE: 1/4" = 1'-0"



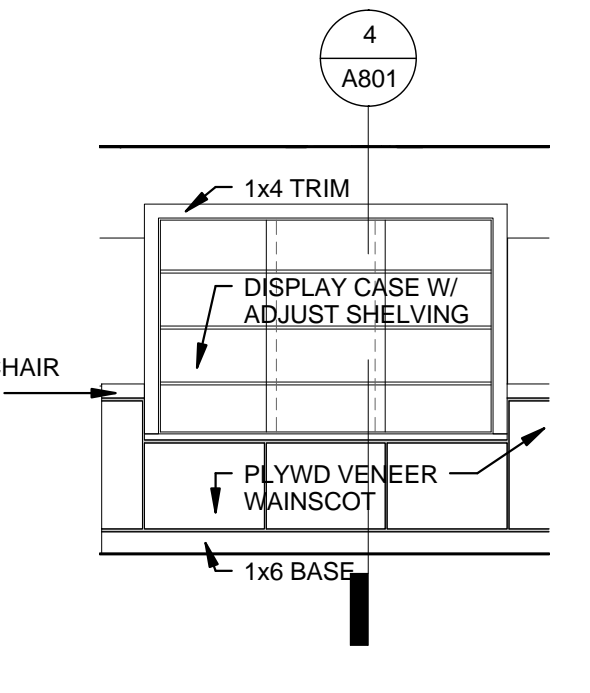
**11 VESTIBULE ELEVATION**  
 SCALE: 1/4" = 1'-0"



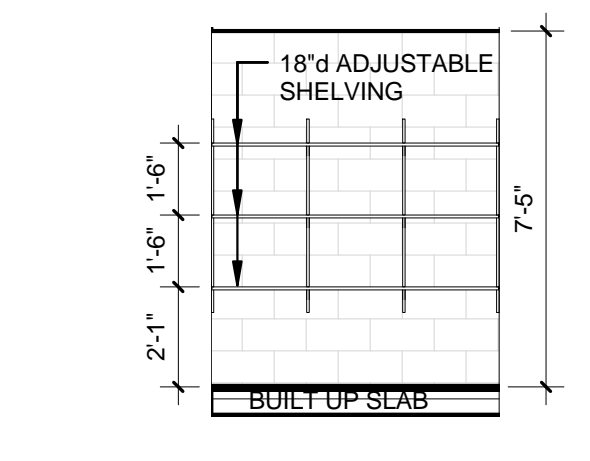
**12 TYP WAINSCOT DETAIL**  
 SCALE: 1" = 1'-0"



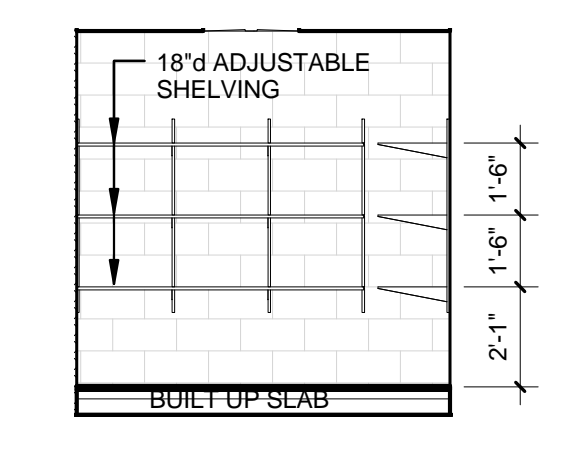
**13 TYP WAINSCOT ELEV**  
 SCALE: 3/4" = 1'-0"



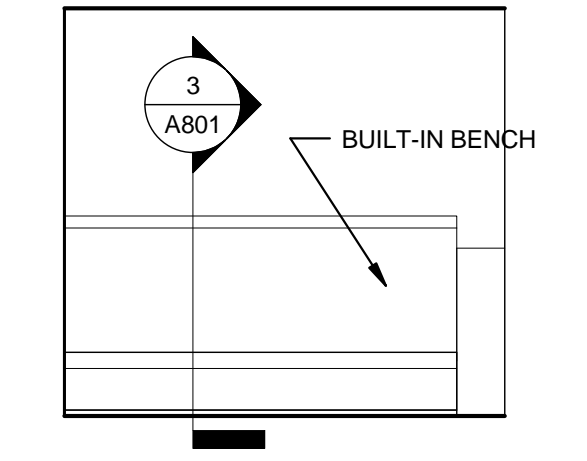
**14 DISPLAY CASE ELEV**  
 SCALE: 1/4" = 1'-0"



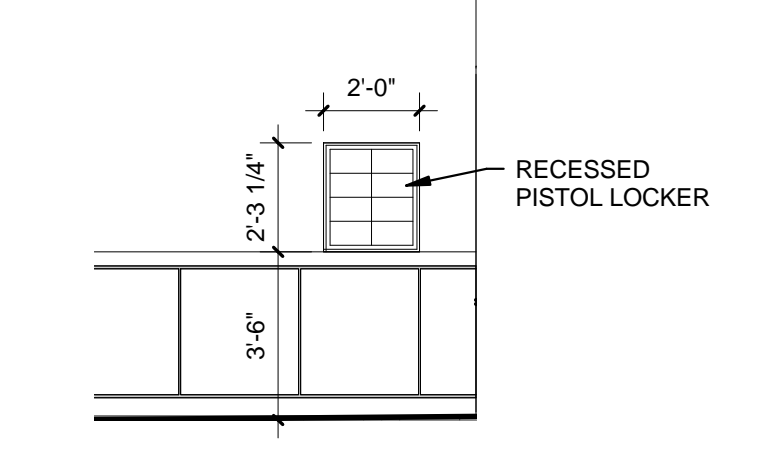
**15 STORAGE 146 SOUTH**  
 SCALE: 1/4" = 1'-0"



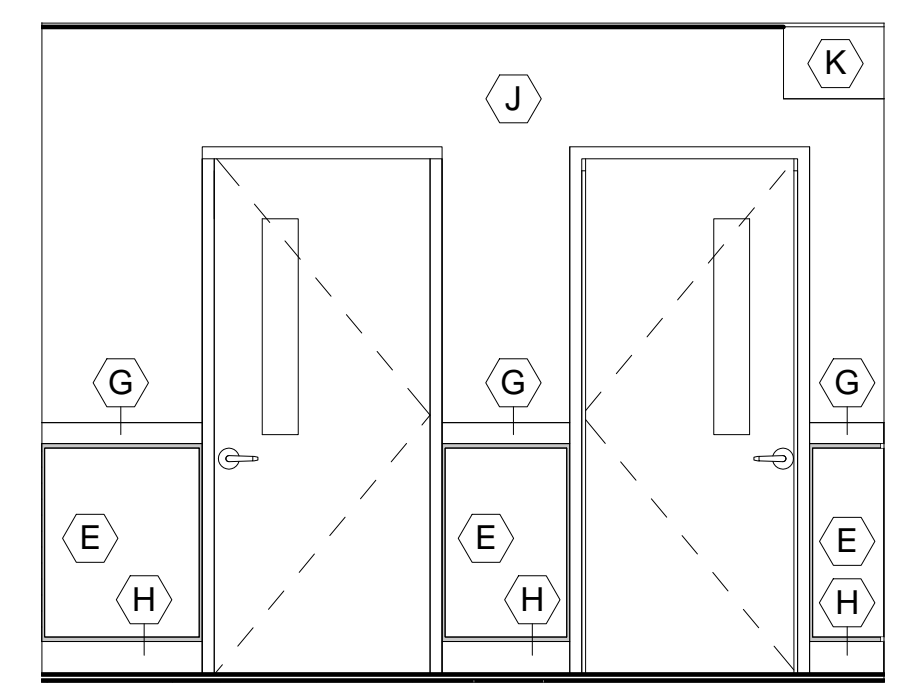
**16 STORAGE 146 WEST**  
 SCALE: 1/4" = 1'-0"



**17 SECOND FLOOR BENCH ELEV**  
 SCALE: 1/4" = 1'-0"

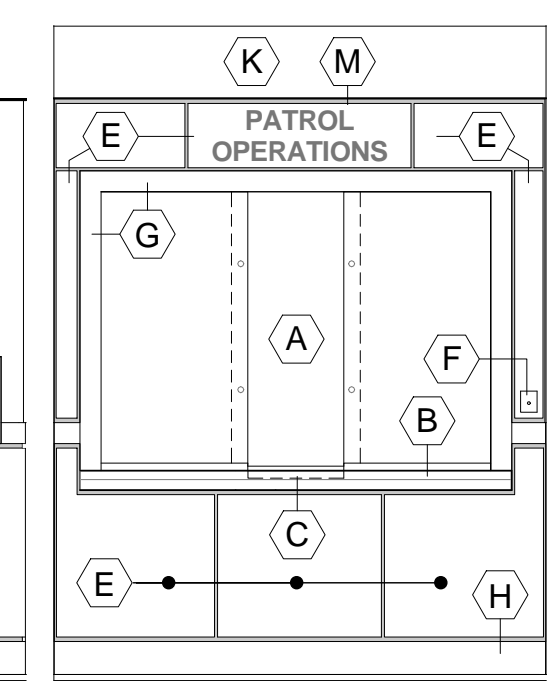


**18 8 DOOR PISTOL LOCKER**  
 SCALE: 1/4" = 1'-0"

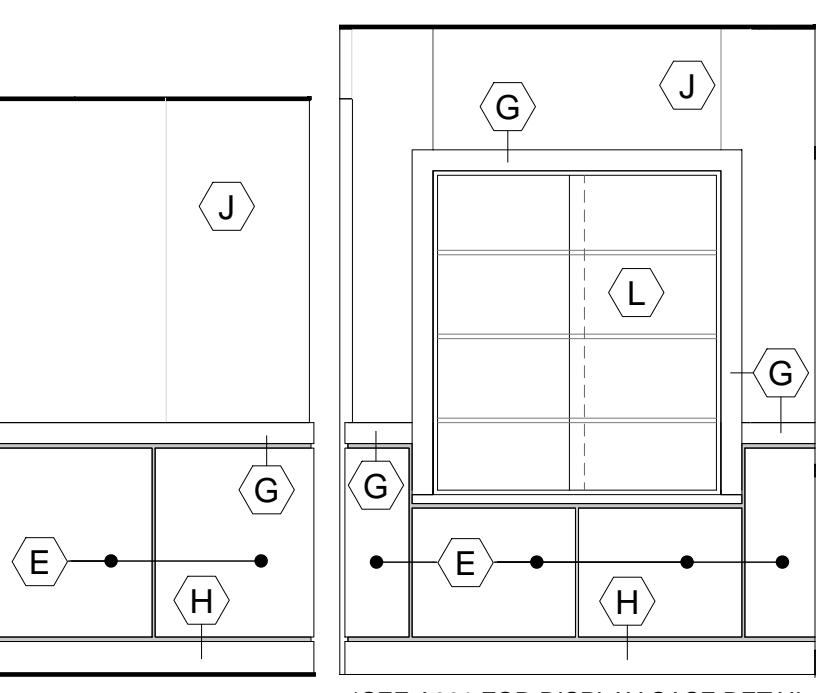
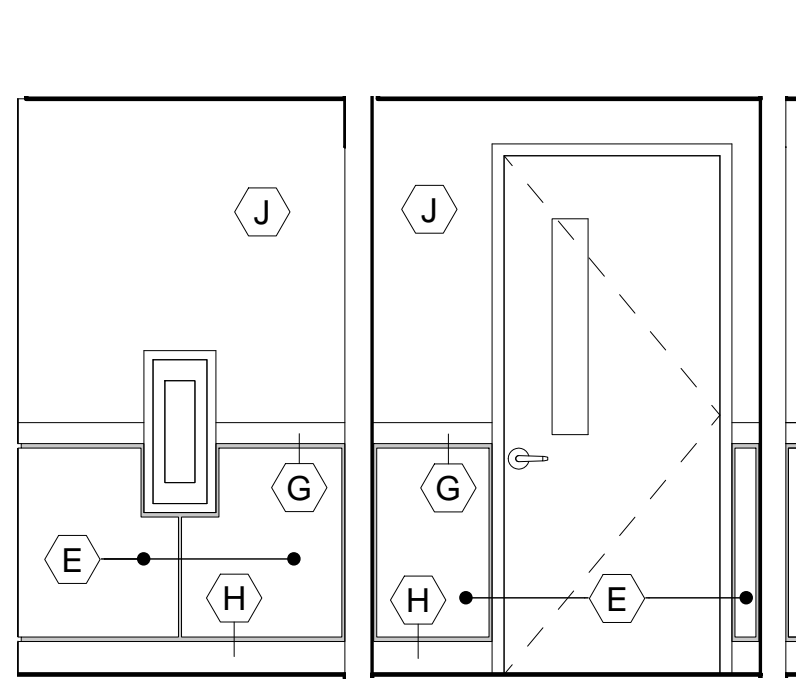


\*SEE 8/A801 FOR COUNTER DETAIL

**19 UNFOLDED ELEVATION @ LOBBY**  
 SCALE: 3/8" = 1'-0"



\*SEE 8/A801 FOR COUNTER DETAIL



\*SEE A801 FOR DISPLAY CASE DETAIL

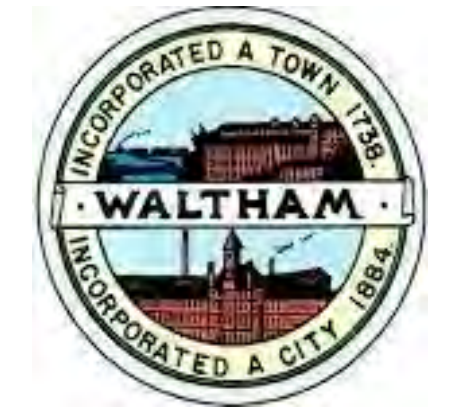
**LOBBY ELEV KEY NOTES:**

- (A) BULLET RESISTANT SECURITY WINDOW ASSEMBLY W/ BAFFLE CONFIG GLAZING
- (B) SOLID SURFACE COUNTERTOP & EDGE
- (C) RECESSED DEAL TRAY
- (D) FIRE RATED SECURITY PACKAGE PASS-THRU
- (E) 1/2" PLYWOOD VENEER PANEL
- (F) DOOR BELL, MAX 48" A.F.F. (REF TO ELECT)
- (G) 1x4 SOLID WD TRIM
- (H) 1x6 SOLID WD BASE TRIM
- (J) PAINTED GYPSUM BOARD WALL
- (K) PAINTED GYPSUM BOARD SOFFIT
- (L) DISPLAY CASE W/ ADJUST SHELVING
- (M) INDIVIDUAL STAINLESS STEEL LETTERS ON STANDOFFS, SEE DETAIL 1/A572

**NOTES:**

- 1) 1/2" GAP BETWEEN PLWD PANELS TO EXPOSE PAINTED GYP (TYP FOR VERTICAL RUNNING GAPS)
- 2) 3/4" GAP BETWEEN PLWD PANELS TO EXPOSE PAINTED GYP (TYP FOR HORIZONTAL RUNNING GAPS)

ISSUED FOR BID



**WALTHAM POLICE STATION RENOVATION**

155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**INTERIOR ELEVATIONS**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: Designer  
 DRAWN BY: JR  
 CHECKED BY: Checker  
 DATE:  
 SCALE: 2016 As Indicated  
 SHEET NUMBER:

**A704**

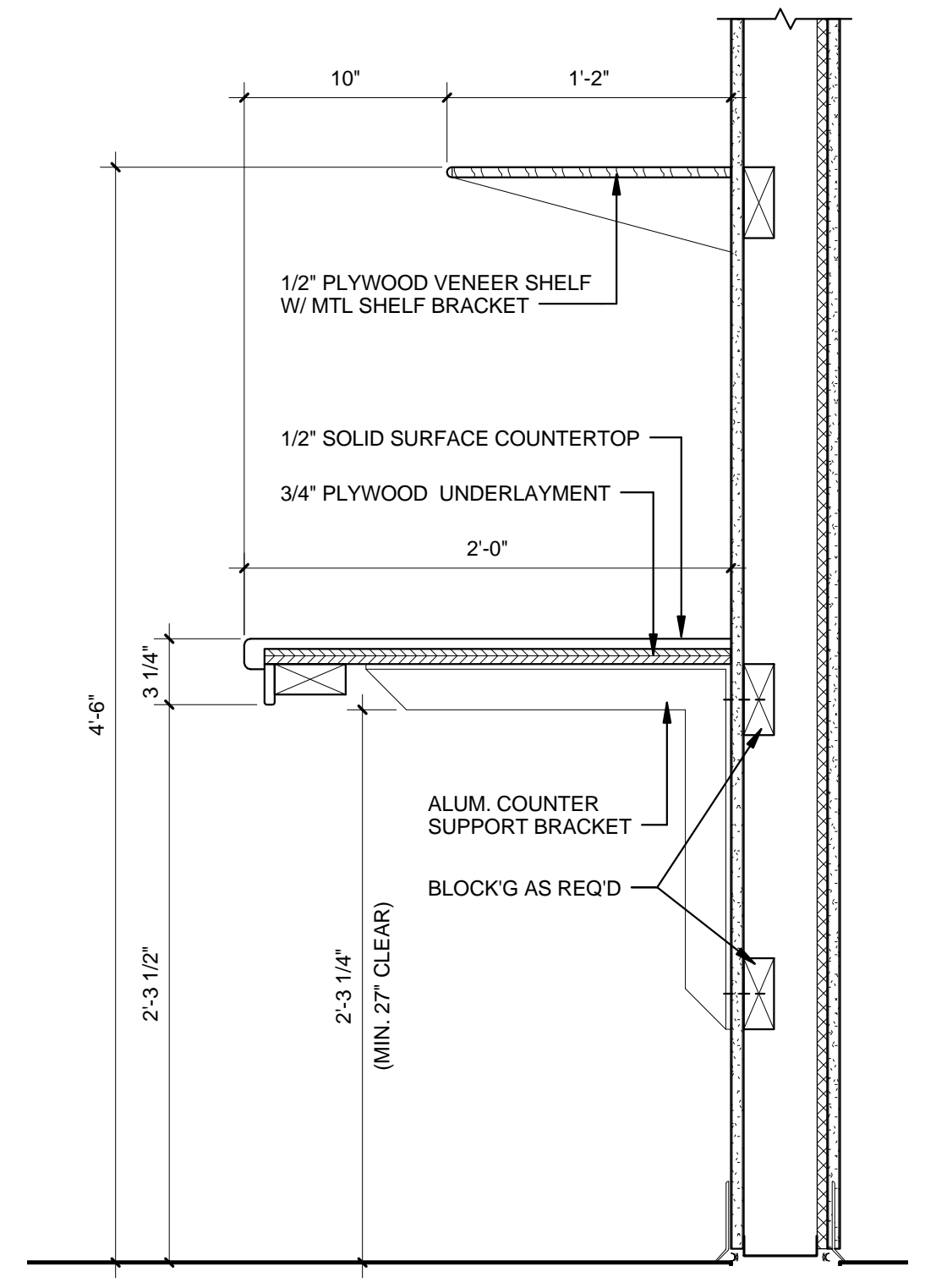
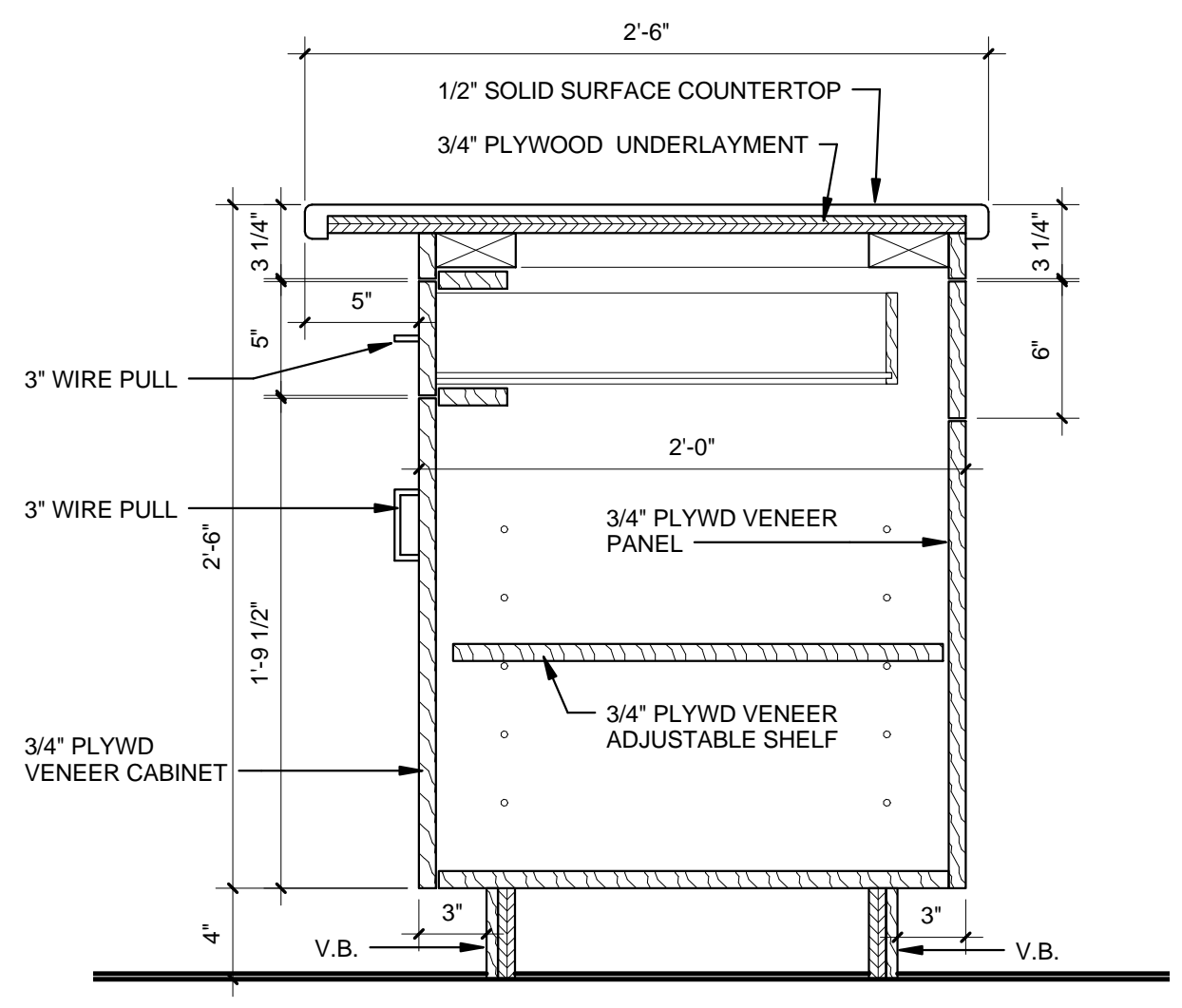
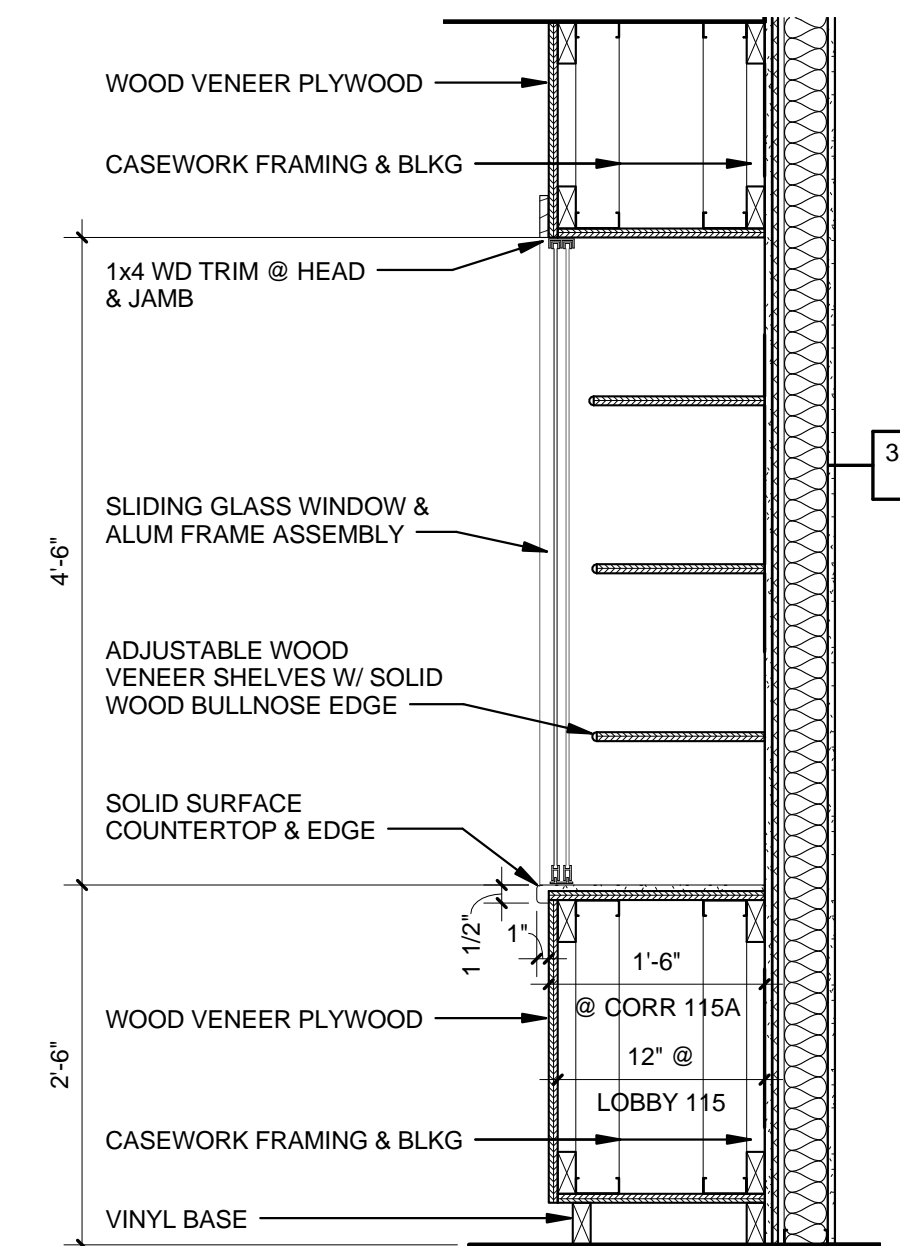
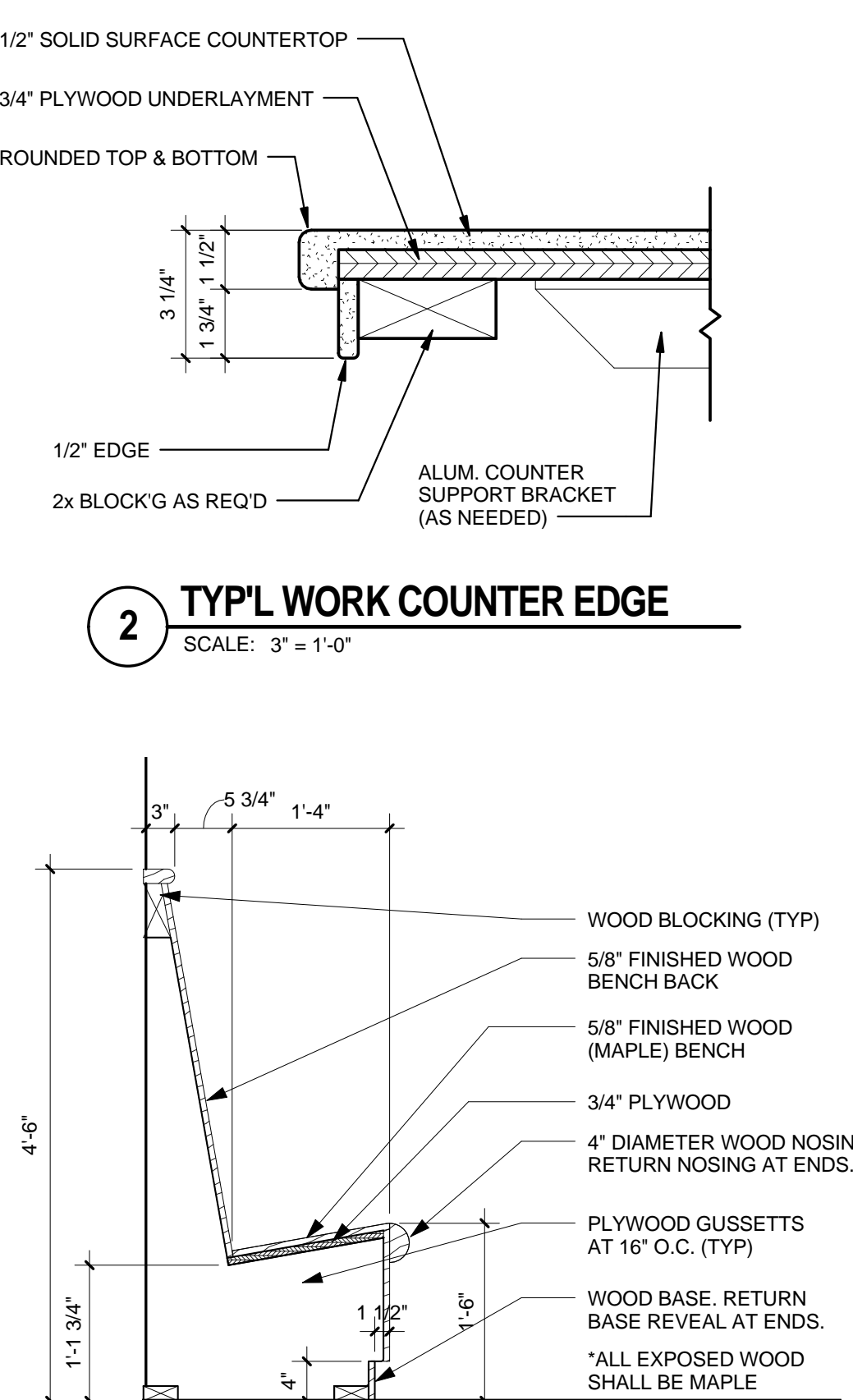
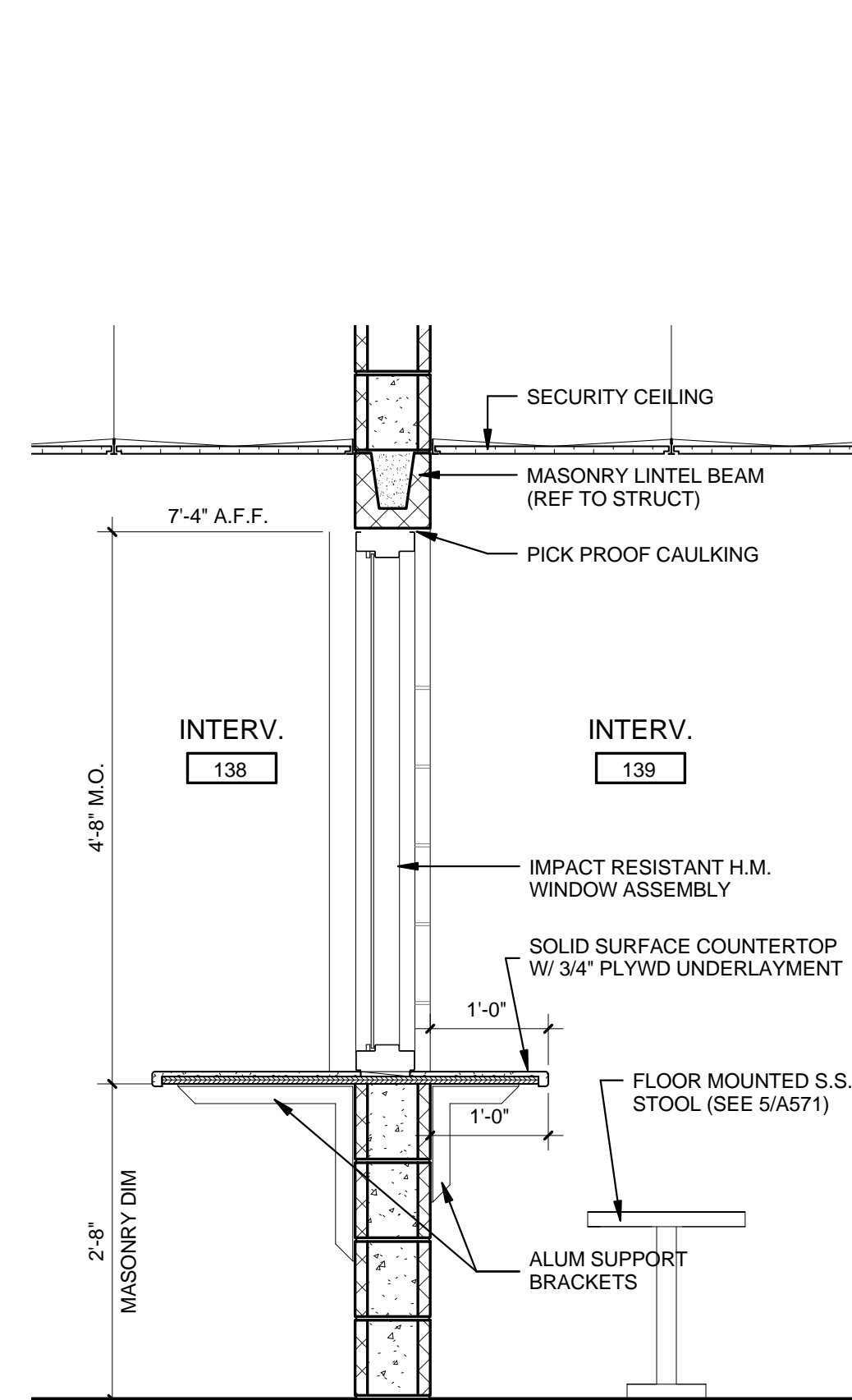
ELEC: \_\_\_\_\_ MECH: \_\_\_\_\_ FIRE: \_\_\_\_\_ PLUM: \_\_\_\_\_ STRUC: \_\_\_\_\_ ARCH: \_\_\_\_\_ CIVIL: \_\_\_\_\_ REVIEWED BY: \_\_\_\_\_ PROJECT FILE: C:\Users\mguires\Documents\19401 Waltham Police Station-Architecture\_Mk062114







ELEC. MECH. FIRE. PLUM. STRUC. ARCH. CIVIL. REVIEW BY: 7/14/2016 11:23:19 AM PROJECT FILE: C:\Users\mgoff\Documents\19401 Waltham Police Station Architecture\_Millwork.rvt



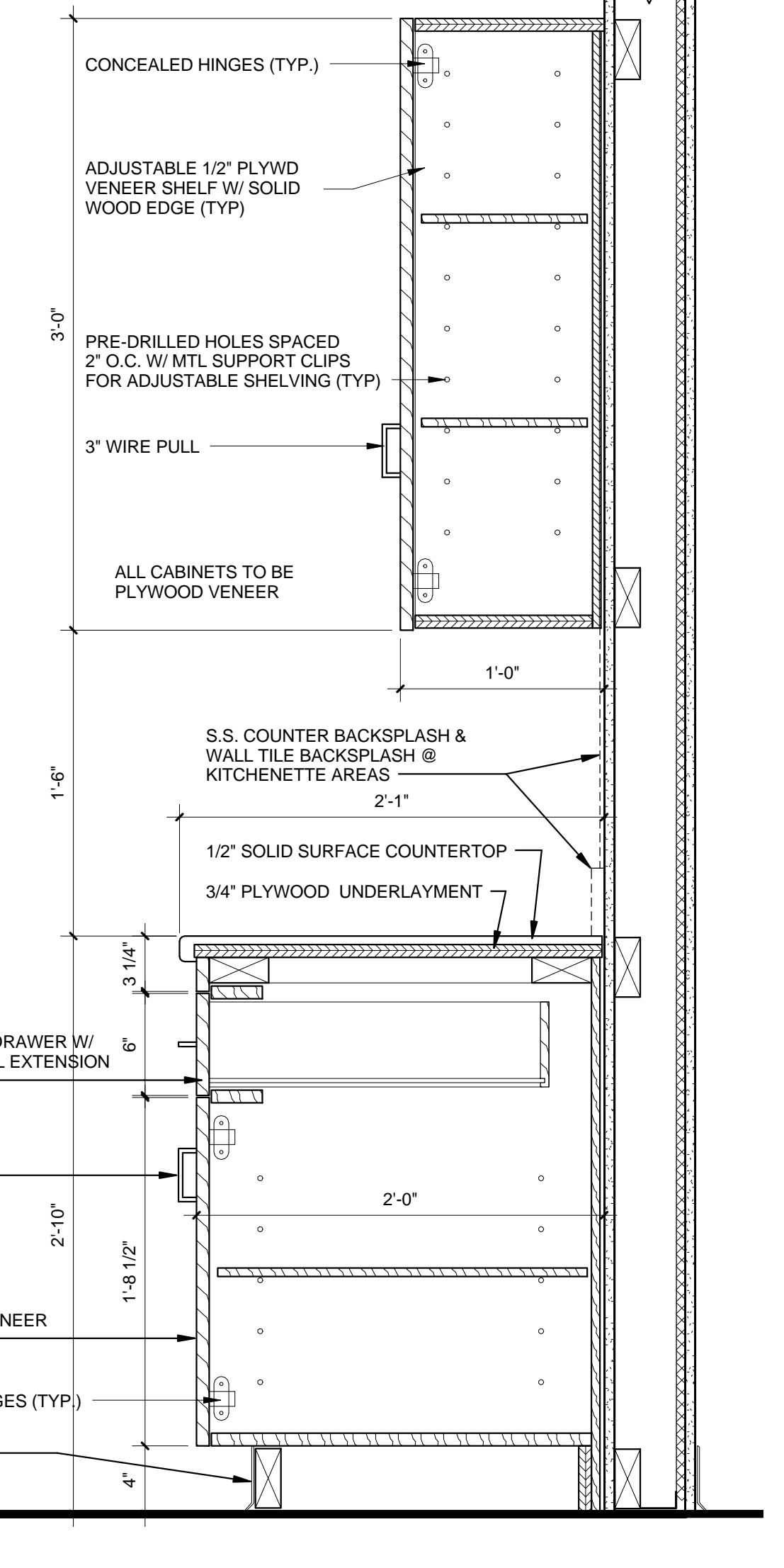
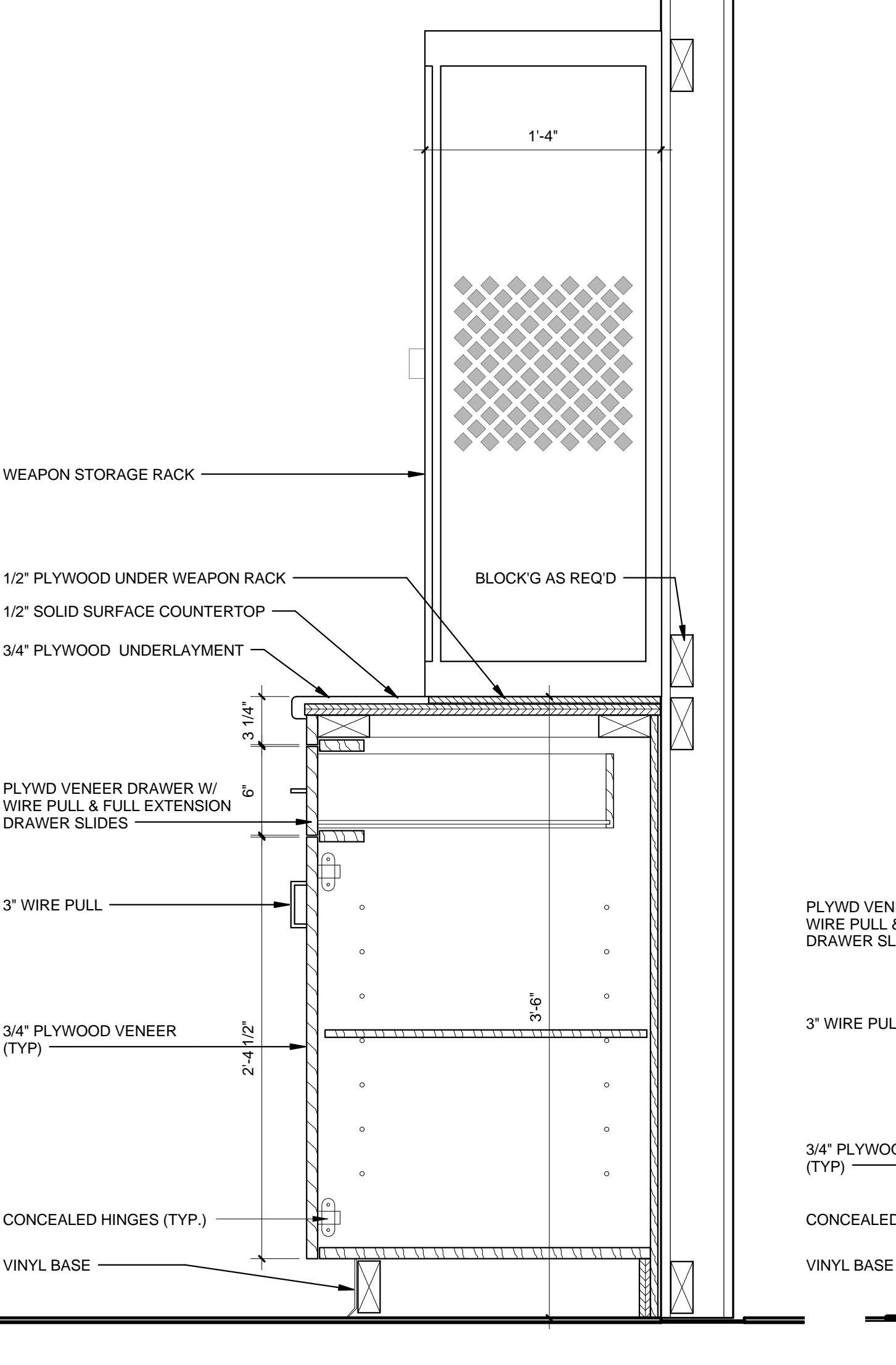
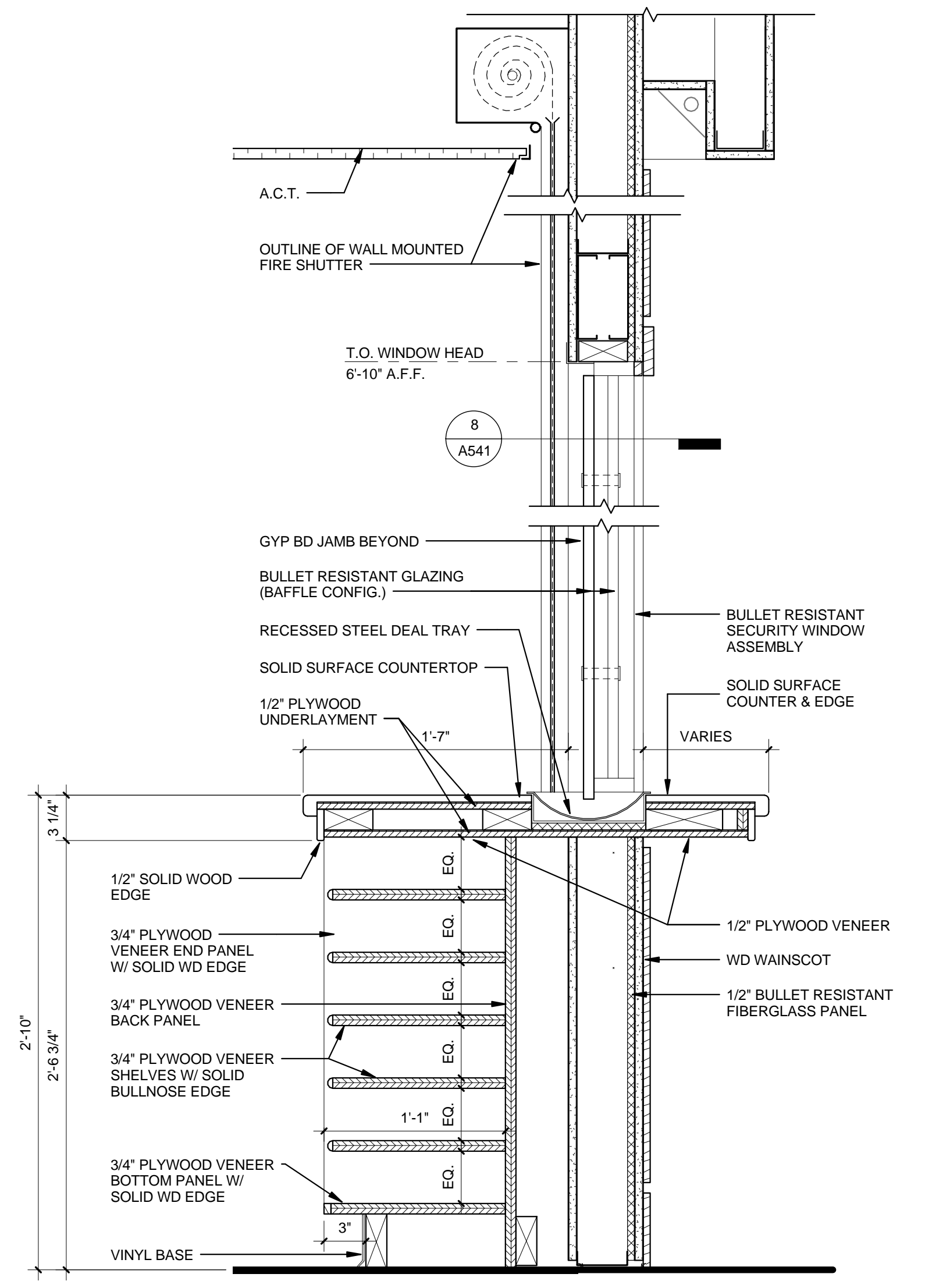
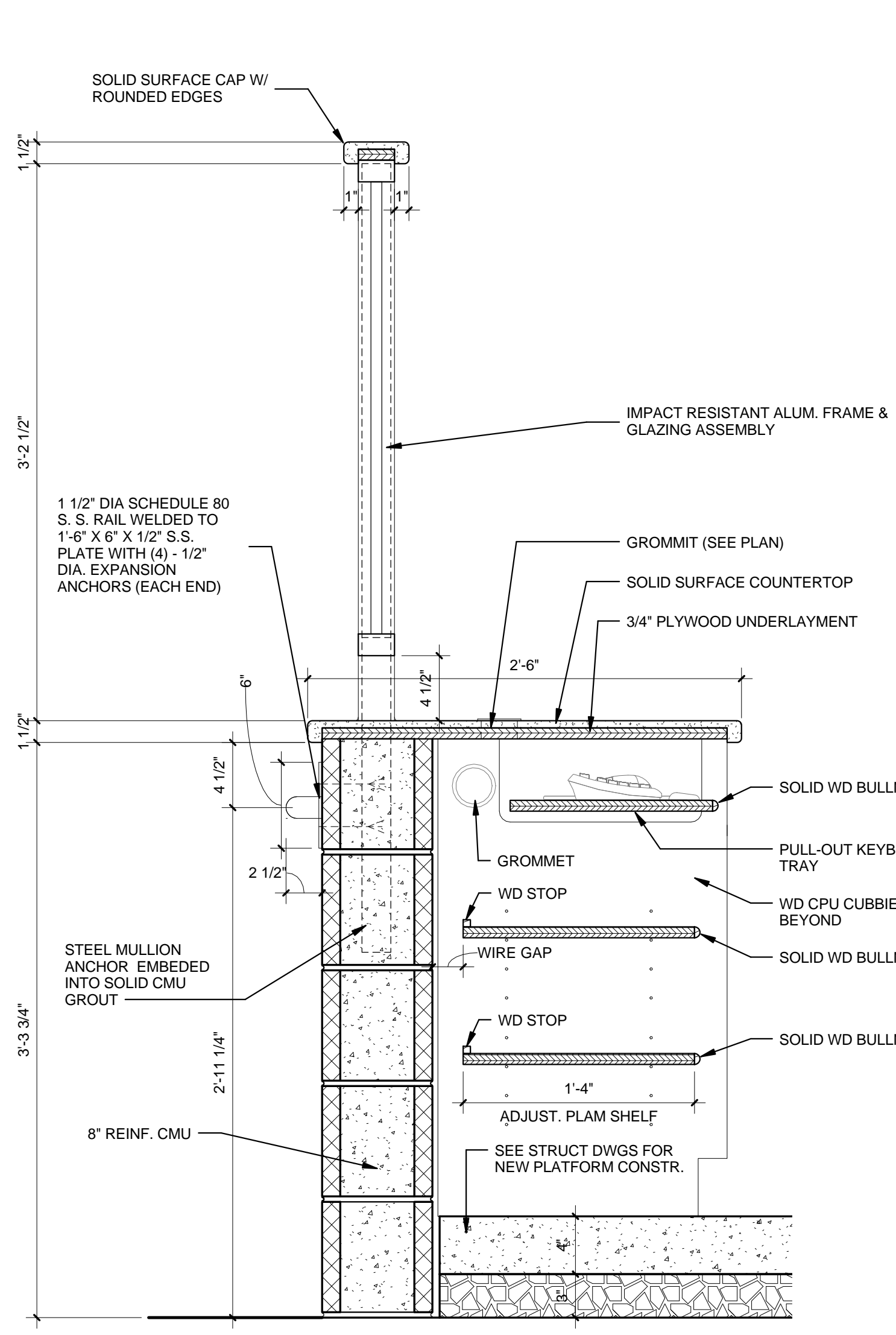
1 SECTION THRU INTERVIEW COUNTER  
SCALE: 3/4" = 1'-0"

3 SECOND FLOOR BENCH SECTION  
SCALE: 3/4" = 1'-0"

4 DISPLAY CASE SECTION  
SCALE: 3/4" = 1'-0"

5 ISLAND COUNTER/CABINET  
SCALE: 1 1/2" = 1'-0"

6 WORK COUNTER  
SCALE: 1 1/2" = 1'-0"



7 BOOKING COUNTER SECTION  
SCALE: 1 1/2" = 1'-0"

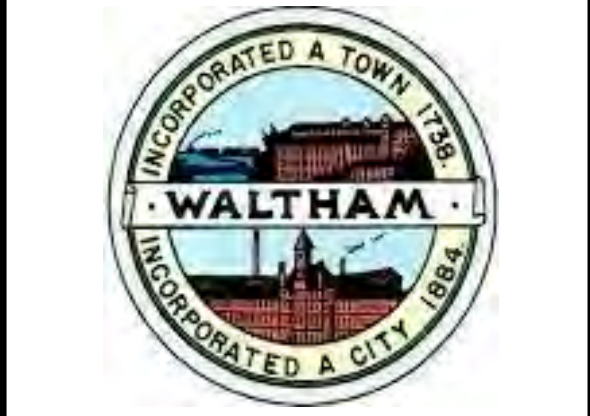
8 RECEPTION COUNTER  
SCALE: 1 1/2" = 1'-0"

9 WEAPON RACK & CABINET DETAIL  
SCALE: 1 1/2" = 1'-0"

10 BASE & UPPER CABS  
SCALE: 1 1/2" = 1'-0"

REVISIONS		
Number	Description	Date

ISSUED FOR BID



**WALTHAM POLICE STATION RENOVATION**  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

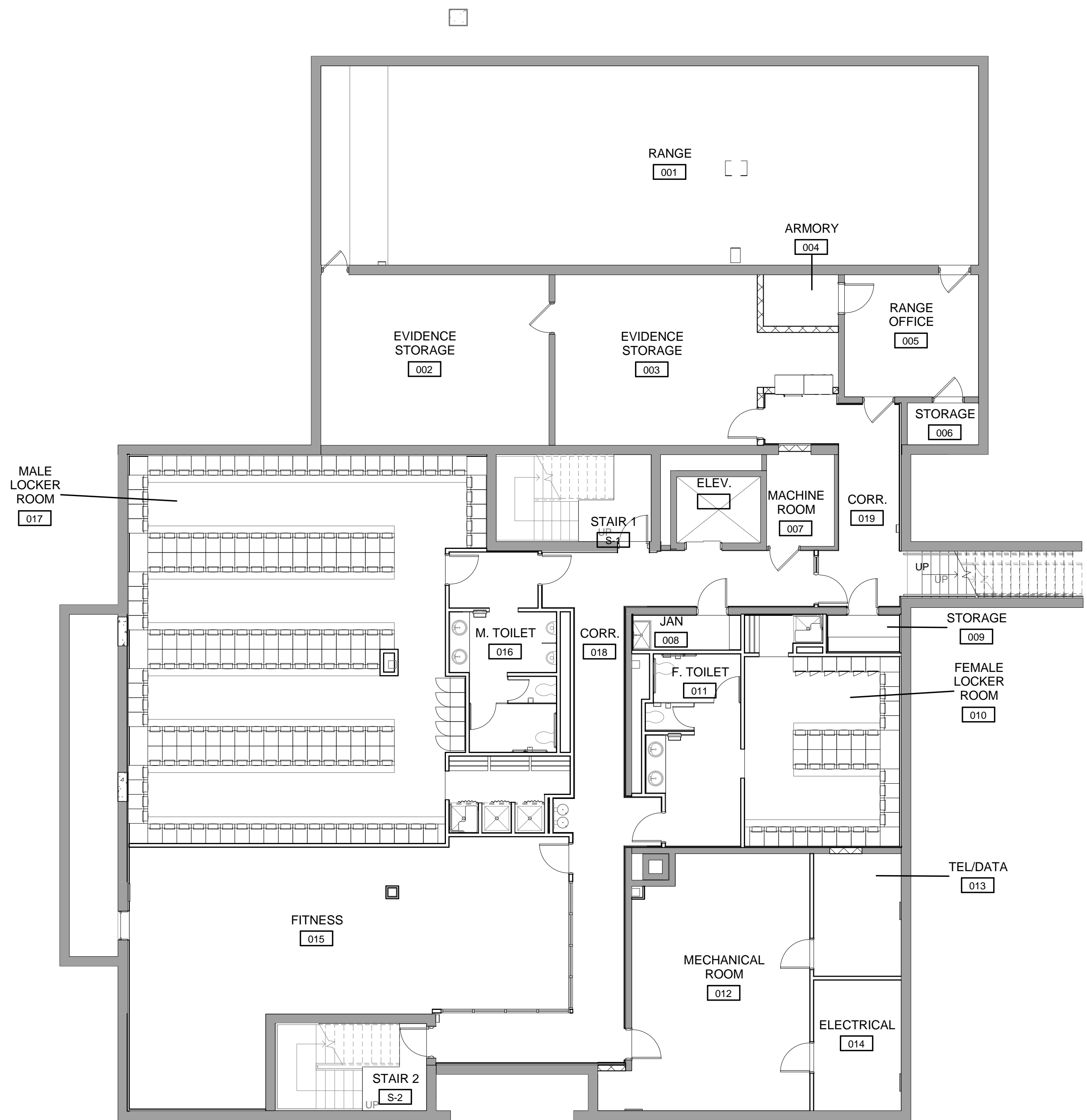
**MILLWORK DETAILS**  
 PROJECT NUMBER: 19401.01  
 DESIGNED BY: FC  
 DRAWN BY: JR  
 CHECKED BY: FC  
 DATE: July-Aug. 2016  
 SCALE: As indicated  
 SHEET NUMBER:



ELEC: \_\_\_\_\_ MECH: \_\_\_\_\_ FIRE: \_\_\_\_\_ PLUM: \_\_\_\_\_ STRU: \_\_\_\_\_ ARCH: \_\_\_\_\_ CIVIL: \_\_\_\_\_  
 REVIEWED BY: \_\_\_\_\_  
 PLOTTED: 7/14/2014 10:23:27 PM  
 PROJECT FILE: C:\Users\maggie\Documents\19401\Waltham Police Station\ARCHITECTURE\_Maggie.rvt

**FURNITURE PLAN NOTES**

1 ALL FURNITURE AND EQUIPMENT SHALL BE PURCHASED AND INSTALLED BY THE CITY UNLESS OTHERWISE NOTED. GM TO COORDINATE POWER / DATA WITH VENDOR.

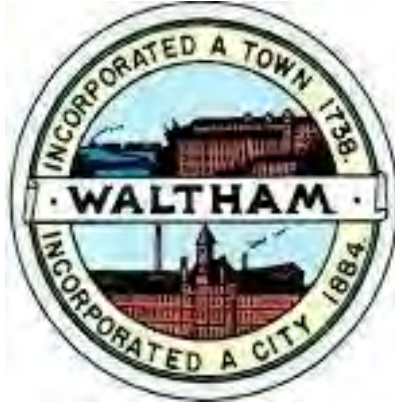


**1 BASEMENT LEVEL FURNITURE PLAN**  
 SCALE: 1/8" = 1'-0"

**CDR MAGUIRE**  
 Architects / Engineers / Planners  
 211 Congress Street, 11th Floor  
 Boston, Massachusetts 02110  
 TEL: (617) 778-1440  
 www.cdmaguire.com

REVISIONS		
Number	Description	Date

**ISSUED FOR BID**



**WALTHAM POLICE STATION RENOVATION**

155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**BASEMENT FLOOR FURNITURE PLAN**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: Designer  
 DRAWN BY: Author  
 CHECKED BY: Checker  
 DATE:  
 SCALE: 2016 As indicated  
 SHEET NUMBER:

**A900**



PROJECT FILE: C:\Users\mregal\Documents\19401\Waltham Police Station\ARCHITECTURE\_MRegal.rvt  
 PLOTTED: 7/14/2016 11:23:28 AM  
 REVIEWED BY: CIVIL: ARCH: STRU: PLUM: FIRE: MECH: ELEC:

**FURNITURE PLAN NOTES**

1 ALL FURNITURE AND EQUIPMENT SHALL BE PURCHASED AND INSTALLED BY THE CITY UNLESS OTHERWISE NOTED. GM TO COORDINATE POWER / DATA WITH VENDOR.

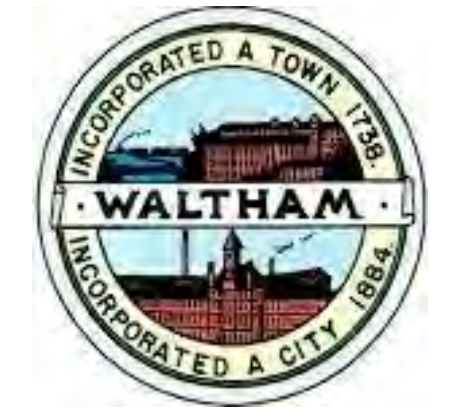


**1 FIRST FLOOR FURNITURE PLAN**  
 SCALE: 1/8" = 1'-0"

**CDR MAGUIRE**  
 Architects / Engineers / Planners  
 211 Congress Street, 11th Floor  
 Boston, Massachusetts 02110  
 TEL: (617) 778-1440  
 www.cdmaguire.com

REVISIONS		
Number	Description	Date

**ISSUED FOR BID**



**WALTHAM POLICE STATION RENOVATION**  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**FIRST FLOOR FURNITURE PLAN**

PROJECT NUMBER: 19401.01  
 DESIGNED BY: Designer  
 DRAWN BY: Author  
 CHECKED BY: Checker  
 DATE: July-Aug. 2016  
 SCALE: As indicated  
 SHEET NUMBER:

**A901**







REVIEWED BY: CIVIL ARCH PLUMB ELECTRICAL MECHANICAL

### ABBREVIATIONS

GENERAL		EQUIPMENT	
AD	COMPRESSED AIR	AC	AIR CONDITIONING OR AIR CONDITIONING UNIT
ADD'L	ADDITIONAL	ACC	AIR COOLED CONDENSING UNIT
AF	AIR FOIL	ACU	AIR CONDITIONING UNIT
AFF	ABOVE FINISHED FLOOR	B	BOILER
AFR	ABOVE FINISHED ROOF	CUH	CABINET UNIT HEATER
ALT	ALTITUDE OR ALTERNATE	DDC	DIRECT DIGITAL CONTROL
AMP	AMPERE	DX	DIRECT EXPANSION
AP	ACCESS PANEL	ET	EXHAUST FAN
APD	AIR PRESSURE DROP	F	FAN
ARCH	ARCHITECT	FTR	FINNED TUBE RADIATION
ATC	AUTOMATIC TEMPERATURE CONTROL	HC	HEATING COIL
ATM	ATMOSPHERE	HP	HEAT PUMP
AVE	AVERAGE	HWC	HOT WATER HEATING COIL
BHP	BRAKE HORSEPOWER	P	PUMP
BLDG	BUILDING	REG	REGISTER
BOD	BOTTOM OF DUCT	RF	RETURN FAN
BSMT	BASEMENT	RHC	REHEAT COIL
BTU	BRITISH THERMAL UNIT	RTU	ROOF TOP UNIT
BTUH	BTU PER HOUR	SA	SOUND ATTENUATOR
C TO C	CENTER TO CENTER	SF	SUPPLY FAN
CENT	CENTRIFUGAL	UH	UNIT HEATER
CFM	CUBIC FEET PER MINUTE	UV	UNIT VENTILATOR
CL	CENTERLINE	VAV	VARIABLE AIR VOLUME TERMINAL UNIT
CLG	CEILING OR COILING	VFD	VARIABLE FREQUENCY DRIVE
COL	CARBON MONOXIDE		
COL	COLUMN		
CONC	CONCRETE		
CONN	CONNECTION		
CONTR	CONTRACTOR		
D	DRAIN OR DEPTH		
DB	DRY BULB TEMPERATURE		
DEG	DEGREE		
DDC	DIRECT DIGITAL CONTROL		
DIA	DIAMETER		
DIM	DIMENSION		
DN	DOWN		
DP	DIFFERENTIAL PRESSURE		
EA	EACH OR EXHAUST AIR		
EAT	ENTERING AIR TEMPERATURE		
EFF	EFFICIENCY		
ELEC	ELECTRICAL		
ELEV	ELEVATION		
EMER	EMERGENCY		
EMS	ENERGY MANAGEMENT SYSTEM		
ENTER	ENTER		
ESP	EXTERNAL STATIC PRESSURE		
EWT	ENTERING WATER TEMPERATURE		
EXH	EXHAUST		
EXIST.	EXISTING		
EXT	EXTERNAL		
EXP	EXPANSION		
F	FAHRENHEIT		
FA	FREE AREA		
FC	FLEXIBLE CONNECTION		
FLA	FULL LOAD AMPS		
FLEX	FLEXIBLE		
FLRDR	FLOOR DRAIN		
FPM	FEET PER MINUTE		
FPS	FEET PER SECOND		
FS	FLOW SWITCH		
FT	FEET		
G	GAS		
GA	GAUGE		
GAL	GALLONS		
GALV	GALVANIZED		
GC	GENERAL CONTRACTOR		
GPH	GALLONS PER HOUR		
GPM	GALLONS PER MINUTE		
GRD	GRADE		
GWB	GYP-SUM WALL BOARD		
HB	HOSE BIBB CONN.		
HD	HEAD		
HGT	HEIGHT		
HP	HORSEPOWER		
HR	HOUR		
HTG	HEATING		
HZ	HERTZ (FREQUENCY, CYCLES PER SECOND)		
ID	INSIDE DIAMETER		
IN	INCHES		
KW	KILOWATT		
L	LENGTH		
LAT	LEAVING AIR TEMPERATURE		
LB	POUND		
LF	LINEAR FEET		
LP	LOW POINT		
LRA	LOCKED ROTOR AMPS		
LUVR	LOUVER		
LVDR	LOUVERED DOOR		
LVG	LEAVING		
LWT	LEAVING WATER TEMPERATURE		
MAX	MAXIMUM		
MBH	THOUSAND BTUH		
MCA	MINIMUM CIRCUIT AMPS		
MECH	MECHANICAL		
MFR	MANUFACTURER		
MIN	MINIMUM		
MU	MAKE-UP WATER		
N/A	NOT APPLICABLE		
NC	NORMALLY CLOSED OR NOISE CRITERIA		
NO	NOT IN CONTRACT		
NO	NORMALLY OPEN		
NO	NUMBER		
NOM	NOMINAL		
NTS	NOT TO SCALE		
OAI	OUTSIDE AIR		
OAI	OUTSIDE AIR INTAKE		
OC	ON CENTER		
OD	OUTSIDE DIAMETER		
ODP	OPEN DRIP PROOF		
OV	OUTLET VELOCITY		
PCF	POUNDS PER CUBIC FOOT		
PD	PRESSURE DROP		
PH	PHASE		
PBG	PLUMBING		
POS	PROVIDED BY OTHER SECTION		
PPM	PARTS PER MILLION		
PSI	POUNDS PER SQUARE INCH		
PSIA	POUNDS PER SQUARE INCH ABSOLUTE		
PSID	POUNDS PER SQUARE INCH DIFFERENTIAL		
PSIG	POUNDS PER SQUARE INCH GAUGE		
PVC	POLYVINYL CHLORIDE		
QTY	QUANTITY		
RA	RADIUS		
RA	RETURN AIR		
RET	RETURN		
REQ'D	REQUIRED		
RH	RELATIVE HUMIDITY		
RLA	RUNNING LOAD AMPS		
RLF	RELIEF		
RM	ROOM		
RPM	REVOLUTIONS PER MINUTE		
SCH	SCHEDULE		
SCR	SCREEN		
SDET	SMOKE DETECTOR		
SEN	SENSIBLE		
SHC	SENSIBLE HEAT CAPACITY		
SP	STATIC PRESSURE		
SPECS	SPECIFICATIONS		
SQ	SQUARE		
SF	SQUARE FEET		
SS	STAINLESS STEEL		
STL	STEEL		
SUP	SUPPLY		
T	TEMPERATURE		
TA	THROWAWAY		
TEL	TELEPHONE (W/ ACCESS DOOR)		
TEFC	TOTALLY ENCLOSED FAN COOLED		
TEMP	TEMPERATURE		
TSTAT	THERMOSTAT		
TON	12,000 BTUH COOLING CAPACITY		
TOT	TOTAL		
TYP	TYPICAL		
UC	UNDERCUT DOOR		
V	VOLTS (ELECTRICAL)		
VEL	VELOCITY		
W	WIDTH OR WATT		
WB	WET BULB TEMPERATURE		
WC	WATER COLUMN		
WG	WATER GAUGE		
W/O	WITHOUT		
WPD	WATER PRESSURE DROP		
WTD	WATER TEMPERATURE DIFFERENCE		
W	WIDTH		
W	WITH		
WB	WET BULB TEMPERATURE		
WC	WATER COLUMN		
WG	WATER GAUGE		
W/O	WITHOUT		
WPD	WATER PRESSURE DROP		
WTD	WATER TEMPERATURE DIFFERENCE		
ACD	AUTOMATIC CONTROL DAMPER		
AFMS	AIR FLOW MEASURING STATION		
BDD	BACKDRAFT DAMPER		
BOD	BOTTOM OF DUCT		
DIFF	DIFFUSER		
EA	EXHAUST AIR		
EG	EXHAUST GRILLE		
ER	EXHAUST REGISTER		
FBD	FLAT BOTTOM DUCT		
FD	FIRE DAMPER (W/ ACCESS DOOR)		
LD	LINEAR DIFFUSER		
MD	MOTOR OPERATED DAMPER		
OA	OUTSIDE AIR		
OD	OPEN END DUCT		
RA	RETURN AIR		
RG	RETURN GRILLE		
RR	RETURN REGISTER		
SA	SUPPLY AIR		
SD	SMOKE DAMPER		
SFD	COMBINATION AUTOMATIC SMOKE/FIRE DAMPER WITH ACCESS DOOR		
TA	THROW AWAY OR TRANSFER AIR		
TD	TOP OF DUCT		
TR	TRANSFER		
TSP	TOTAL STATIC PRESSURE (IN. WG)		
VD	VOLUME DAMPER		
VAV	VARIABLE AIR VOLUME SUPPLY AIR TERMINAL		
WMS	WIRE MESH SCREEN		

### PIPING LEGEND

	BALL VALVE		BUTTERFLY VALVE
	HOSE END BALL VALVE WITH CAP AND CHAIN		CHECK VALVE (SILENT CHECK TYPE ON PUMP DISCHARGE)
	STRAINER WITH HOSE END BLOWOFF VALVE, CAP AND CHAIN		SUCTION DIFFUSER/STRAINER (NON-REDUCING) WITH BLOWOFF
	SOLENOID VALVE		2-WAY MODULATING PRESSURE INDEPENDENT ACV
	2-WAY AUTOMATIC CONTROL VALVE (TWO POSITION)		AUTOMATIC FLOW LIMITING VALVE (PRESSURE INDEPENDENT)
	TRIPLE DUTY PUMP VALVE, CHECK, BALANCING (FLOW METER), SHUT-OFF		FLOW SWITCH
	RELIEF/SAFETY VALVE		UNION
	BLIND FLANGE		PIPE - CAPPED
	PRESSURE GAUGE (W/ BALL VALVE(S))		PRESSURE SWITCH
	THERMOMETER		PRESSURE/THERMOMETER WELL
	AIR VENT - AUTOMATIC		AIR VENT - MANUAL
	DIRECTION OF FLOW		EXPANSION JOINT
	FLEXIBLE CONNECTOR		PIPE ANCHOR
	PIPE GUIDE		PIPE CONNECTION - TOP
	PIPE CONNECTION - BOTTOM		PIPE - DOWN
	PIPE - UP		PITCH OF PIPE - (R) RISE OR (D) DROP
	REDUCER - CONCENTRIC		REDUCER - ECCENTRIC
	CLEANOUT FOR CONDENSATE DRAIN		DIRT LEG
	RISE (DOUBLE LINE - PLAN VIEW)		DROP (DOUBLE LINE - PLAN VIEW)
	PIPE BREAK (DOUBLE LINE)		PIPE BREAK (SINGLE LINE)

### DUCTWORK

SINGLE LINE		DOUBLE LINE	
	RECTANGULAR SUPPLY DUCT W=WIDTH, D=DEPTH (INCHES UNLESS NOTED OTHERWISE) AS VIEWED		RECTANGULAR RETURN/EXHAUST DUCT W=WIDTH, D=DEPTH (INCHES UNLESS NOTED OTHERWISE) AS VIEWED
	ROUND SUPPLY DUCT (DIA=INSIDE DIAMETER)		ROUND RETURN/EXHAUST DUCT (DIA=INSIDE DIAMETER)
	ROUND SUPPLY DUCT UP		STANDARD RADIUS ELBOW (R = W) SUPPLY/RETURN/EXHAUST
	ROUND SUPPLY DUCT DOWN		FULL LENGTH SPLITTER VANES (R < W) SUPPLY/RETURN/EXHAUST
	SUPPLY DUCT UP		SPLIT TAKE-OFF
	SUPPLY DUCT DOWN		RECTANGULAR WYE SUPPLY
	ROUND RETURN DUCT UP		HORIZONTAL OFFSET SUPPLY/RETURN/EXHAUST
	ROUND RETURN DUCT DOWN		CHANGE OF ELEVATION (R)RISE OR (D)DROP SUPPLY/RETURN/EXHAUST
	RETURN DUCT UP		45° TAP TAKE-OFF
	RETURN DUCT DOWN		45° TAKE-OFF TO ROUND TO ROUND TRANSITION
	ROUND EXHAUST DUCT UP		SQUARE TO ROUND CONNECTION
	ROUND EXHAUST DUCT DOWN		BELLMOUTH CONNECTION
	EXHAUST DUCT UP		CONVERGE RETURN/EXHAUST W/45° TAKE-OFFS
	EXHAUST DUCT DOWN		SIDEWALL DUCT MOUNTED REGISTER/GRILLE
	RECTANGULAR DUCT TO ROUND SUPPLY/RETURN/EXHAUST		SUPPLY SIDEWALL LINEAR DIFFUSER (W/ SHEETMETAL PLENUM, LINING & BRANCH CONN. FOR EVERY 4' OF LINEAR.)
	CEILING DUCT MOUNTED DIFFUSER/GRILLE		SUPPLY CEILING LINEAR DIFFUSER (W/ SHEETMETAL PLENUM, LINING & BRANCH CONN. FOR EVERY 4' OF LINEAR.)
	TAKE-OFF TO DIFFUSER/GRILLE		OPEN END DUCT W/ 1/2"x1/2" WMS
	CEILING DUCT MOUNTED DIFFUSER/GRILLE		AUTOMATIC CONTROL DAMPER W/ ACCESS DOOR
	ACOUSTICALLY LINED DUCT		MANUAL VOLUME DAMPER
	FLEXIBLE DUCT		SELF-CLOSING FIRE DAMPER W/ ACCESS DOOR
	AUTOMATIC CONTROL DAMPER W/ ACCESS DOOR		COMBINATION SMOKE/FIRE DAMPER W/ ACCESS DOOR
	MANUAL VOLUME DAMPER		DUCT MOUNTED SMOKE DETECTOR
	SELF-CLOSING FIRE DAMPER W/ ACCESS DOOR		BACKDRAFT DAMPER
	COMBINATION SMOKE/FIRE DAMPER W/ ACCESS DOOR		UNDERCUT DOOR
	DUCT MOUNTED SMOKE DETECTOR		RETURN OR EXHAUST AIR FLOW
	BACKDRAFT DAMPER		SUPPLY AIR FLOW
	UNDERCUT DOOR		ROOF EXHAUST FAN SHOWN ON ROOF
	RETURN OR EXHAUST AIR FLOW		ROOF EXHAUST FAN SHOWN ON FLOORPLAN
	SUPPLY AIR FLOW		

### PIPING ABBREVIATIONS

	DRAIN
	HOT WATER RETURN
	HOT WATER SUPPLY
	REFRIGERANT GAS
	REFRIGERANT HOT GAS BYPASS
	REFRIGERANT LIQUID
	REFRIGERANT SUCTION
	VENT
	REMOVE EXISTING PIPING

### CALLOUT SYMBOLS

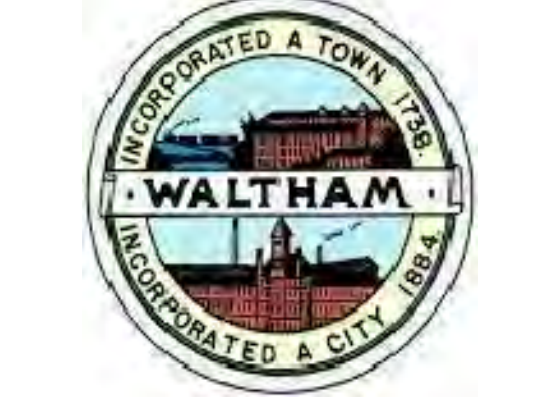
	CONNECT NEW TO EXISTING
	LIMIT OF DEMOLITION
	SECTION DESIGNATION SHEET NUMBER
	REVISION NUMBER
	TEMPERATURE SENSOR OR THERMOSTAT
	HUMIDITY SENSOR OR HUMIDISTAT
	TEMPERATURE SENSOR
	REMOVE EXISTING ITEM
	S = SUPPLY (100) = CFM TO BALANCE TO
	R = RETURN (100) = CFM TO BALANCE TO
	E = EXHAUST (100) = CFM TO BALANCE TO
	T = TRANSFER (100) = CFM TO BALANCE TO
	A = SCHEDULED DIFFUSER (100) = CFM TO BALANCE TO
	A = SCHEDULED REGISTER/GRILLE (100) = CFM TO BALANCE TO
	T = SCHEDULED REGISTER/GRILLE (100) = CFM TO BALANCE TO
	SCHEDULED EQUIPMENT UNIT NUMBER
	REFER TO EQUIPMENT REQUIRING ELECTRICAL SERVICE SYMBOL ABOVE FOR TAG AND DATA INFORMATION.

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 200 Brinkstone Square  
 Andover, MA 01810-1488  
 T: 978-296-6200

REVISIONS		
Number	Description	Date

ISSUED FOR BID



WALTHAM POLICE STATION RENOVATION

155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

HVAC LEGEND, NOTES & ABBRVS.

PROJECT NUMBER: 20130535  
 DESIGNED BY: JJK  
 DRAWN BY: JJK  
 CHECKED BY: CH  
 DATE: July-Aug.  
 SCALE: 2016 N.T.S.  
 SHEET NUMBER:

H000

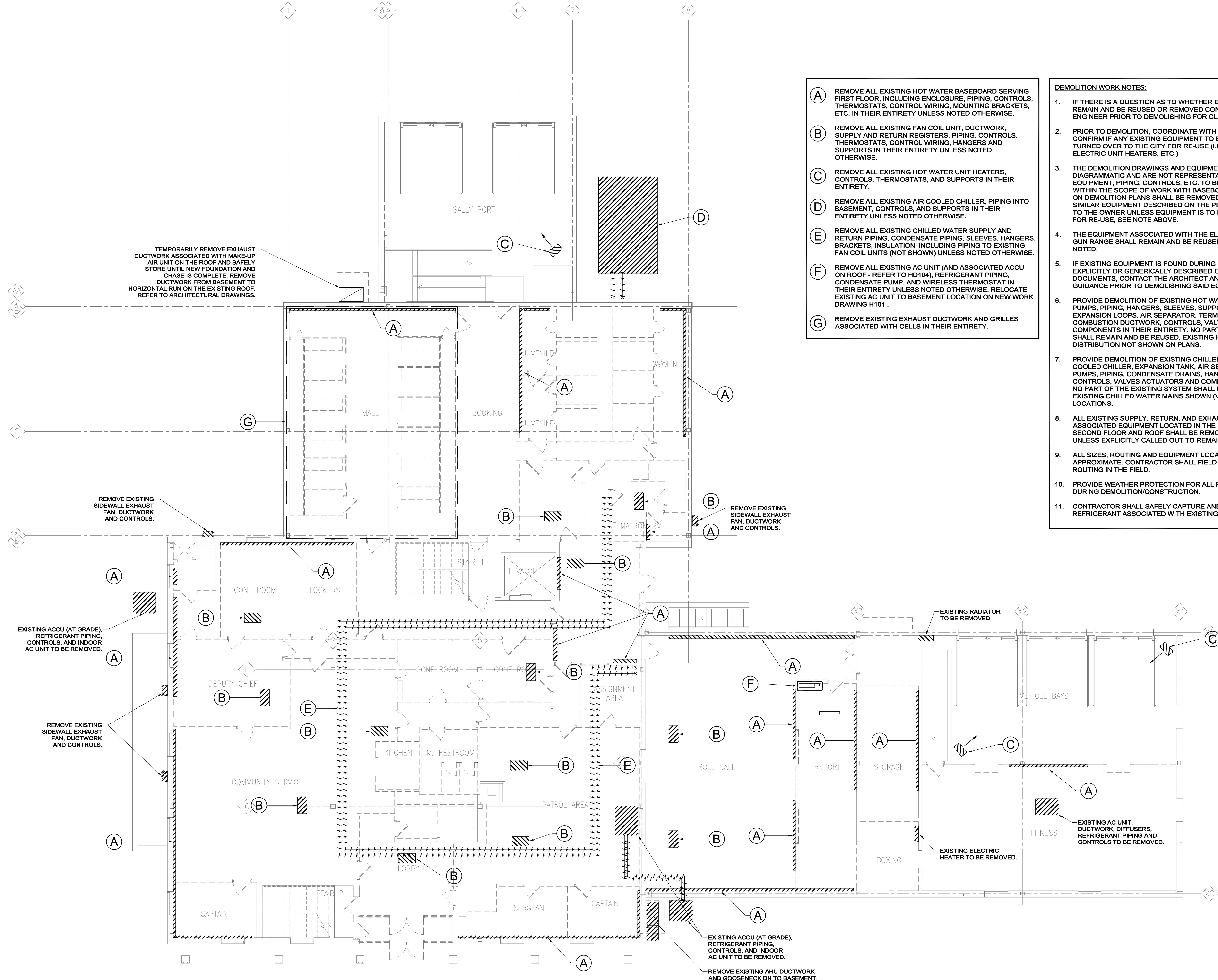






ELEC. \_\_\_\_\_  
 MECH. \_\_\_\_\_  
 FIRE \_\_\_\_\_  
 PLUM. \_\_\_\_\_  
 STRU. \_\_\_\_\_  
 ANCH. \_\_\_\_\_  
 REVIEW BY: CIVIL \_\_\_\_\_

C:\01\130130535 - Waltham Police HQ Renovation\1200 Drawings\1200 HVAC\1200 HVAC First Floor Demolition Plan.dwg [Printed July 14, 2016 - 5:48pm] dwg



- (A) REMOVE ALL EXISTING HOT WATER BASEBOARD SERVING FIRST FLOOR, INCLUDING ENCLOSURE, PIPING, CONTROLS, THERMOSTATS, CONTROL WIRING, MOUNTING BRACKETS, ETC. IN THEIR ENTIRETY UNLESS NOTED OTHERWISE.
- (B) REMOVE ALL EXISTING FAN COIL UNIT, DUCTWORK, SUPPLY AND RETURN REGISTERS, PIPING, CONTROLS, THERMOSTATS, CONTROL WIRING, HANGERS AND SUPPORTS IN THEIR ENTIRETY UNLESS NOTED OTHERWISE.
- (C) REMOVE ALL EXISTING HOT WATER UNIT HEATERS, CONTROLS, THERMOSTATS, AND SUPPORTS IN THEIR ENTIRETY.
- (D) REMOVE ALL EXISTING AIR COOLED CHILLER, PIPING INTO BASEMENT, CONTROLS, AND SUPPORTS IN THEIR ENTIRETY UNLESS NOTED OTHERWISE.
- (E) REMOVE ALL EXISTING CHILLED WATER SUPPLY AND RETURN PIPING, CONDENSATE PIPING, SLEEVES, HANGERS, BRACKETS, INSULATION, INCLUDING PIPING TO EXISTING FAN COIL UNITS (NOT SHOWN) UNLESS NOTED OTHERWISE.
- (F) REMOVE ALL EXISTING AC UNIT (AND ASSOCIATED ACCU ON ROOF - REFER TO HD104), REFRIGERANT PIPING, CONDENSATE PUMP, AND WIRELESS THERMOSTAT IN THEIR ENTIRETY UNLESS NOTED OTHERWISE. RELOCATE EXISTING AC UNIT TO BASEMENT LOCATION ON NEW WORK DRAWING H101.
- (G) REMOVE EXISTING EXHAUST DUCTWORK AND GRILLES ASSOCIATED WITH CELLS IN THEIR ENTIRETY.

- DEMOLITION WORK NOTES:**
- IF THERE IS A QUESTION AS TO WHETHER EXISTING EQUIPMENT SHALL REMAIN AND BE REUSED OR REMOVED CONTACT THE ARCHITECT AND ENGINEER PRIOR TO DEMOLISHING FOR CLARIFICATION.
  - PRIOR TO DEMOLITION, COORDINATE WITH THE CITY OF WALTHAM TO CONFIRM IF ANY EXISTING EQUIPMENT TO BE DEMOLISHED CAN BE TURNED OVER TO THE CITY FOR RE-USE (I.E. EXISTING ACU/ACCU'S, ELECTRIC UNIT HEATERS, ETC.)
  - THE DEMOLITION DRAWINGS AND EQUIPMENT LOCATIONS ARE DIAGRAMMATIC AND ARE NOT REPRESENTATIVE OF ALL EXISTING EQUIPMENT, PIPING, CONTROLS, ETC. TO BE DEMOLISHED - I.E. ROOMS WITHIN THE SCOPE OF WORK WITH BASEBOARD RADIATION NOT SHOWN ON DEMOLITION PLANS SHALL BE REMOVED IN SAME MANNER AS SIMILAR EQUIPMENT DESCRIBED ON THE PLANS AT NO ADDITIONAL COST TO THE OWNER UNLESS EQUIPMENT IS TO BE TURNED OVER TO CITY FOR RE-USE, SEE NOTE ABOVE.
  - THE EQUIPMENT ASSOCIATED WITH THE ELEVATOR MACHINE ROOM AND GUN RANGE SHALL REMAIN AND BE REUSED UNLESS OTHERWISE NOTED.
  - IF EXISTING EQUIPMENT IS FOUND DURING DEMOLITION THAT IS NOT EXPLICITLY OR GENERICALLY DESCRIBED OR NOTED WITHIN THESE DOCUMENTS, CONTACT THE ARCHITECT AND ENGINEER FOR FURTHER GUIDANCE PRIOR TO DEMOLISHING SAID EQUIPMENT.
  - PROVIDE DEMOLITION OF EXISTING HOT WATER SYSTEM, BOILER, PUMPS, PIPING, HANGERS, SLEEVES, SUPPORTS, EXPANSION TANK, EXPANSION LOOPS, AIR SEPARATOR, TERMINAL EQUIPMENT, COMBUSTION DUCTWORK, CONTROLS, VALVES, ACTUATORS, AND COMPONENTS IN THEIR ENTIRETY; NO PART OF THE EXISTING SYSTEM SHALL REMAIN AND BE REUSED. EXISTING HOT WATER PIPING DISTRIBUTION NOT SHOWN ON PLANS.
  - PROVIDE DEMOLITION OF EXISTING CHILLED WATER SYSTEM, AIR COOLED CHILLER, EXPANSION TANK, AIR SEPARATOR, CHILLED WATER PUMPS, PIPING, CONDENSATE DRAINS, HANGERS, SLEEVES, SUPPORTS, CONTROLS, VALVES ACTUATORS AND COMPONENTS IN THEIR ENTIRETY. NO PART OF THE EXISTING SYSTEM SHALL REMAIN AND BE REUSED. EXISTING CHILLED WATER MAINS SHOWN (V.I.F. EXACT RUNS AND LOCATIONS).
  - ALL EXISTING SUPPLY, RETURN, AND EXHAUST DUCTWORK AND ASSOCIATED EQUIPMENT LOCATED IN THE BASEMENT, FIRST FLOOR, SECOND FLOOR AND ROOF SHALL BE REMOVED IN ITS ENTIRETY UNLESS EXPLICITLY CALLED OUT TO REMAIN AND BE REUSED.
  - ALL SIZES, ROUTING AND EQUIPMENT LOCATIONS INDICATED AND ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY EXACT SIZES AND ROUTING IN THE FIELD.
  - PROVIDE WEATHER PROTECTION FOR ALL ROOF AND WALL OPENINGS DURING DEMOLITION/CONSTRUCTION.
  - CONTRACTOR SHALL SAFELY CAPTURE AND LEGALLY DISPOSE OF ALL REFRIGERANT ASSOCIATED WITH EXISTING COOLING SYSTEMS.

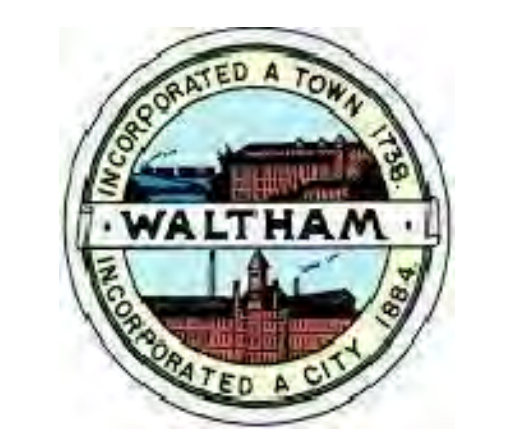
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 200 Brickstone Square  
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REVISIONS		
Number	Description	Date

**ISSUED FOR BID**



**WALTHAM POLICE STATION RENOVATION**  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

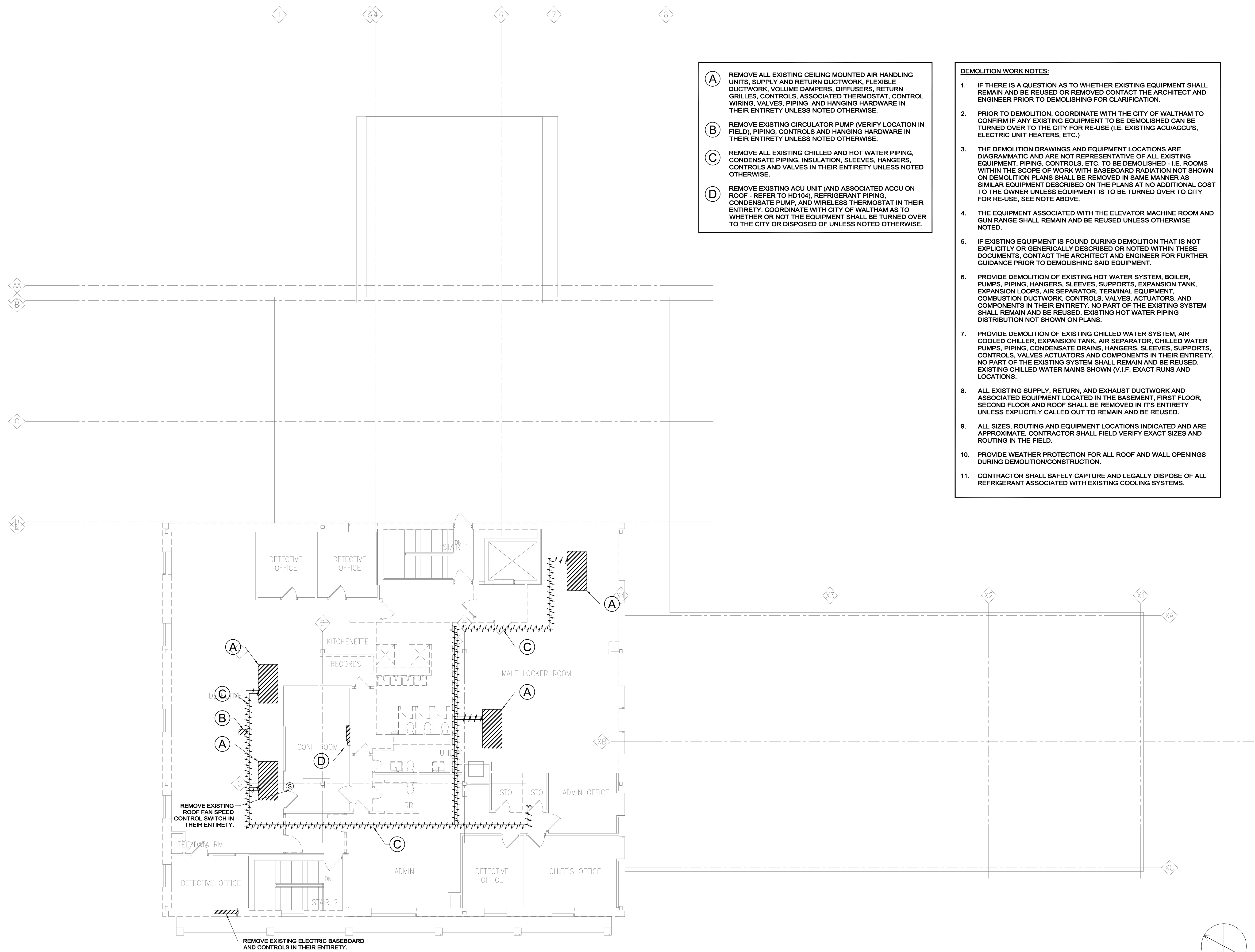
**HVAC FIRST FLOOR DEMO PLAN**

**PROJECT NUMBER:** 20130535  
**DESIGNED BY:** JJK  
**DRAWN BY:** JJK  
**CHECKED BY:** CH  
**DATE:** July-Aug.  
**SCALE:** 2016 1/8" = 1'-0"  
**SHEET NUMBER:**

**HD102**



REVIEWED BY: CIVIL: \_\_\_\_\_ ARCH: \_\_\_\_\_ STN: \_\_\_\_\_ PLUM: \_\_\_\_\_ FIRE: \_\_\_\_\_ MECH: \_\_\_\_\_ ELEC: \_\_\_\_\_



- (A)** REMOVE ALL EXISTING CEILING MOUNTED AIR HANDLING UNITS, SUPPLY AND RETURN DUCTWORK, FLEXIBLE DUCTWORK, VOLUME DAMPERS, DIFFUSERS, RETURN GRILLES, CONTROLS, ASSOCIATED THERMOSTAT, CONTROL WIRING, VALVES, PIPING AND HANGING HARDWARE IN THEIR ENTIRETY UNLESS NOTED OTHERWISE.
- (B)** REMOVE EXISTING CIRCULATOR PUMP (VERIFY LOCATION IN FIELD), PIPING, CONTROLS AND HANGING HARDWARE IN THEIR ENTIRETY UNLESS NOTED OTHERWISE.
- (C)** REMOVE ALL EXISTING CHILLED AND HOT WATER PIPING, CONDENSATE PIPING, INSULATION, SLEEVES, HANGERS, CONTROLS AND VALVES IN THEIR ENTIRETY UNLESS NOTED OTHERWISE.
- (D)** REMOVE EXISTING ACU UNIT (AND ASSOCIATED ACCU ON ROOF - REFER TO HD104), REFRIGERANT PIPING, CONDENSATE PUMP, AND WIRELESS THERMOSTAT IN THEIR ENTIRETY. COORDINATE WITH CITY OF WALTHAM AS TO WHETHER OR NOT THE EQUIPMENT SHALL BE TURNED OVER TO THE CITY OR DISPOSED OF UNLESS NOTED OTHERWISE.

- DEMOLITION WORK NOTES:**
- IF THERE IS A QUESTION AS TO WHETHER EXISTING EQUIPMENT SHALL REMAIN AND BE REUSED OR REMOVED CONTACT THE ARCHITECT AND ENGINEER PRIOR TO DEMOLISHING FOR CLARIFICATION.
  - PRIOR TO DEMOLITION, COORDINATE WITH THE CITY OF WALTHAM TO CONFIRM IF ANY EXISTING EQUIPMENT TO BE DEMOLISHED CAN BE TURNED OVER TO THE CITY FOR RE-USE (I.E. EXISTING ACU/ACCU'S, ELECTRIC UNIT HEATERS, ETC.)
  - THE DEMOLITION DRAWINGS AND EQUIPMENT LOCATIONS ARE DIAGRAMMATIC AND ARE NOT REPRESENTATIVE OF ALL EXISTING EQUIPMENT, PIPING, CONTROLS, ETC. TO BE DEMOLISHED - I.E. ROOMS WITHIN THE SCOPE OF WORK WITH BASEBOARD RADIATION NOT SHOWN ON DEMOLITION PLANS SHALL BE REMOVED IN SAME MANNER AS SIMILAR EQUIPMENT DESCRIBED ON THE PLANS AT NO ADDITIONAL COST TO THE OWNER UNLESS EQUIPMENT IS TO BE TURNED OVER TO CITY FOR RE-USE, SEE NOTE ABOVE.
  - THE EQUIPMENT ASSOCIATED WITH THE ELEVATOR MACHINE ROOM AND GUN RANGE SHALL REMAIN AND BE REUSED UNLESS OTHERWISE NOTED.
  - IF EXISTING EQUIPMENT IS FOUND DURING DEMOLITION THAT IS NOT EXPLICITLY OR GENERICALLY DESCRIBED OR NOTED WITHIN THESE DOCUMENTS, CONTACT THE ARCHITECT AND ENGINEER FOR FURTHER GUIDANCE PRIOR TO DEMOLISHING SAID EQUIPMENT.
  - PROVIDE DEMOLITION OF EXISTING HOT WATER SYSTEM, BOILER, PUMPS, PIPING, HANGERS, SLEEVES, SUPPORTS, EXPANSION TANK, EXPANSION LOOPS, AIR SEPARATOR, TERMINAL EQUIPMENT, COMBUSTION DUCTWORK, CONTROLS, VALVES, ACTUATORS, AND COMPONENTS IN THEIR ENTIRETY. NO PART OF THE EXISTING SYSTEM SHALL REMAIN AND BE REUSED. EXISTING HOT WATER PIPING DISTRIBUTION NOT SHOWN ON PLANS.
  - PROVIDE DEMOLITION OF EXISTING CHILLED WATER SYSTEM, AIR COOLED CHILLER, EXPANSION TANK, AIR SEPARATOR, CHILLED WATER PUMPS, PIPING, HANGERS, SLEEVES, SUPPORTS, EXPANSION TANK, EXPANSION LOOPS, AIR SEPARATOR, TERMINAL EQUIPMENT, COMBUSTION DUCTWORK, CONTROLS, VALVES, ACTUATORS, AND COMPONENTS IN THEIR ENTIRETY. NO PART OF THE EXISTING SYSTEM SHALL REMAIN AND BE REUSED. EXISTING CHILLED WATER MAINS SHOWN (V.I.F. EXACT RUNS AND LOCATIONS).
  - ALL EXISTING SUPPLY, RETURN, AND EXHAUST DUCTWORK AND ASSOCIATED EQUIPMENT LOCATED IN THE BASEMENT, FIRST FLOOR, SECOND FLOOR AND ROOF SHALL BE REMOVED IN ITS ENTIRETY UNLESS EXPLICITLY CALLED OUT TO REMAIN AND BE REUSED.
  - ALL SIZES, ROUTING AND EQUIPMENT LOCATIONS INDICATED AND ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY EXACT SIZES AND ROUTING IN THE FIELD.
  - PROVIDE WEATHER PROTECTION FOR ALL ROOF AND WALL OPENINGS DURING DEMOLITION/CONSTRUCTION.
  - CONTRACTOR SHALL SAFELY CAPTURE AND LEGALLY DISPOSE OF ALL REFRIGERANT ASSOCIATED WITH EXISTING COOLING SYSTEMS.

REMOVE EXISTING ROOF FAN SPEED CONTROL SWITCH IN THEIR ENTIRETY.

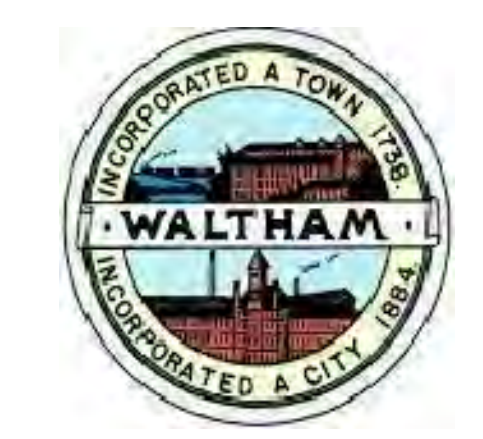
REMOVE EXISTING ELECTRIC BASEBOARD AND CONTROLS IN THEIR ENTIRETY.

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REVISIONS		
Number	Description	Date

ISSUED FOR BID



WALTHAM POLICE STATION RENOVATION  
155 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS

**HVAC SECOND FLOOR DEMO PLAN**

PROJECT NUMBER: 20130535  
DESIGNED BY: JJK  
DRAWN BY: JJK  
CHECKED BY: CH  
DATE: July-Aug.  
SCALE: 2016 1/8" = 1'-0"  
SHEET NUMBER:

**HD103**

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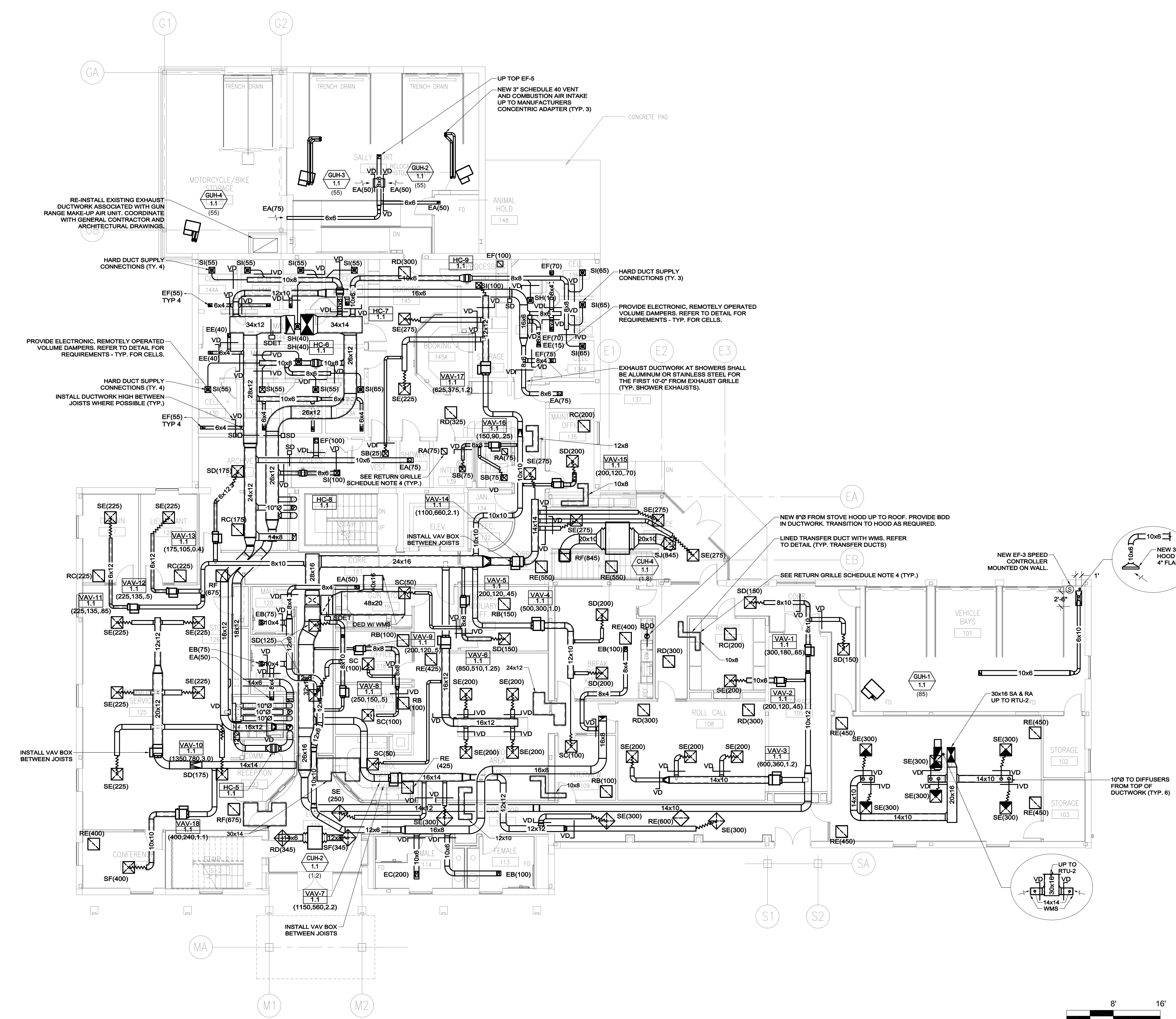








ELEC: \_\_\_\_\_ MECH: \_\_\_\_\_ FIRE: \_\_\_\_\_ PLUM: \_\_\_\_\_ STRU: \_\_\_\_\_ ARCH: \_\_\_\_\_ REVIEW BY: CIVIL: \_\_\_\_\_



UP TOP EF-5  
NEW 3" SCHEDULE 40 VENT AND COMBUSTION AIR INTAKE UP TO MANUFACTURERS CONCENTRIC ADAPTER (TYP. 3)

CONCRETE PAD

RE-INSTALL EXISTING EXHAUST DUCTWORK ASSOCIATED WITH GUN RANGE MAKE-UP AIR UNIT. COORDINATE WITH GENERAL CONTRACTOR AND ARCHITECTURAL DRAWINGS.

HARD DUCT SUPPLY CONNECTIONS (TY. 4)

EF(55) TYP 4

PROVIDE ELECTRONIC, REMOTELY OPERATED VOLUME DAMPERS. REFER TO DETAIL FOR REQUIREMENTS - TYP. FOR CELLS.

HARD DUCT SUPPLY CONNECTIONS (TY. 4)

INSTALL DUCTWORK HIGH BETWEEN JOISTS WHERE POSSIBLE (TYP.)

EF(55) TYP 4

PROVIDE ELECTRONIC, REMOTELY OPERATED VOLUME DAMPERS. REFER TO DETAIL FOR REQUIREMENTS - TYP. FOR CELLS.

HARD DUCT SUPPLY CONNECTIONS (TY. 3)

PROVIDE ELECTRONIC, REMOTELY OPERATED VOLUME DAMPERS. REFER TO DETAIL FOR REQUIREMENTS - TYP. FOR CELLS.

EXHAUST DUCTWORK AT SHOWERS SHALL BE ALUMINUM OR STAINLESS STEEL FOR THE FIRST 10'-0" FROM EXHAUST GRILLE (TYP. SHOWER EXHAUSTS).

NEW 8"Ø FROM STOVE HOOD UP TO ROOF. PROVIDE BDD IN DUCTWORK. TRANSITION TO HOOD AS REQUIRED.

LINED TRANSFER DUCT WITH WMS. REFER TO DETAIL (TYP. TRANSFER DUCTS)

SEE RETURN GRILLE SCHEDULE NOTE 4 (TYP.)

NEW EF-3 SPEED CONTROLLER MOUNTED ON WALL

NEW 30x12 HOOD W/ 4" FLANGE

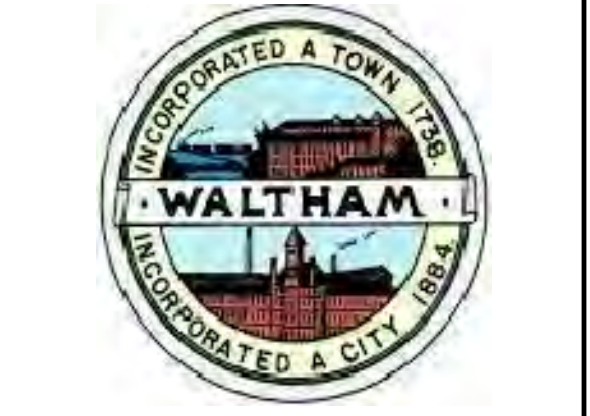
INSTALL VAV BOX BETWEEN JOISTS

NEW 10"Ø TO DIFFUSERS FROM TOP OF DUCTWORK (TYP. 6)

UP TO RTU-2

REVISIONS		
Number	Description	Date

ISSUED FOR BID



WALTHAM POLICE STATION RENOVATION  
155 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS

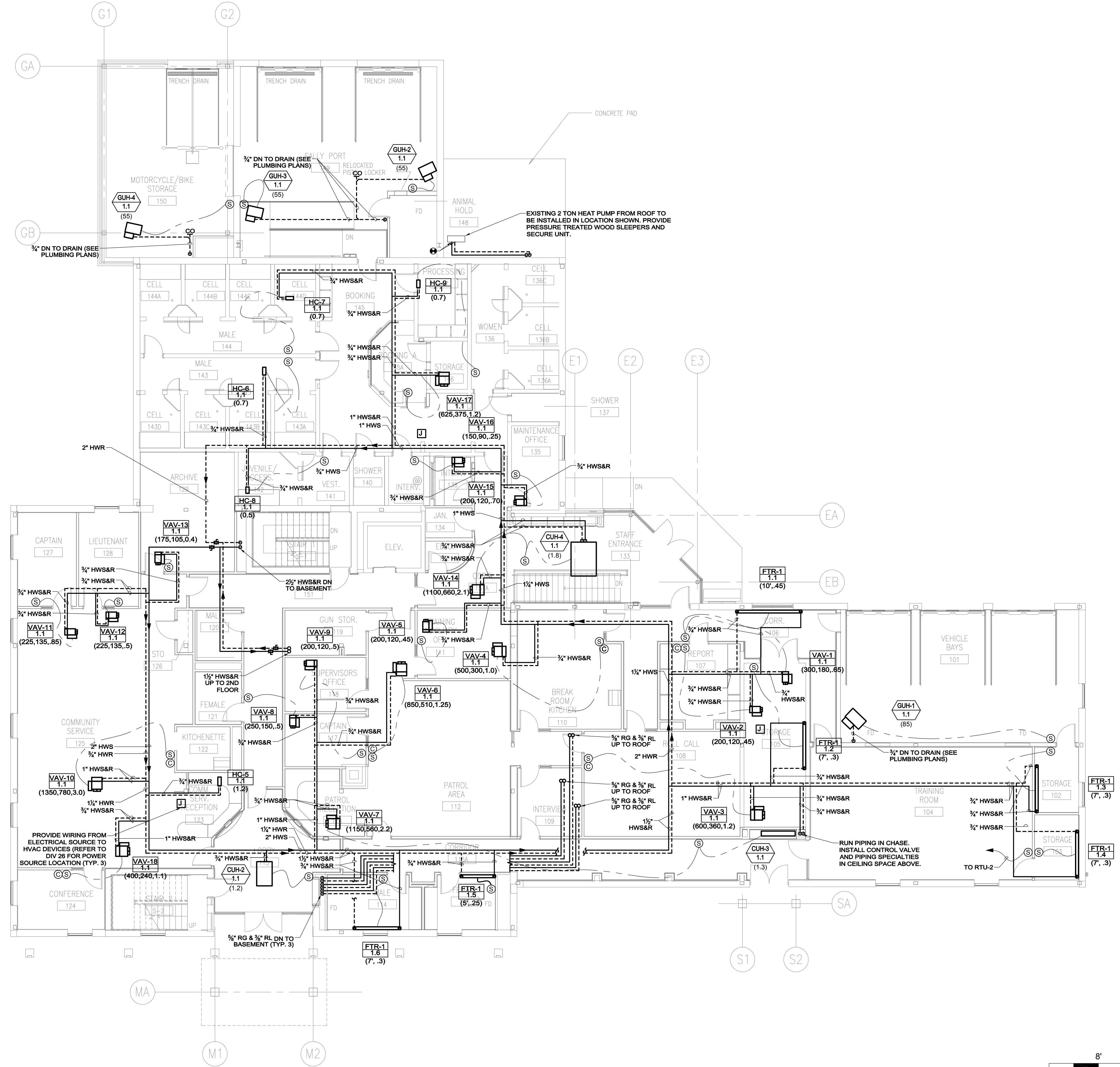
**HVAC FIRST FLOOR DUCTWORK PLAN**

PROJECT NUMBER: 20130535  
DESIGNED BY: JJK  
DRAWN BY: JJK  
CHECKED BY: CH  
DATE: July-Aug.  
SCALE: 2016 1/8" = 1'-0"  
SHEET NUMBER:

**H102**



ELEC: \_\_\_\_\_  
 MECH: \_\_\_\_\_  
 FIRE: \_\_\_\_\_  
 PLUM: \_\_\_\_\_  
 STRU: \_\_\_\_\_  
 ANCH: \_\_\_\_\_  
 REVIEW BY: CIVIL: \_\_\_\_\_



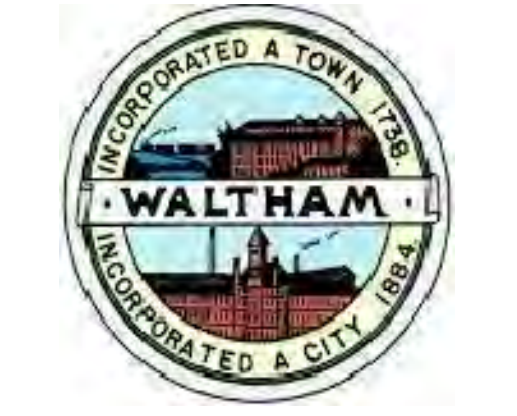
C:\01\20160535 - Waltham Police HQ Renovation\1200 Drawings\1200 HVAC\1st Floor Piping Plan.dwg (Print) July 14, 2014 - 5:52pm dlmawak

**COR MAGUIRE**  
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 Andover, MA 01810-1488  
 T. 978-296-6200

REVISIONS		
Number	Description	Date

ISSUED FOR BID

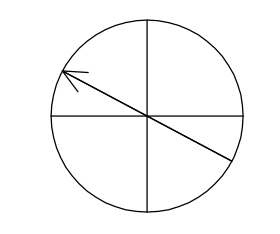
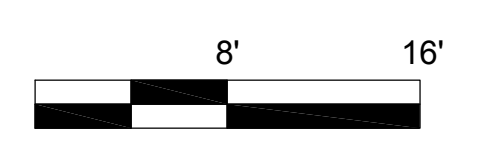


WALTHAM POLICE STATION RENOVATION  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**HVAC FIRST FLOOR PIPING PLAN**

PROJECT NUMBER: 20130535  
 DESIGNED BY: JJK  
 DRAWN BY: JJK  
 CHECKED BY: CH  
 DATE: July-Aug.  
 SCALE: 2016 1/8" = 1'-0"  
 SHEET NUMBER:

**H103**

















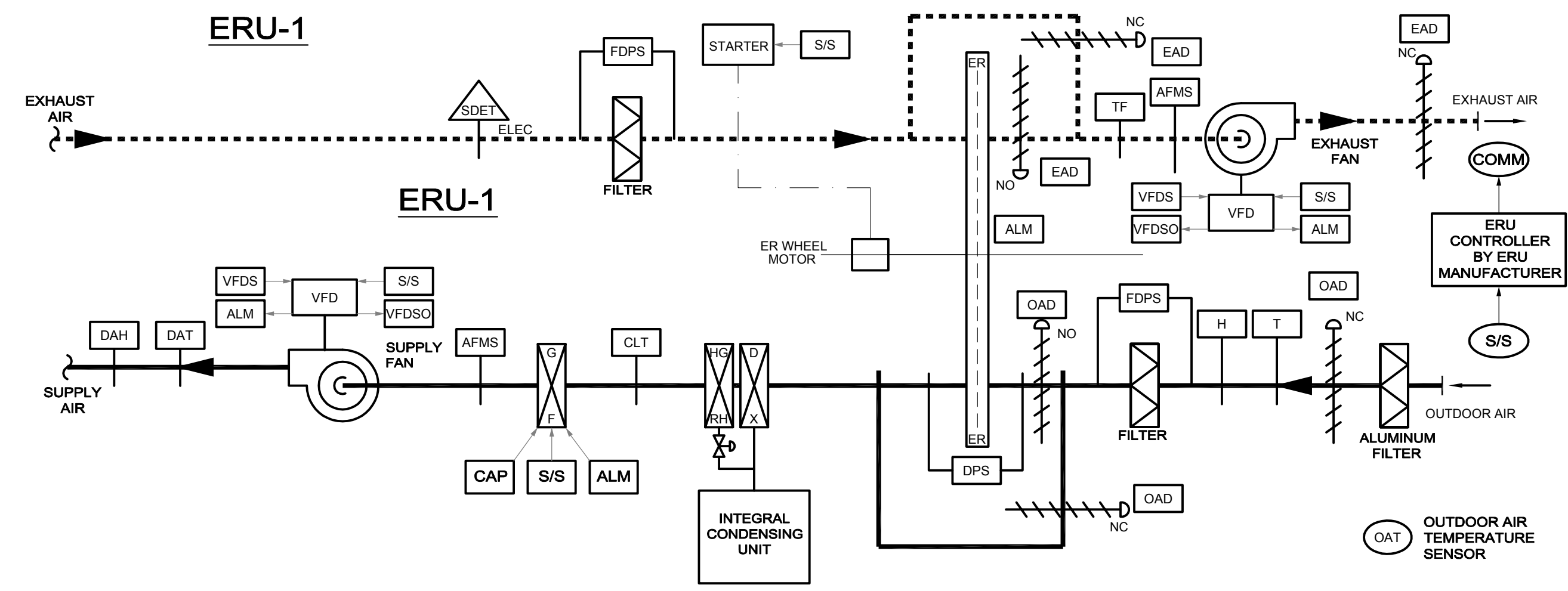








REVIEW BY: CIVIL ARCH. STNU PLUMB. FIRE. MECH. ELEC.



**GENERAL**

1. THE ENERGY RECOVERY UNIT (ERU) SHALL BE CONTROLLED VIA A DEDICATED FACTORY PROVIDED, FULLY PROGRAMMABLE DDC CONTROLLER TO PROVIDE ENERGY RECOVERY, COOLING, DEHUMIDIFICATION, AND HEATING CAPACITY CONTROL. PROVIDE FAILURE ALARMS. BAS CONTRACTOR SHALL COORDINATE INTERFACE WITH ERU FACTORY MOUNTED CONTROL POINTS TO PROVIDE GRAPHICS (WITH ALL DATA) AND ALARMS IN THE DDC CONTROL SYSTEM VIA BACNET.
2. THE ENERGY RECOVERY UNIT MANUFACTURER SHALL PROVIDE THE FILTER DIFFERENTIAL PRESSURE SWITCHES, FREEZE/STAT, VARIABLE FREQUENCY DRIVES (SUPPLY AND EXHAUST), GAS FIRED FURNACE (INCLUDING SAFETIES AND CAPACITY CONTROL), DISCHARGE AIR TEMPERATURE SENSOR, DISCHARGE AIR HUMIDITY SENSOR, AIRFLOW MEASURING STATIONS (SUPPLY AND EXHAUST), OUTDOOR AIR INTAKE ENTHALPY SENSOR (H), FROST PROTECTION SENSOR, MOTOR STARTERS, CURRENT SWITCHES, DAMPERS AND ACTUATORS, AND RECOVERY WHEEL BY-PASS DAMPERS AND ACTUATORS. THE ATC CONTRACTOR SHALL PROVIDE THE DDC CONTROLLER AND INTERFACE TO THE ENERGY RECOVERY UNIT END DEVICES.
3. ATC CONTRACTOR AND UNIT MANUFACTURER SHALL COORDINATE AFMS, VFD, AND ALL SENSOR SIGNALS AND RANGES.
4. PROVIDE FROST CONTROL FOR MANUFACTURER'S SEQUENCE WITH VFD WHEEL CONTROL.
5. ALL TEMPERATURES LISTED ARE FAHRENHEIT. SETPOINTS SHALL BE ADJUSTABLE. ALL ACTUATORS SHALL BE ELECTRONIC.
6. ANTI-RECYCLE TIME DELAYS AND SAFETIES ON COMPRESSORS AND GAS FURNACE SHALL BE PROVIDED BY THE ENERGY RECOVERY UNIT MANUFACTURER.
7. ALL TEMPERATURE SENSORS IN THE ERU AND DUCTWORK SHALL BE AVERAGING TYPE EXCEPT FOR FREEZE/STATS WHICH SHALL BE LOW POINT READING TYPE. SEE ATC SPECIFICATION FOR MORE INFO ON CONTROL COMPONENT REQUIREMENTS.
8. THE FIRST STAGE OF HEATING AND COOLING FOR THE ENERGY RECOVERY UNIT IS USE OF THE ENERGY RECOVERY (ER) WHEEL. WHEN NEITHER HEATING OR COOLING IS NEEDED, THE WHEEL SHALL BE DE-ENERGIZED AND BY-PASSED.
9. MOTOR RATED RELAYS SHALL BE PROVIDED TO INTERFACE MANUAL MOTOR STARTER WITH CONTROL WIRING TO SATISFY THE CONTROL SEQUENCE.
10. REFER TO HOT WATER HEATING COILS FOR ADDITIONAL SEQUENCES AND REQUIREMENTS.

**FAN CONTROL**

1. ERU SHALL NORMALLY OPERATE CONTINUOUSLY.
2. WHILE OFF ON SAFETY OR MANUAL DISCONNECT, ERU (INCLUDING SUPPLY FAN, EXHAUST FAN, AND ER WHEEL) SHALL BE OFF WITH THE OUTSIDE AIR DAMPER (OAD) AND EXHAUST AIR DAMPER (EAD) CLOSED. THE GAS FURNACE AND CONDENSING UNIT DE-ENERGIZED.
3. WHEN STARTED, THE OAD AND EAD SHALL OPEN AND THE ENERGY RECOVERY WHEEL SHALL START ON LOW SPEED AND SLOWLY RAMP TO HIGH SPEED. THEN THE ERU SUPPLY AND EXHAUST FANS SHALL START. DISCHARGE AIR TEMPERATURE SENSOR (DAT) SHALL MODULATE ER WHEEL SPEED TO MAINTAIN AIR TEMPERATURE SETPOINT.

**HEATING CONTROL**

1. THE FIRST MEANS OF MAINTAINING HEAT SETPOINT SHALL BE ACTIVATION OF THE ECONOMIZER AS SENSED BY THE OUTDOOR AIR INTAKE ENTHALPY SENSOR. HEATING SET POINT AT DAT SHALL BE 60°F (ADJ.). UPON A DROP IN DISCHARGE AIR TEMPERATURE (DAT) BELOW THE HEATING SETPOINT SENSOR (TR), THE ER WHEEL SHALL INCREASE IN SPEED TO SATISFY THE HEATING DEMAND. IF ADDITIONAL HEATING IS REQUIRED, THE GAS FIRED FURNACE (HV) SHALL BE STAGED TO PROVIDE THE REQUIRED CAPACITY TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT. THE REVERSE SHALL OCCUR ON A RISE IN DISCHARGE AIR TEMPERATURE.

**COOLING CONTROL**

1. COOLING COIL DISCHARGE SET POINT (CLT) SHALL BE RESET BETWEEN 55°F (ADJ.) AND 75°F (ADJ.) MAX TO SATISFY THE COOLING REQUIREMENTS (UNLESS IN DEHUMIDIFICATION MODE) BY POOLING THE TEMPERATURE SENSORS SERVED BY ERU-1 (EXCEPT FITNESS ROOM - SEE HC CONTROLS) AND PROVIDING A DAT REQUIRED TO SATISFY WORST CASE SENSOR. THE FIRST MEANS OF MAINTAINING COOLING SETPOINT SHALL BE ACTIVATION OF THE ECONOMIZER AS SENSED BY THE OUTDOOR AIR INTAKE ENTHALPY SENSOR. IF ADDITIONAL COOLING IS REQUIRED, THE INTEGRAL CONDENSING UNIT SHALL BE STAGED AS REQUIRED TO MAINTAIN THE COOLING COIL DISCHARGE TEMPERATURE SETPOINT (CLT). THE REVERSE SHALL OCCUR ON A DROP IN TEMPERATURE BELOW COOLING SETPOINT.

**DEHUMIDIFICATION CONTROL**

1. IF THE DISCHARGE AIR DEW POINT AS MEASURED BY DAT AND DAH RISES ABOVE 58°F (ADJ.) FOR 5 MINUTES (ADJ.), THE DX COIL SHALL BE CONTROLLED BETWEEN 50°F AND 55°F AT CLT AND THE HOT GAS REHEAT COIL SHALL BE MODULATED TO MAINTAIN COOLING SETPOINT. UPON A DROP IN DEW POINT BELOW 57°F (ADJ.) FOR 10 MINUTES THE DEHUMIDIFICATION CYCLE SHALL END.

**FROST CONTROL**

1. IF THE FROST PROTECTION TEMPERATURE SENSOR TF, LOCATED IN THE LEAVING EXHAUST AIR AFTER THE ENTHALPY WHEEL FALLS TO BELOW SETPOINT OF 15°F (CONTRACTOR SHALL VERIFY SETPOINT WITH MANUFACTURER), THE BY-PASS DAMPERS SHALL MODULATE OPEN TO RAISE THE AIR TEMPERATURE TO MINIMUM SETPOINT.

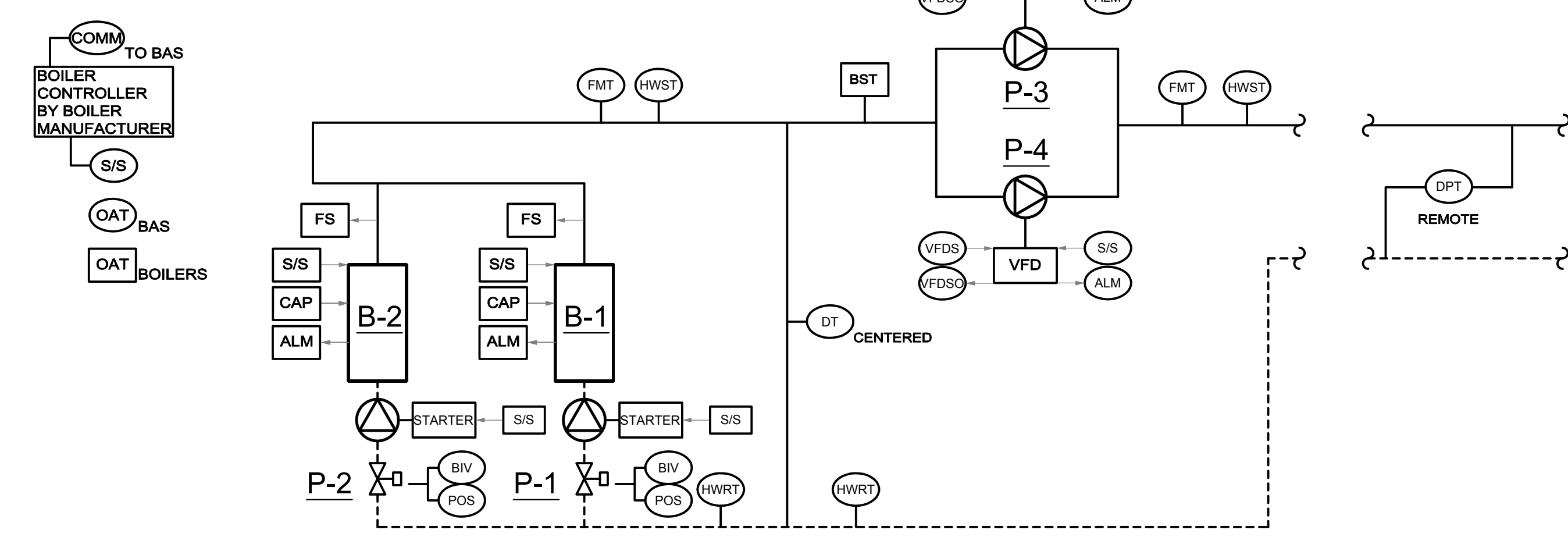
**SAFETIES**

1. THE FOLLOWING SAFETIES, EACH WITH ITS OWN MANUAL RESET, SHALL SHUT DOWN THE ENERGY RECOVERY UNIT'S SUPPLY AND EXHAUST FANS VIA HARDWARE BEFORE THE H-O-A.
  - a. IF THE FROST PROTECTION TEMPERATURE SENSOR TF LOCATED IN THE LEAVING EXHAUST AIR STREAM AFTER THE ENTHALPY WHEEL FALLS TO BELOW SETPOINT OF -2°F (MANUFACTURER SHALL VERIFY LOCATION AND SETPOINT).

**ALARMS**

1. ENERGY WHEEL FROST CONTROL: IF EXHAUST AIR TEMPERATURE IS BELOW THE ENERGY RECOVERY WHEEL'S FROST THRESHOLD 15°F (ADJ.) (DETERMINED BY THE FROST PROTECTION SENSOR, SETPOINTS TO BE COORDINATED WITH UNIT MANUFACTURER) FOR 15 MINUTES (ADJ.) AN ALARM SHALL BE SENT TO THE BAS.
2. CURRENT SWITCHES PROVIDE MONITORING OF SUPPLY AND EXHAUST FANS OPERATION. UPON LOSS OF SIGNAL, AN ALARM SHALL BE SENT TO THE BAS AND THE UNIT SHALL BE SHUT DOWN.
3. VFD ALARM CONTACT PROVIDES INDICATION OF ENERGY RECOVERY WHEEL OPERATION. UPON LOSS OF SIGNAL, AN ALARM SHALL BE SENT TO THE BAS.
4. DIFFERENTIAL PRESSURE SWITCH PROVIDE MONITORING OF FILTER PRESSURE DROPS. ALARM SHALL BE SENT TO THE BAS WHEN EITHER PRESSURE DROP SETPOINT (REFER TO SCHEDULE FOR INITIAL PD) IS EXCEEDED FOR MORE THAN 10 MINUTES.
5. DIFFERENTIAL PRESSURE SENSOR SHALL MONITOR THE ENERGY RECOVERY WHEEL PRESSURE DROP. ALARM SHALL BE SENT TO THE BAS WHEN THE MANUFACTURER'S SETPOINT IS EXCEEDED.
6. IF ANY DUCT SMOKE DETECTOR TRIPS, THE UNIT SUPPLY FAN, CONDENSING SECTION, AND GAS FURNACE SHALL BE SHUTDOWN AND AN ALARM SHALL BE SENT TO THE BAS. THE EXHAUST FAN SHALL REMAIN ON. THE DETECTOR MUST BE MANUALLY RESET TO RESUME NORMAL OPERATIONS.

**ERU-1 ENERGY RECOVERY UNIT CONTROL SEQUENCES**



**GENERAL**

1. BOILER MANUFACTURER SHALL PROVIDE BOILER CONTROLLER TO SEQUENCE AND MODULATE ALL BOILERS, AND PROVIDE BACNET OR LONTALK 2-WAY COMMUNICATIONS, INCLUDING ALARMS, BETWEEN THE BOILER CONTROLLER AND THE BAS. BAS CONTRACTOR SHALL INSTALL AND WIRE REMOTE SENSORS FURNISHED BY THE BOILER MANUFACTURER, PROVIDE ALL PUMP CONTROLS, AND PROVIDE DYNAMIC GRAPHICS (ALL DATA) OF THE BOILER SYSTEM AT THE OPERATOR'S WORKSTATION.
2. BOILER CONTROLS SHALL BE SET-UP BY THE MANUFACTURER TO INTERLOCK WITH ASSOCIATED ISOLATION VALVES. PROVIDE LINE SIZED, TWO POSITION, SLOW ACTING BOILER ISOLATION VALVES. BOILER ISOLATION VALVES SHALL BE PROVIDED WITH POSITION FEEDBACK SIGNAL.
3. BAS CONTRACTOR SHALL MEET WITH BOILER CONTROLS MANUFACTURER TO COORDINATE THE REQUIRED CONTROL SIGNALS, STATUS SIGNALS (FOR THE GRAPHICS), AND ALARMS FOR THE BOILER SYSTEM.
4. ALL SET POINTS AND TIME DELAYS SHALL BE ADJUSTABLE WITHOUT ANY PROGRAM CHANGES. ALL ACTUATORS SHALL BE ELECTRONIC. PROVIDE FOR LOCAL EQUIPMENT OVERRIDE OF CONTROL SYSTEM.
5. BAS SHALL PROVIDE FOR ROTATION OF LEAD/STANDBY VFD SECONDARY PUMPS ON A WEEKLY BASIS.
6. PROVIDE TEMPERATURE SENSORS AND OTHER DEVICES SHOWN AND COORDINATE ALL SENSOR INSTALLATION LOCATIONS WITH THE MECHANICAL CONTRACTOR. COORDINATE AND INSURE MANUFACTURER'S RECOMMENDED UPSTREAM AND DOWNSTREAM PIPE DIAMETERS ARE PROVIDED - ESPECIALLY FOR FLOW METERS. WIRE BOILER MANUFACTURER'S CONTROLLER TO EACH BOILER AND SENSOR PER MANUFACTURER'S DIAGRAMS. COORDINATE TO OBTAIN ALL INFO FOR BAS GRAPHICS.
7. BAS CONTRACTOR SHALL PROVIDE AND WIRE INDIVIDUAL FIRESTATS (NOT SHOWN) TO SHUTDOWN EACH BOILER AND ENSURE THE BOILER EMERGENCY SHUT-OFF SWITCHES STOP ALL BOILERS.

**HOT WATER CONTROL**

1. THE BOILER SYSTEM SHALL NORMALLY BE ON DURING WARM-UP, ALL OCCUPIED HOURS (INCLUDING UNOCCUPIED OVERRIDE) AND UNOCCUPIED HOURS WHEN THE OAT IS BELOW 57°F AND SHALL BE AUTOMATICALLY STARTED AND STOPPED BY THE BAS. THE BOILER SHALL BE DISABLED ONLY DURING THE UNOCCUPIED HOURS WHEN THE OAT IS ABOVE 57°F. THE CONTROL OF BOILER STAGING AND CAPACITY SHALL BE BY THE BOILER CONTROLLER.
2. BEFORE THE BOILERS ARE STARTED, THE LEAD BOILERS ISOLATION VALVE SHALL BE OPENED SLOWLY, THE PRIMARY PUMP (BP) SHALL BE STARTED AND THE LEAD SECONDARY HOT WATER PUMP SHALL BE STARTED AT LOW SPEED BY THE BAS. IF SECONDARY PUMP FAILS, STANDBY PUMP SHALL BE STARTED AND THE BAS SHALL ALARM.
3. OPERATING SPEED FOR THE LEAD PUMP SHALL BE THE LOWEST REQUIRED TO MAINTAIN THE SET POINT OF THE REMOTE DIFFERENTIAL PRESSURE SENSOR (DPT) LOCATED NEAR THE FURTHEST COILS. INITIAL SET POINT OF REMOTE DPT SHALL BE 15 PSI WITH FINAL SET POINT COORDINATED WITH THE BALANCING CONTRACTOR TO THE LOWEST NEEDED TO GET FULL FLOW TO THE MOST REMOTE COIL (WITH THE COILS CONTROL VALVE NO MORE THAN 90% OPEN).
4. THE BOILER SUPPLY WATER TEMPERATURE AT SENSOR BST SHALL BE INITIALLY SET TO A MAXIMUM OF 140°F AT 0°F OAT AND RESET LINEARLY TO A MINIMUM OF 110°F AT 60°F OAT.

**BOILER CONTROL SYSTEM**

1. WHEN A BOILER IS NEEDED TO OPERATE, THE PRIMARY BOILER PUMP (P-1 AND/OR P-2) SHALL PROVE ON BY THE BOILER'S FLOW SWITCH (FS) BEFORE THE BOILER STARTS. WHEN A BOILER IS NOT NEEDED THE BOILER PUMP SHALL BE STOPPED AFTER THE BURNER IS STOPPED. AN EXCEPTION IS THE LEAD BOILER WHOSE BOILER PUMP SHALL ALWAYS REMAIN ON TO PROVIDE PRIMARY HW FLOW.
2. ON A CALL FOR HEATING, THE LEAD BOILER SHALL START ON LOW FIRE. THE BOILER HOT SUPPLY WATER TEMPERATURE AT BST SHALL BE MAINTAINED BY STAGING OF BOILERS AND MODULATING THE BURNERS. MANUFACTURER'S BOILER CONTROLLER SHALL START AND OPERATE THE LAG BOILERS WHEN NEEDED TO MAINTAIN EITHER THE SYSTEM SUPPLY TEMPERATURE AT BST OR WHEN THE SYSTEM WOULD OPERATE MORE EFFICIENTLY WITH MORE BOILERS ON.
3. THE BOILER CONTROLLER SHALL ROTATE THE LEAD AND LAG BOILERS TO ASSURE THAT ALL

**BOILERS RECEIVE EQUAL RUN TIME.**

4. WHEN LOAD DROPS (BASED ON BOILER CAPACITY AND EFFICIENCY) LAG BOILERS SHALL BE STOPPED AS REQUIRED.
5. THE BOILER CONTROLLER SHALL ENABLE/DISABLE, MONITOR STATUS, AND DISPLAY ALARM SIGNALS FOR FLAME FAILURE AND LOW WATER ALARM. UPON A BOILER FAILURE ALARM, FLAME FAILURE ALARM, BP FAILURE, OR LOW WATER ALARM, THE RESPECTIVE BOILER SHALL BE DE-ENERGIZED, BOILER PUMP SHALL STOP, AND ISOLATION VALVE SHALL CLOSE. THE NEXT BOILER IN THE LEAD/LAG SEQUENCE OF OPERATION SHALL BE ENERGIZED, AND EACH ALARM SHALL BE COMMUNICATED TO THE BAS FOR ALARM/DISPLAY AT THE OPERATOR'S WORKSTATION.

**BOILER MOUNTED CONTROLS (BY BOILER MANUFACTURER)**

1. ALL CONTROLS SHALL BE LOCATED IN A HINGED LOCKING METAL CABINET WITH NEMA 1A ENCLOSURE AND NEOPRENE DUST SEAL. CONTROLS SHALL BE ELECTRONIC. ALL WIRING SHALL BE COLOR CODED. PROVIDE CONTROL TRANSFORMER, AND FUSING IN ACCORDANCE WITH ALL CODE REQUIREMENTS. PROVIDE DUAL ADJUSTABLE HIGH LIMIT CONTROLS WITH ONE SET AT 190°F WITH MANUAL RESET AND ALARM CONTACT, AND ONE SET AT 180°F WITH AUTO RESET AFTER AN ADJUSTABLE DIFFERENTIAL; ADJUSTABLE, RESETTABLE OPERATING CONTROL (WITH INITIAL RESET SCHEDULE BETWEEN 140°F AND 110°F BASED ON OAT); AND LOW WATER CUT OFF DEVICE WITH MANUAL RESET.
2. THE SEQUENCE OF BURNER OPERATION SHALL BE CONTROLLED BY A PROGRAMMING RELAY OF THE ELECTRONIC TYPE PROVIDING PRE-PURGE AND POST-PURGE CYCLES AND WITH FULL PROTECTION AGAINST FLAME FAILURE DURING BOTH IGNITION AND NORMAL BURNER OPERATING PERIODS. OPERATING OF THE PROGRAMMING RELAY SHALL BE GOVERNED BY EXCESS TEMPERATURE LIMIT SWITCH, AN ELECTRONIC FLAME FAILURE PROTECTION DEVICE AND THE LOW WATER CUT-OFF TO SHUT DOWN THE BOILER. AFTER THE SAFETY SHUTDOWN MANUAL RESET SHALL BE REQUIRED. THE BURNER BLOWER CONTROLS SHALL BE INTERLOCKED TO PREVENT BURNER OPERATION WITHOUT FORCED DRAFT. MEANS SHALL BE PROVIDED FOR AUTOMATICALLY DELAYING BURNER OPERATION WHILE ALLOWING FAN TO SCAVENGE BOILER PASSES OF COMBUSTION GASES AFTER FLAME OR OTHER BURNER STOPPAGE. EACH BURNER SHALL BE PROVIDED WITH BOILER PUMP START/STOP CONTACTS AND ALARM.

**REPORTING FUNCTIONS**

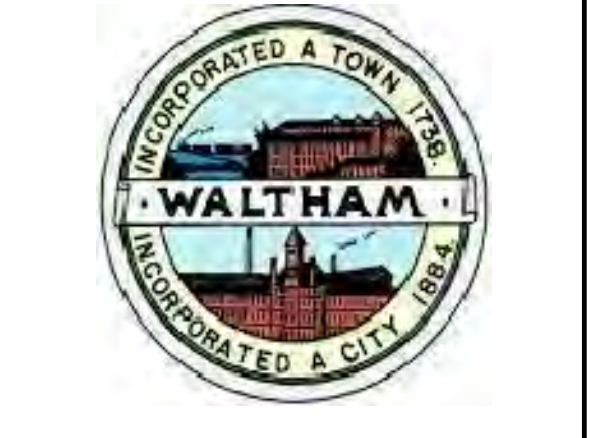
1. HISTORIES/TRENDING
  - a. THE BAS SHALL PRINT OUT ANY TEMPERATURE OR DATA FROM ANY SENSOR OR DEFINED VARIABLE ON REQUEST OF OPERATOR.
  - b. THE BAS SHALL BE PROGRAMMED TO RECORD HISTORIES OF ALL TEMPERATURES (BOILER WATER SUPPLY AND RETURN TEMPERATURES, HOT WATER SUPPLY AND RETURN TEMPERATURES, DE-COUPLER TEMPERATURE [DT] TO INDICATE DIRECTION OF FLOW, ETC.), STATUS, FLOW RATE, HOUR OF DAY, HOURS OF OPERATION ASSOCIATED WITH EACH PIECE OF EQUIPMENT. IN ADDITION, RECORD HISTORIES OF ANY OTHER ITEM OVER ANY TIME PERIOD REQUESTED BY OPERATOR. COORDINATE WITH OWNER FOR INITIAL LIST OF HISTORY ITEMS.
  - c. THE BAS SHALL PRINT OUT ALL CHANGES IN EQUIPMENT STATUS AS THEY OCCUR.
  - d. INITIALLY THE BAS SHALL TREND AND LOG BOILER PLANT CAPACITY (FLOW AT FMT AND DIFFERENTIAL TEMPERATURE BETWEEN MATCHED SENSORS HWST AND HWRT), PUMP SPEED, REMOTE DPT READING, OAT, WHICH BOILERS ARE ON AND AT WHAT CAPACITY, ALONG WITH TIME OF DAY.
2. ALARMS
  - a. ALARM MESSAGES SHALL BE DISPLAYED AND PRINTED AT THE OPERATORS WORKSTATION.
  - b. IN ADDITION TO THE ALARMS PREVIOUSLY LISTED, ALL SENSORS AND VARIABLES SHALL BE CAPABLE OF HIGH/LOW ALARM POINTS. AS A MINIMUM, THE FOLLOWING SHALL BE ALARMED AFTER APPROPRIATE TIME DELAYS:
    - 1) IF ANY PIECE OF EQUIPMENT IS ON THAT IS INDICATED AS OFF OR FAILS.
3. GRAPHICS
  - a. PROVIDE OVERALL SYSTEM, INDIVIDUAL BOILER AND PUMP GRAPHICS WITH REAL TIME UPDATING OF CONDITIONS (STATUS, TEMPERATURES, FLOWS, ETC.).

**HOT WATER SYSTEM CONTROL SEQUENCE**



REVISIONS		
Number	Description	Date

**ISSUED FOR BID**



**WALTHAM POLICE STATION**

155 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS

**HVAC AUTOMATIC TEMPERATURE CONTROLS**

PROJECT NUMBER: 20130535  
DESIGNED BY: JJK  
DRAWN BY: JJK  
CHECKED BY: CH  
DATE: July-Aug.  
SCALE: 2016 N.T.S.

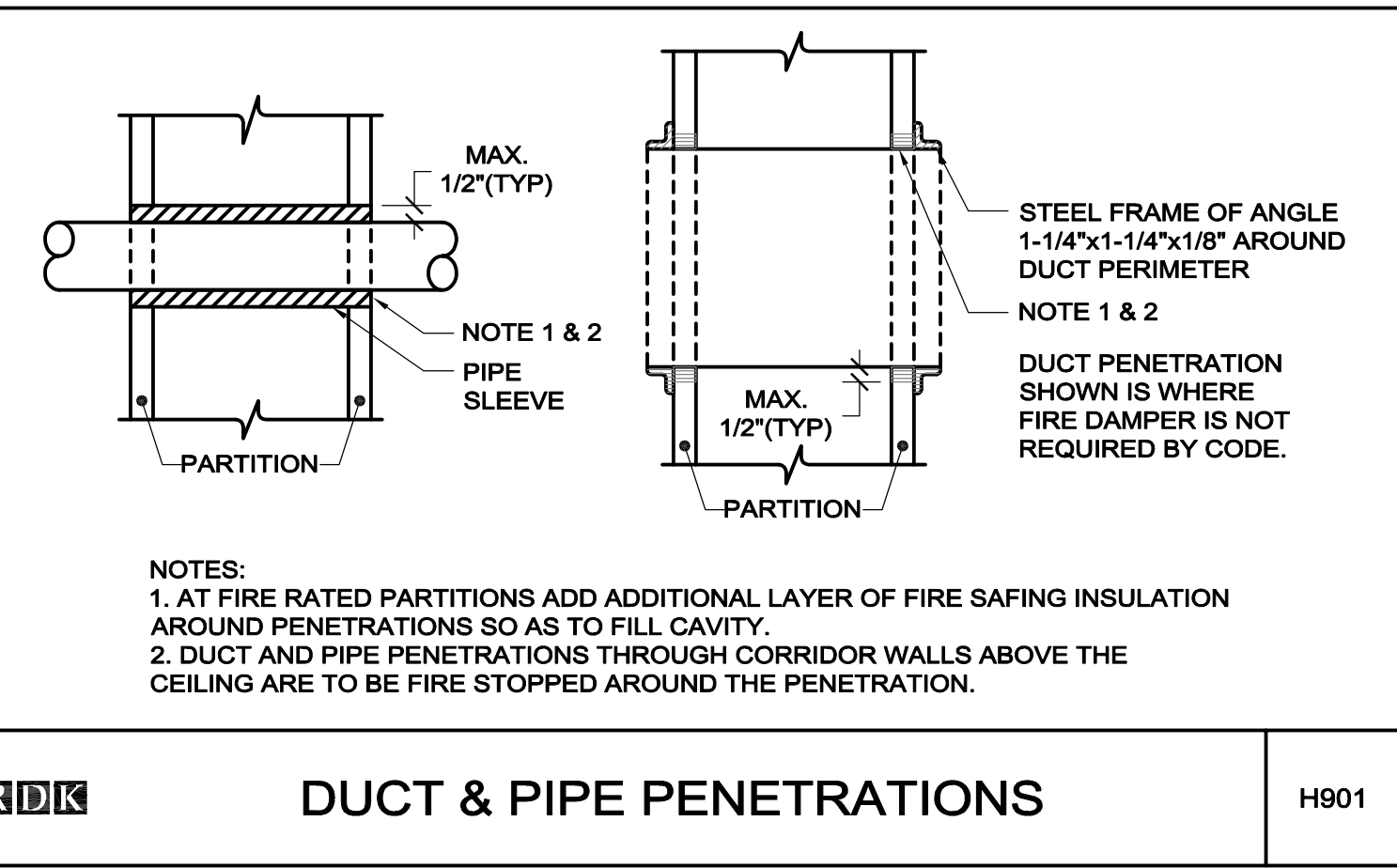
SHEET NUMBER: **H603**

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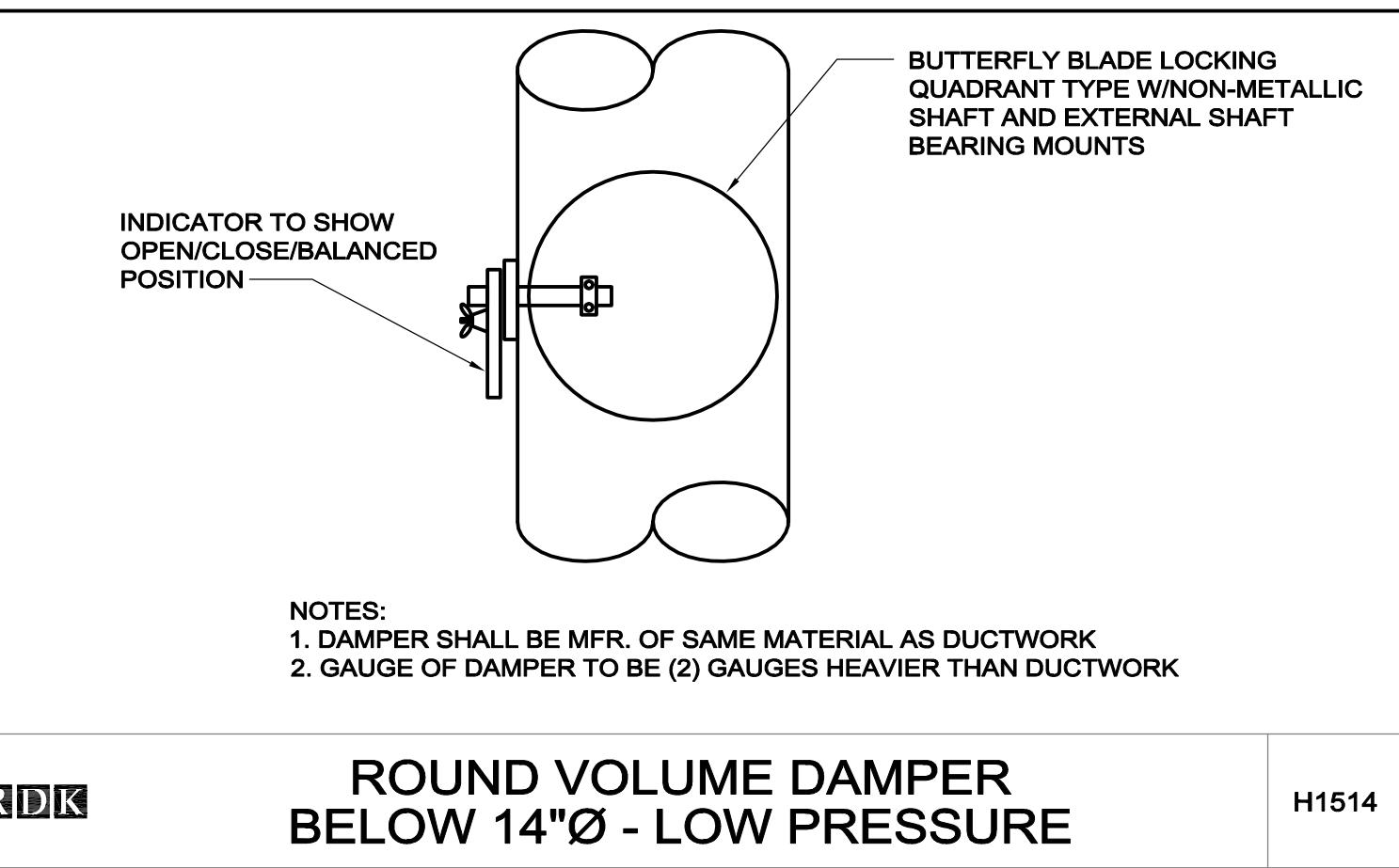






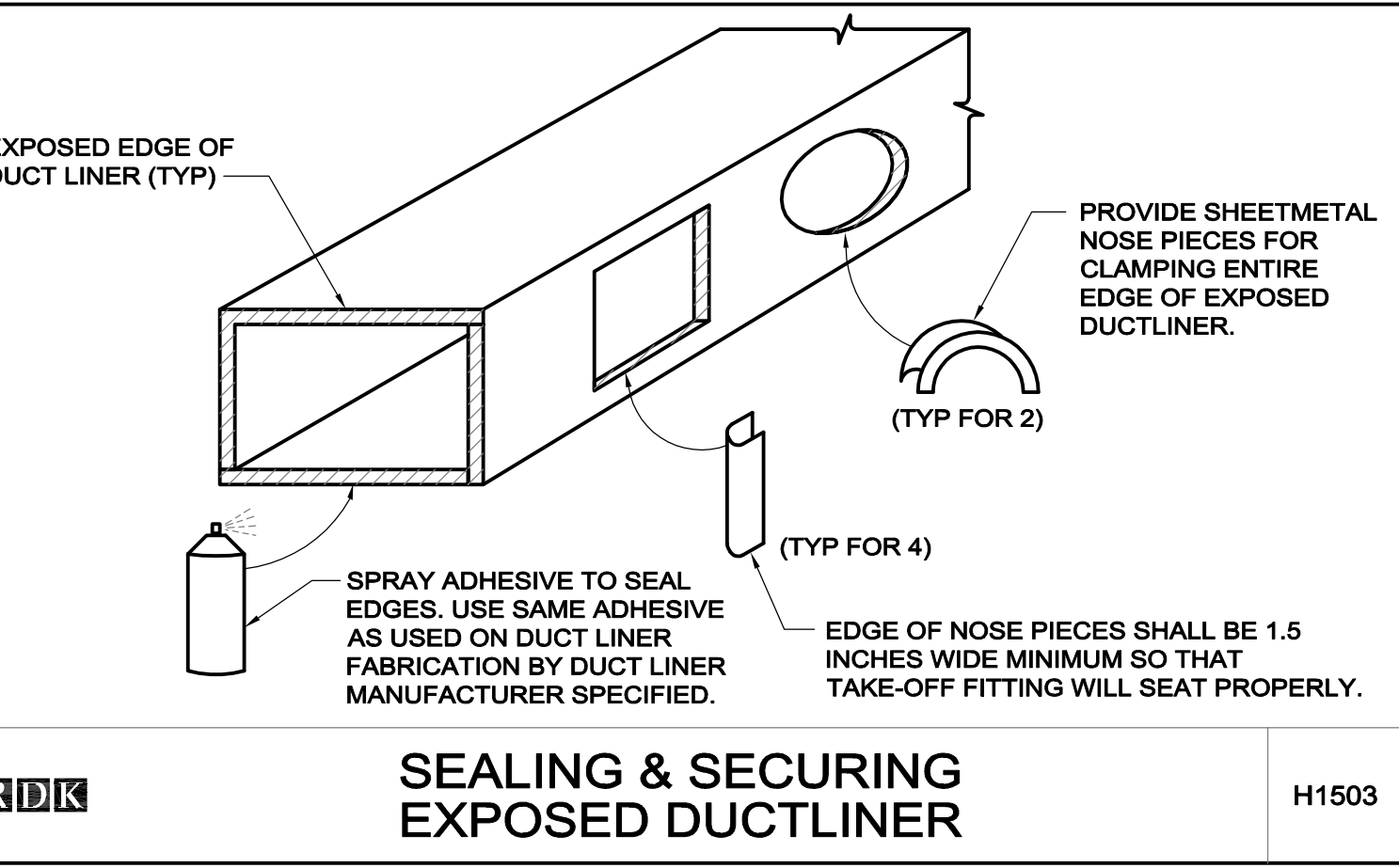
NOTES:  
 1. AT FIRE RATED PARTITIONS ADD ADDITIONAL LAYER OF FIRE SAFING INSULATION AROUND PENETRATIONS SO AS TO FILL CAVITY.  
 2. DUCT AND PIPE PENETRATIONS THROUGH CORRIDOR WALLS ABOVE THE CEILING ARE TO BE FIRE STOPPED AROUND THE PENETRATION.

**DUCT & PIPE PENETRATIONS** H901

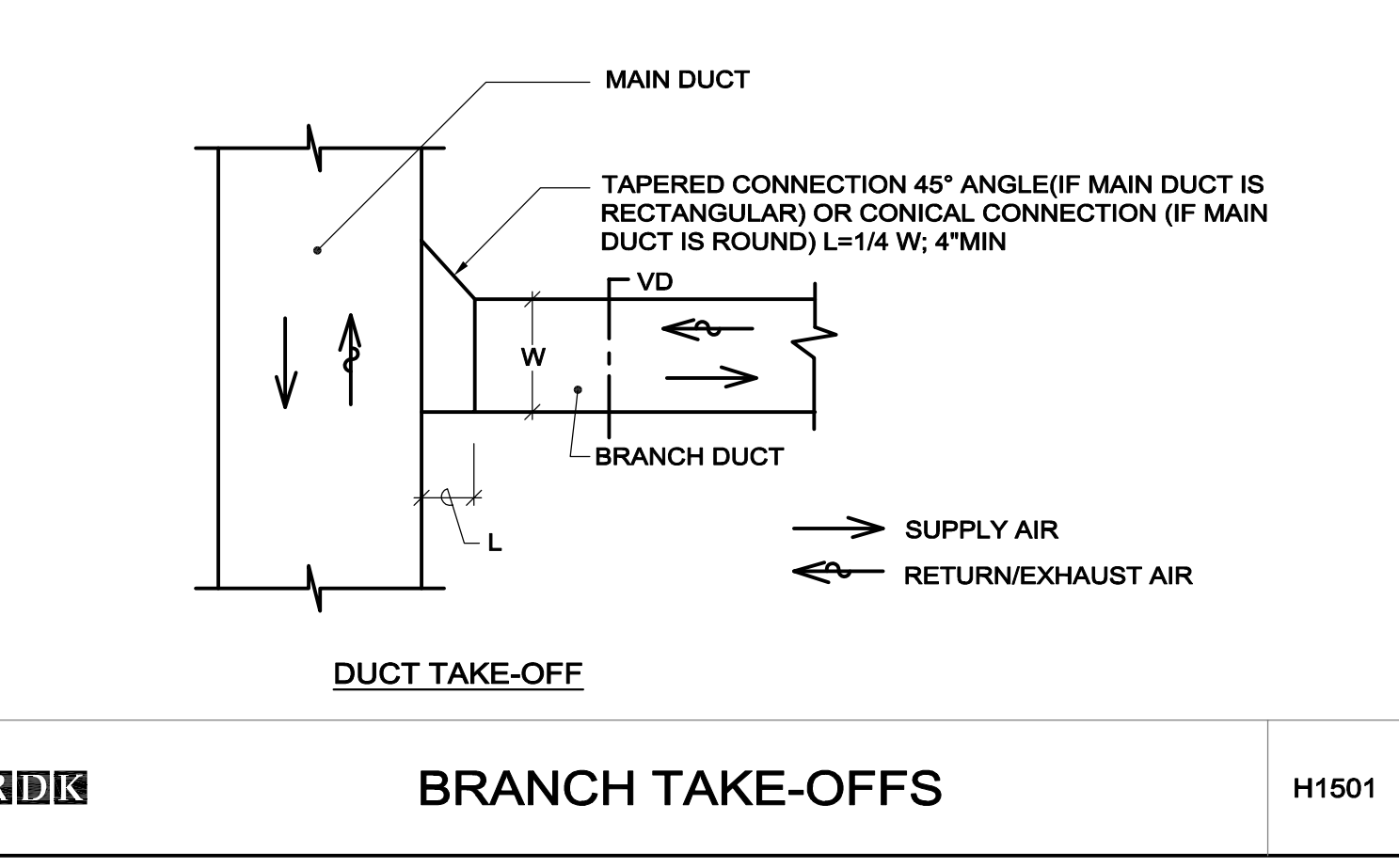


NOTES:  
 1. DAMPER SHALL BE MFR. OF SAME MATERIAL AS DUCTWORK  
 2. GAUGE OF DAMPER TO BE (2) GAUGES HEAVIER THAN DUCTWORK

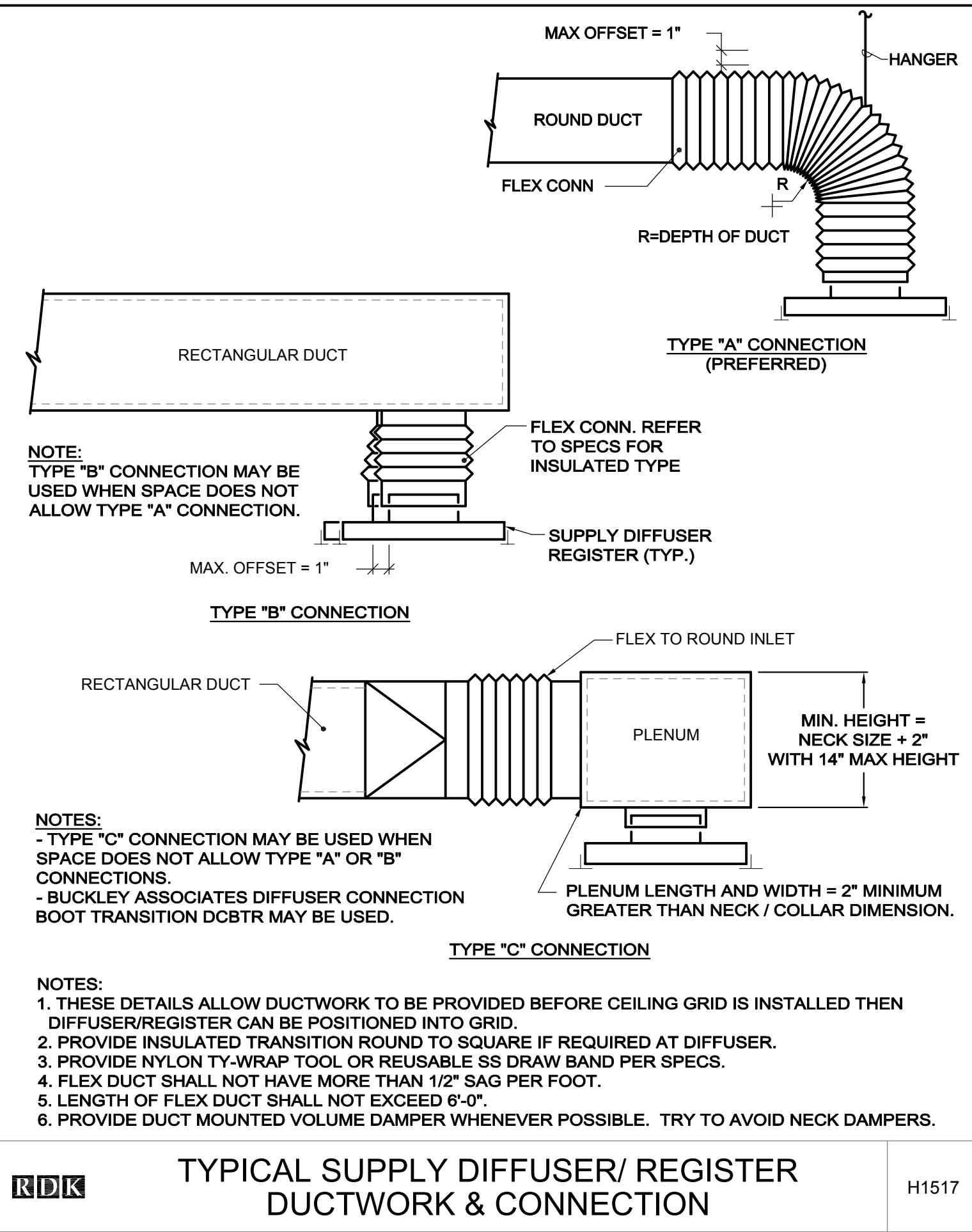
**ROUND VOLUME DAMPER BELOW 14"Ø - LOW PRESSURE** H1514



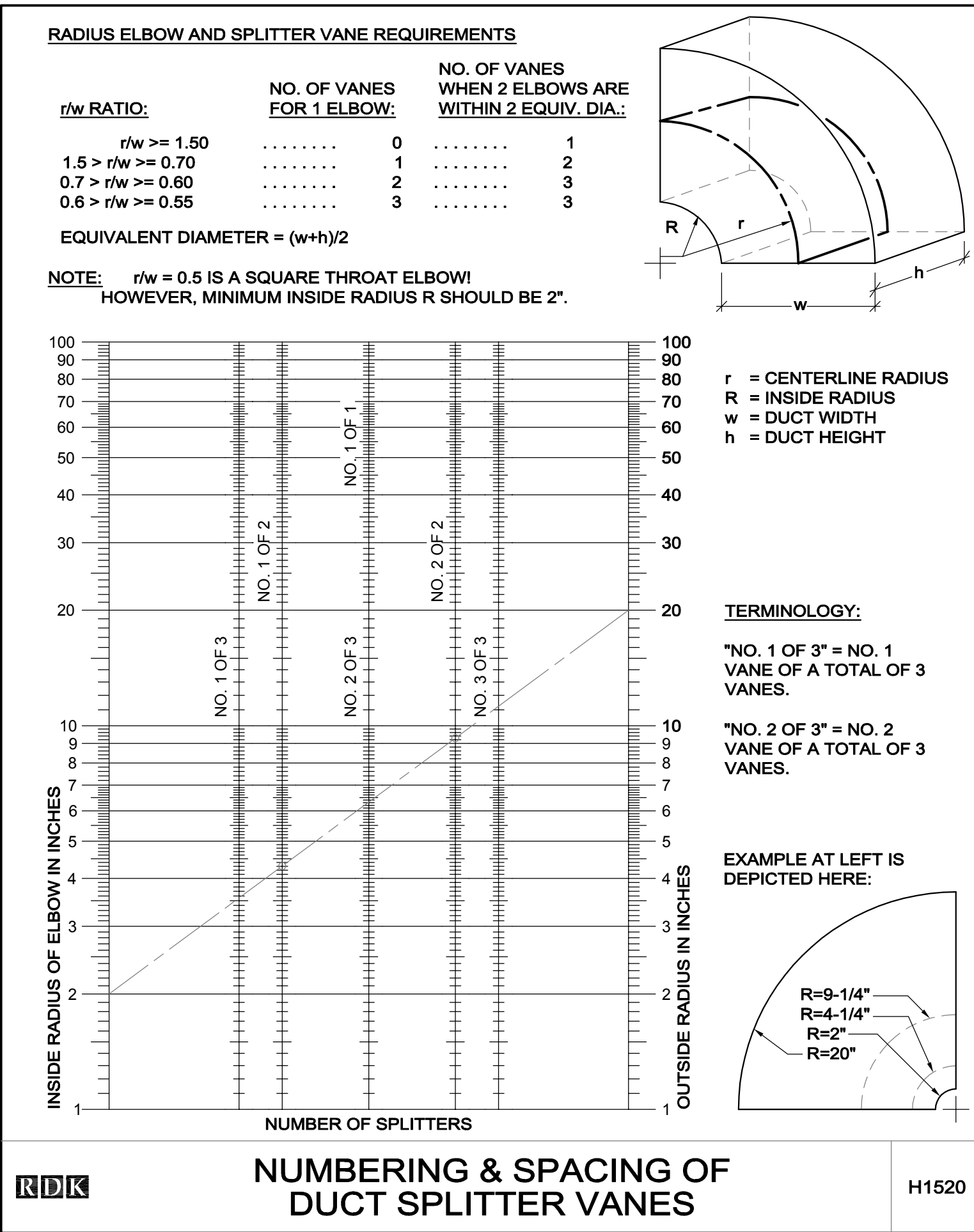
**SEALING & SECURING EXPOSED DUCTLINER** H1503



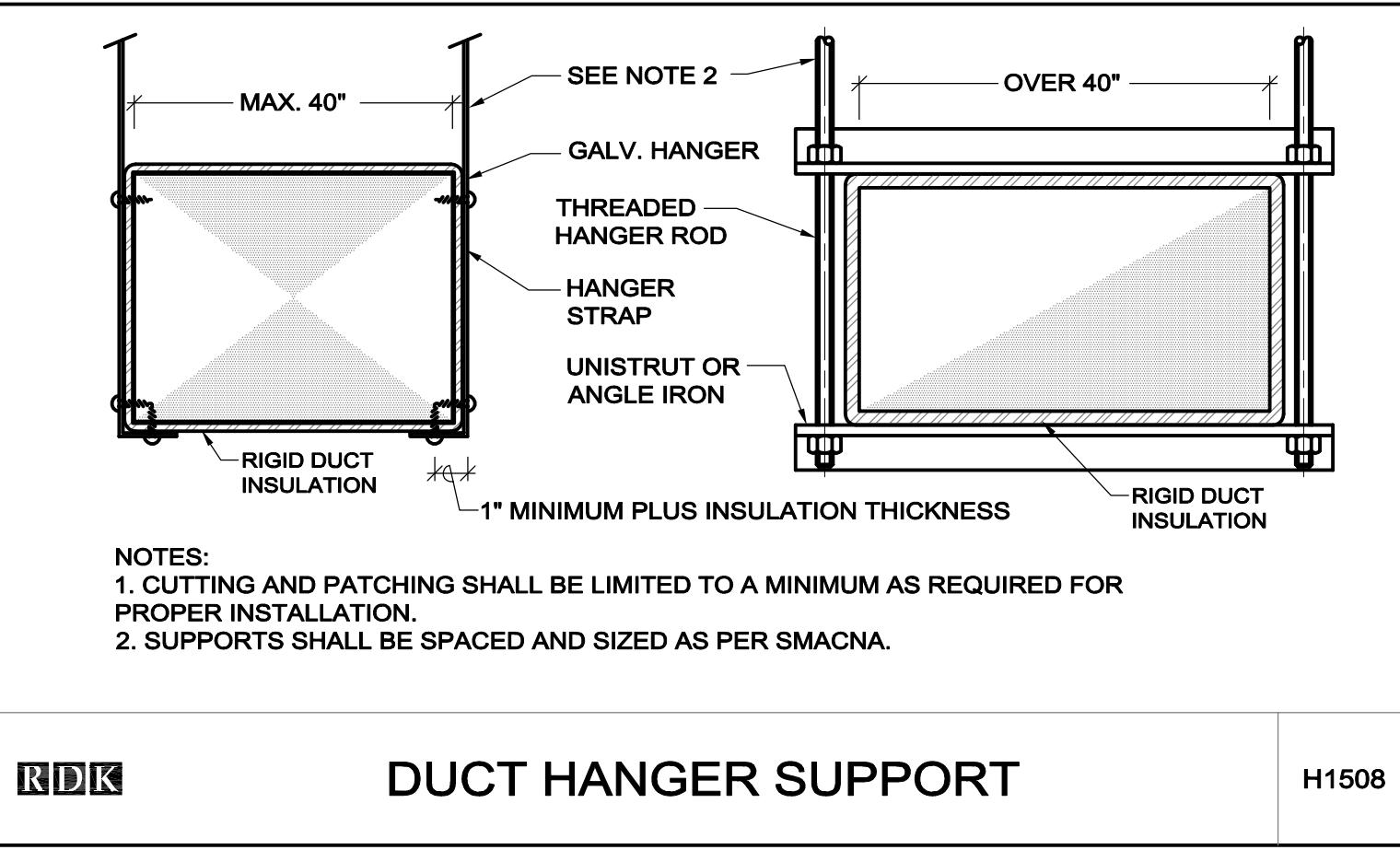
**BRANCH TAKE-OFFS** H1501



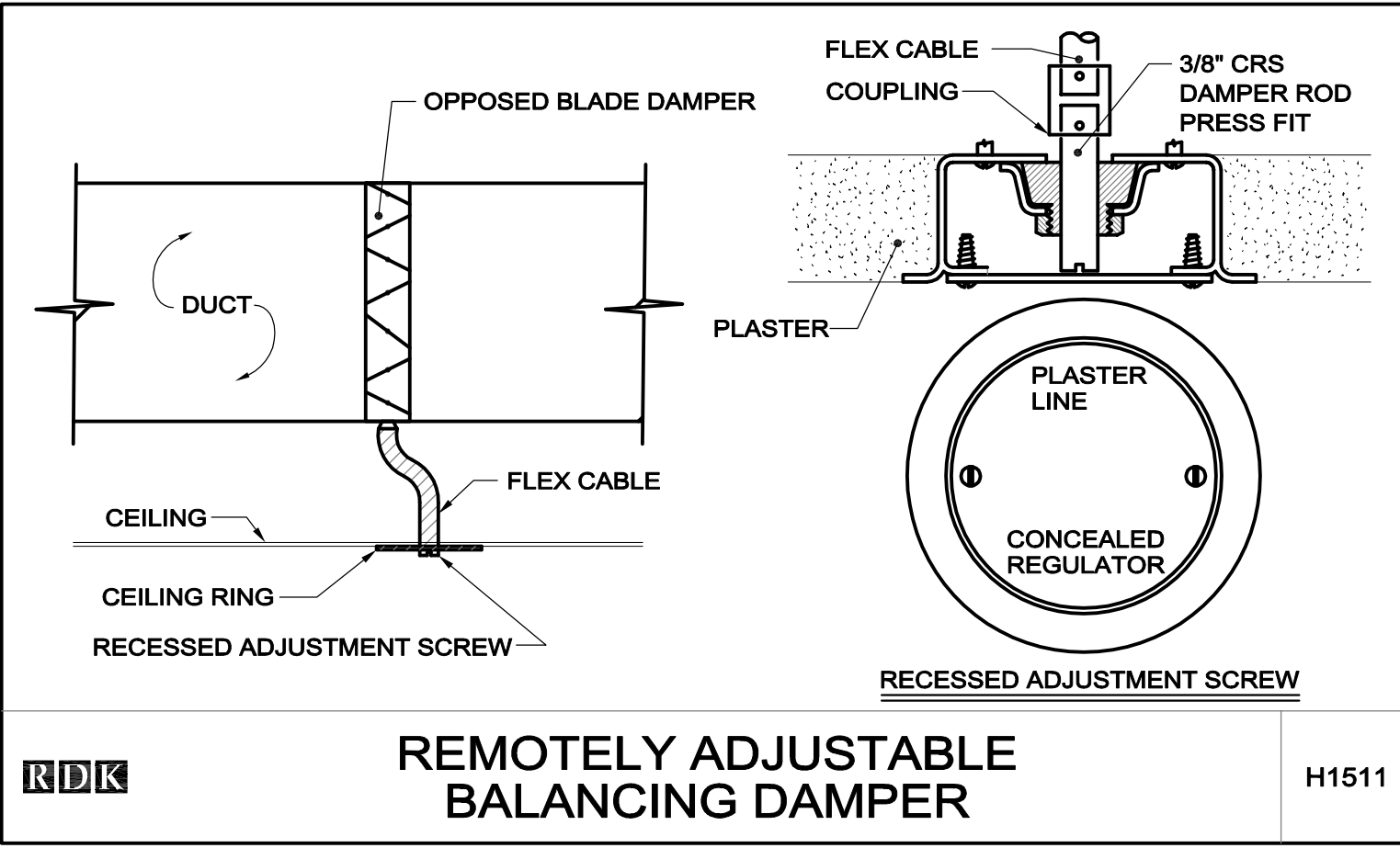
**TYPICAL SUPPLY DIFFUSER/ REGISTER DUCTWORK & CONNECTION** H1517



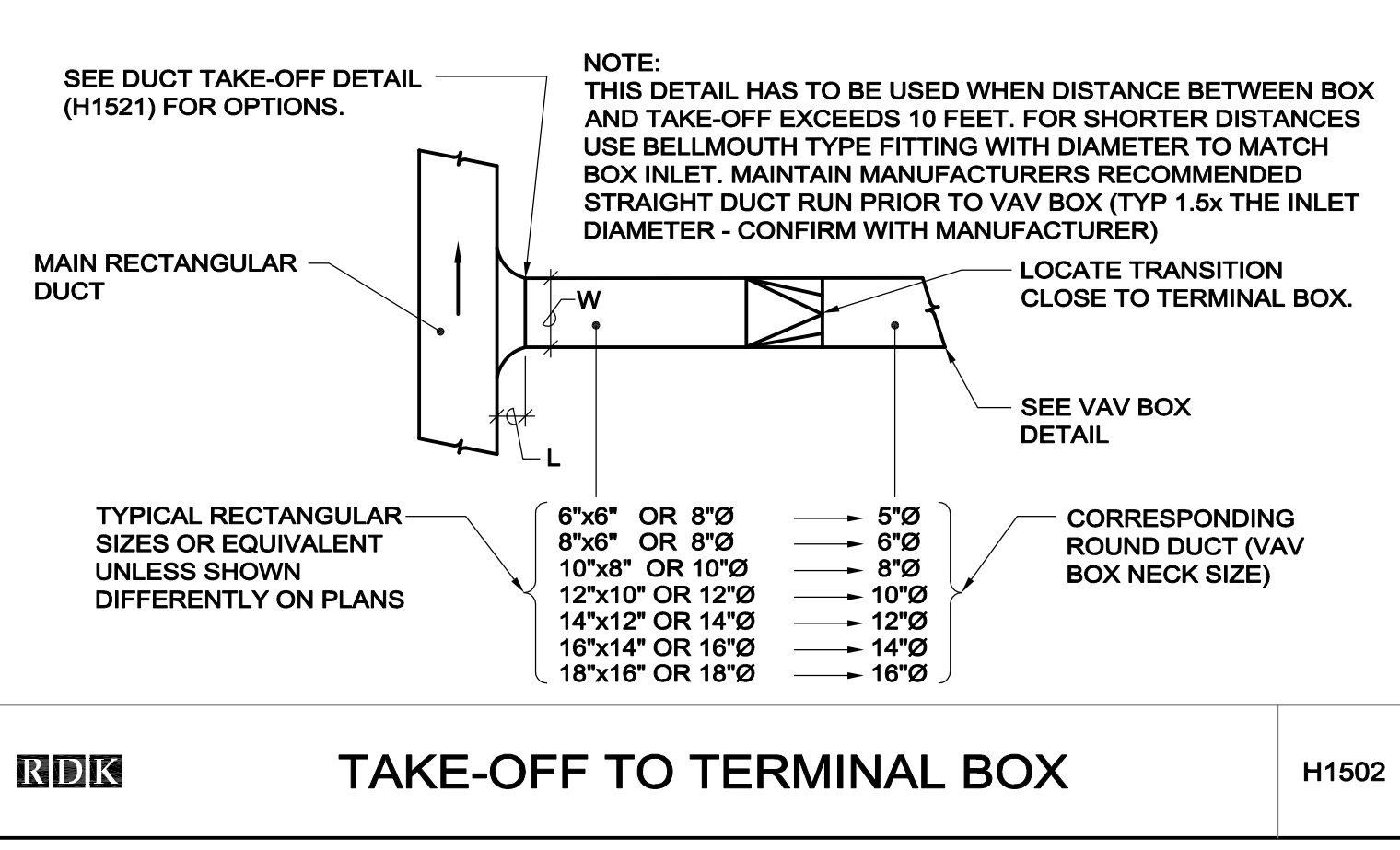
**NUMBERING & SPACING OF DUCT SPLITTER VANES** H1520



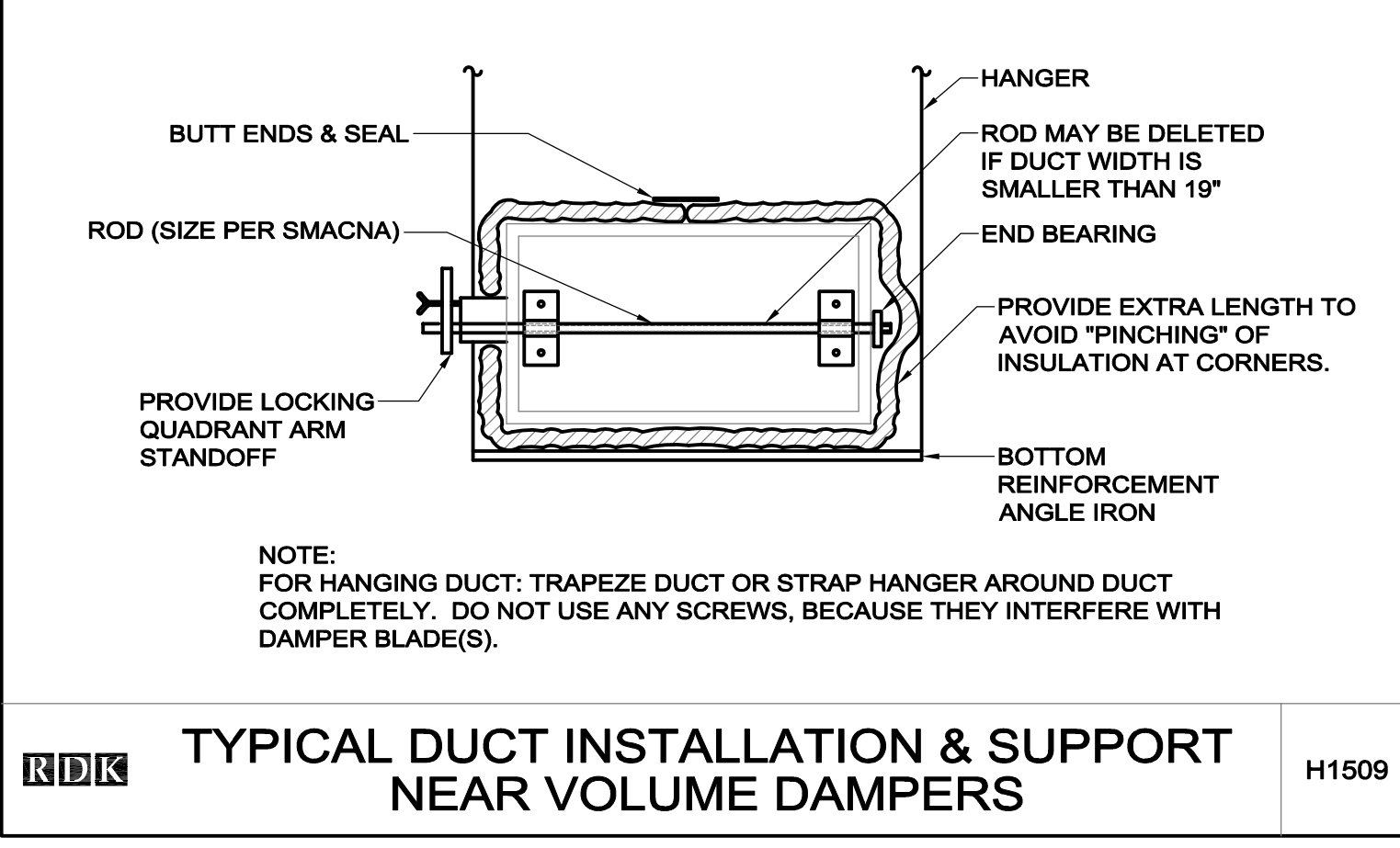
**DUCT HANGER SUPPORT** H1508



**REMOVELY ADJUSTABLE BALANCING DAMPER** H1511



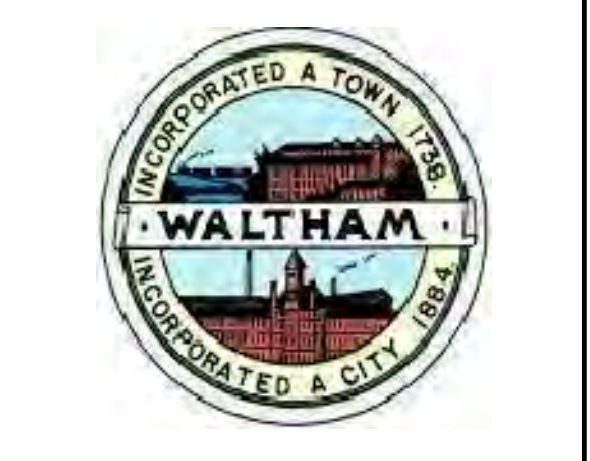
**TAKE-OFF TO TERMINAL BOX** H1502



**TYPICAL DUCT INSTALLATION & SUPPORT NEAR VOLUME DAMPERS** H1509

REVISIONS		
Number	Description	Date

ISSUED FOR BID



WALTHAM POLICE STATION RENOVATION

155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**HVAC DETAILS**

PROJECT NUMBER: 20130535  
 DESIGNED BY: JJK  
 DRAWN BY: JJK  
 CHECKED BY: CH  
 DATE: July-Aug.  
 SCALE: 2016 N.T.S.  
 SHEET NUMBER:

**H700**

REVIEWED BY: CIVIL, ARCH, PLUMB, MECH, ELEC;  
 C:\01\30\130535 - Waltham Police Station Renovation\1200 Drawings\1200 HVAC\Detail\1200 HVAC DETAILS.dwg (Work) July 14, 2014 - 5:50pm dlmack



















REVIEWED BY: CIVIL ARCHITECTURE PLUMBING ELECTRICAL MECHANICAL

AIR SEPARATOR SCHEDULE (GPM)						
TAG	SERVICE	TYPE	WATER FLOW (GPM)	P.D. (FT.)	MANUFACTURER AND MODEL NUMBER (AS STANDARD)	REMARKS
AS-1	HOT WATER	AIR SEPARATOR W/O STRAINER	47	0.3	AMTROL 3-AS-L	SEE NOTES

NOTES:  
 1. REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.  
 2. PROVIDE BALL-TYPE BLOWDOWN VALVE, HOSE CONNECTION W/ CAP AND CHAIN.  
 3. PROVIDE VENT WITH 1/2" COPPER TUBING FROM THE AIR VENT TO FLOOR. REFER TO DETAIL.  
 4. AIR SEPARATOR SHALL BE BY AMTROL, TACO, BELL AND GOSSETT OR EQUAL.

PIPE INSULATION (IECC - 2012 ASHRAE 90.1 - 2010 COMPLIANCE)						
MINIMUM INSULATION THICKNESS IN INCHES FOR INDOOR PIPE SIZES (SEE NOTES BELOW)						
PIPING SYSTEM TYPES	FLUID TEMP. RANGE (°F)	< 1"	1" TO 1 1/4"	1 1/2" TO 3"	K-FACTOR (BTU-INCH/°F-HR-SF) AT AVE. TEMP. (°F)	REMARKS
LOW TEMPERATURE HEATING	100 TO 200	1.5	1.5	2	0.25-0.28 @ 125°F	
REFRIGERANT (SUCTION/GAS AND LIQUID LINES FOR HEAT PUMPS) AND ALL OUTDOOR REFRIGERANT	-	0.5	1	1	0.21-0.27 @ 75°F	

NOTES:  
 1. FOR MINIMUM THICKNESS OF ALTERNATIVE INSULATION TYPES OUTSIDE THE STATED CONDUCTIVITY RANGE, SEE TEST METHOD FOR STEADY STATE HEAT TRANSFER PROPERTIES OF HORIZONTAL PIPE INSULATIONS, ASTM C 335-95, AND THE STATE ENERGY CODE.  
 2. PROVIDE OUTDOOR REFRIGERANT WITH UV RESISTANT ALUMINUM OR PVC JACKET.  
 3. REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.

SPLIT SYSTEM HEAT PUMP SCHEDULE																									
INDOOR UNIT										OUTDOOR UNIT															
TAG	SERVICE	LOCATION	CFM	COOLING DATA				HEATING DATA			ELECTRIC DATA			MANUFACTURER AND MODEL NUMBER (AS STANDARD)	TAG	LOCATION	REFRIGERANT	AMBIENT AIR TEMP. (°F)	COMPRESSOR		ELECTRIC SERVICE			MANUFACTURER AND MODEL NUMBER (AS STANDARD)	REMARKS
				TOTAL MBH	SENS. MBH	EAT DB (°F)	WB (°F)	MBH	INDOOR TEMP. DB (°F)	OUTDOOR TEMP. DB (°F)	V	MCA	PH						MAX MBH	MCA	V	PH			
HP-1	FITNESS 015	FITNESS 015	635-705-775	24.0	18.5	80.0	67.0	18.0	70.0	17.0	208	1.0	1	PKA-A24KA4	ACCU-2	LOWER ROOF	R410A	95	18.0	24.0	18	208	1	PUZ-A24NHA4	SEE NOTES
HP-2	FITNESS 015	FITNESS 015	635-705-775	24.0	18.5	80.0	67.0	18.0	70.0	17.0	208	1.0	1	PKA-A24KA4	ACCU-3	LOWER ROOF	R410A	95	18.0	24.0	18	208	1	PUZ-A24NHA4	SEE NOTES

NOTES:  
 1. PROVIDE HP-1 AND HP-2 WITH WIND BAFFLE FOR LOW AMBIENT COOLING, OPTIONAL MINI CONDENSATE PUMP (MODEL SI3100) AND WIRED WALL MOUNTED CONTROLLER (PAR-21MAAU).

SPLIT A/C UNIT SCHEDULE																								
INDOOR UNIT										OUTDOOR UNIT														
TAG	SERVICE	LOCATION	CFM	COOLING DATA				ELECTRIC DATA			MANUFACTURER AND MODEL NUMBER (AS STANDARD)	TAG	LOCATION	REFRIGERANT	AMBIENT AIR TEMP. (°F)	COOLING	SEER	ELECTRIC SERVICE			MANUFACTURER AND MODEL NUMBER (AS STANDARD)	REMARKS		
				TOTAL MBH	SENS. MBH	EAT DB (°F)	WB (°F)	V	FLA	MCA								PH	MCA	FLA			V	PH
ACU-1	TEL/DATA 013	TEL/DATA 013	24.0	16.8	80.0	67.0	705	208	.36	1.0	1	PKA-A24	ACCU-1	LOWER ROOF	R410A	95	24.0	17.0	18	.75	208	1	PUY-A24	SEE NOTES

NOTES:  
 1. PROVIDE UNIT WITH WIRED REMOTE INDOOR TEMPERATURE SENSOR, CONDENSATE PUMP (MODEL SI3100) AND WIND BAFFLE FOR LOW AMBIENT COOLING.

DIFFUSER, GRILLE & REGISTER SCHEDULE									
TAG	SELECTION RANGE (CFM)	NECK SIZE (IN.)	OVERALL SIZE (IN.)	MOUNTING	ACCESSORIES	MANUFACTURER AND MODEL NUMBER (AS STANDARD)	NO OR AIR PRESSURE DROP NOT TO EXCEED	REMARKS	
SA	0-50	4"Ø	12x12	LAY-IN	-	TITUS TMS	25	SEE NOTES	
SB	50-75	5"Ø	12x12	LAY-IN	-	TITUS TMS	25	SEE NOTES	
SC	50-125	8"Ø	24x24	LAY-IN	-	TITUS TMS	25	SEE NOTES	
SD	125-200	10"Ø	24x24	LAY-IN	-	TITUS TMS	25	SEE NOTES	
SE	200-300	12"Ø	24x24	LAY-IN	-	TITUS TMS	25	SEE NOTES	
SF	300-450	14"Ø	24x24	LAY-IN	-	TITUS TMS	25	SEE NOTES	
SG	90	14x6	14x6	SURFACE	-	TITUS 300RS	25	SEE NOTES	
SH	15-50	6x6	6x6	SURFACE	-	TITUS SG-PR	25	SEE NOTES	
SI	50-75	8x8	8x8	SURFACE	-	TITUS SG-PR	25	SEE NOTES	
SJ	845	20x20	24x24	LAY-IN	-	TITUS 300RS	25	SEE NOTES	
RA	0-75	6x6	24x24	LAY-IN	-	TITUS 350RL	25	SEE NOTES	
RB	75-150	8x8	24x24	LAY-IN	-	TITUS 350RL	25	SEE NOTES	
RC	150-250	10x10	24x24	LAY-IN	-	TITUS 350RL	25	SEE NOTES	
RD	250-400	12x12	24x24	LAY-IN	-	TITUS 350RL	25	SEE NOTES	
RE	400-600	14x14	24x24	LAY-IN	-	TITUS 350RL	25	SEE NOTES	
RF	650-850	18x18	24x24	LAY-IN	-	TITUS 350RL	25	SEE NOTES	
EA	0-75	6x6	24x24	LAY-IN	-	TITUS 350RL	25	SEE NOTES	
EB	75-150	8x8	24x24	LAY-IN	-	TITUS 350RL	25	SEE NOTES	
EC	150-300	12x12	24x24	LAY-IN	-	TITUS 350RL	25	SEE NOTES	
ED	300-450	14x14	24x24	LAY-IN	-	TITUS 350RL	25	SEE NOTES	
EE	15-50	6x6	6x6	SURFACE	-	TITUS SG-PR	25	SEE NOTES	
EF	50-75	8x8	8x8	SURFACE	-	TITUS SG-PR	25	SEE NOTES	

NOTES:  
 1. REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION. CONFIRM QUANTITIES AND FLOW PATTERNS WITH FLOOR PLANS.  
 2. RUNOUTS TO DIFFUSERS SHALL BE THE SAME SIZE AS THE INLET.  
 3. PROVIDE 24"x24" LAY-IN BORDER FOR DIFFUSERS, REGISTERS AND GRILLES THAT ARE TO BE INSTALLED WITHIN A CEILING GRID. REFER TO ARCHITECTURAL RCP.  
 4. PROVIDE RETURN GRILLES IN INTERVIEW ROOMS AND ROOMS WITH FULL HEIGHT WALLS/ DEDICATED TRANSFER AIR DUCTS WITH ACOUSTIC/ACOUSTIC BAFFLE (OR APPROVED EQUAL) AND LINER AND CAP-SUB ASSEMBLY FOR NOISE REDUCTION. ASSEMBLY ATTACH AS REQUIRED. CONFIGURE SO OPENING POINTS AWAY FROM TRANSFER DUCT.

HEATING SYSTEM EXPANSION TANK SCHEDULE (ACCEPTANCE VOLUME)															
TAG	SERVICE	LOCATION	FLUID	SYSTEM TEMP (°F)		SYSTEM PRESSURE (PSIG) AT TANK		VOLUME (GALLONS)		DIMENSIONS (IN)		INITIAL TANK AIR CHARGE (PSIG)	WEIGHT (LBS)	MANUFACTURER AND MODEL NUMBER (AS STANDARD)	REMARKS
				MIN	MAX	MIN	MAX	TANK	ACCEPTANCE	DIAMETER	HEIGHT				
ET-1	HOT WATER	BOILER ROOM	WATER	40	140	20	48	53	48	24	38	12	190	EXTROL 200-L	SEE NOTES

NOTES:  
 1. REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.  
 2. EXPANSION TANKS TO BE RATED FOR MAXIMUM WORKING PRESSURE OF 125 PSIG. EXPANSION TANK SHALL BE ASME RATED.  
 3. EXPANSION TANKS SHALL BE FULL ACCEPTANCE TYPE.

FINNED TUBE RADIATOR SCHEDULE													
TAG	WATER TEMP. (°F)	LVP (°F)	PIPE		FINS			ROWS HIGH	BTU/HFT	COVER		MANUFACTURER AND MODEL NUMBER (AS STANDARD)	REMARKS
			TYPE	SIZE (IN)	TYPE	FINS PER INCH	SIZE (IN)			TYPE	SIZE (IN)		
FTR-1	140	120	CU	3/4"	AL	50	4-3/4" x 3-3/4"	1	540	SLOPE	14	STERLING JVB-S14B	SEE NOTES

NOTES:  
 1. PROVIDE 14 GAGE ENCLOSURE WITH FULL BACKPLATE, END CAPS, ONE TIER SLOPE TOP TYPE ENCLOSURE.  
 2. PROVIDE WITH BAKED ENAMEL PRIME COAT. FINAL COLOR TO BE COORDINATED WITH THE ARCHITECT.  
 3. FIN TUBE RADIATION SHALL BE BY STERLING, SLANT-FIN, VULCAN OR EQUAL.

UNIT HEATER (HOT WATER) SCHEDULE (GPM)																
TAG	LOCATION	TYPE	MIN OUTPUT (MBH)	AIR			WATER			MOTOR HP	ELECTRIC SERVICE			MANUFACTURER AND MODEL NUMBER (AS STANDARD)	REMARKS	
				CFM	EAT (°F)	LAT (°F)	GPM	EWT (°F)	LWT (°F)		P.D. (FT.)	AMPS	V			PH
UH-1	MECHANICAL ROOM	HORIZONTAL	4.1	245	60	91	.50	140	110	.3	16 W	0.8	115	1	STERLING HS-108A	SEE NOTES

NOTES:  
 1. PROVIDE HOT WATER UNIT HEATER WITH OSHA APPROVED FAN GUARDS, HORIZONTAL LOUVER, AND UNIT MOUNTED MANUAL MOTOR STARTER/ DISCONNECT SWITCH.  
 2. PROVIDE WITH BAKED ENAMEL FINISH - COORDINATE FINAL COLOR WITH OWNER AND ARCHITECT.  
 3. HOT WATER UNIT HEATER SHALL BE BY STERLING, MODINE, AIRTHERM OR EQUAL.

MINIMUM DUCT INSULATION R-VALUES					
LOCATION	SUPPLY	RETURN	RAW OUTDOOR AIR	EXHAUST	
				WITH ENERGY RECOVERY	WITHOUT ENERGY RECOVERY
UNCONDITIONED SPACE (SHAFT OR CEILING WITH DUCTED RETURN AIR)	R-5	R-5	R-4	R-5	-0-

DUCT LINING SCOPE: ACOUSTIC DUCT LINING OF THE TYPE AND THICKNESS SPECIFIED SHALL BE INSTALLED ON ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK WITHIN 20 FEET OF ALL TYPES OF AIR HANDLING UNITS (INCLUDING RTU, ERU, ACU, ETC., AND ALL BRANCHES WITHIN 20') ALL FANS (INCLUDING BRANCHES), ALL LOW PRESSURE DUCTWORK DOWNSTREAM OF ALL TYPES OF SUPPLY VOLUME BOXES (VAV), AND WHERE DETAILED OR SHOWN ON DRAWINGS. LINING SHALL NOT BE USED ON DUCTWORK SERVING AND SHOWER SYSTEMS.  
 NOTES: (SEE SPECIFICATIONS FOR R-VALUES OF VARIOUS DUCT INSULATION AND LINERS).  
 1. R-VALUES SHOWN MAY BE OBTAINED BY ADDING THE R-VALUES OF BOTH THE LINING (WHERE SHOWN OR USED) AND EXTERNAL DUCT INSULATION.  
 2. R-VALUES SHOWN ARE AS INSTALLED. USE R-VALUES FOR 25% COMPRESSION FOR NON-RIGID INSULATION.  
 3. REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.

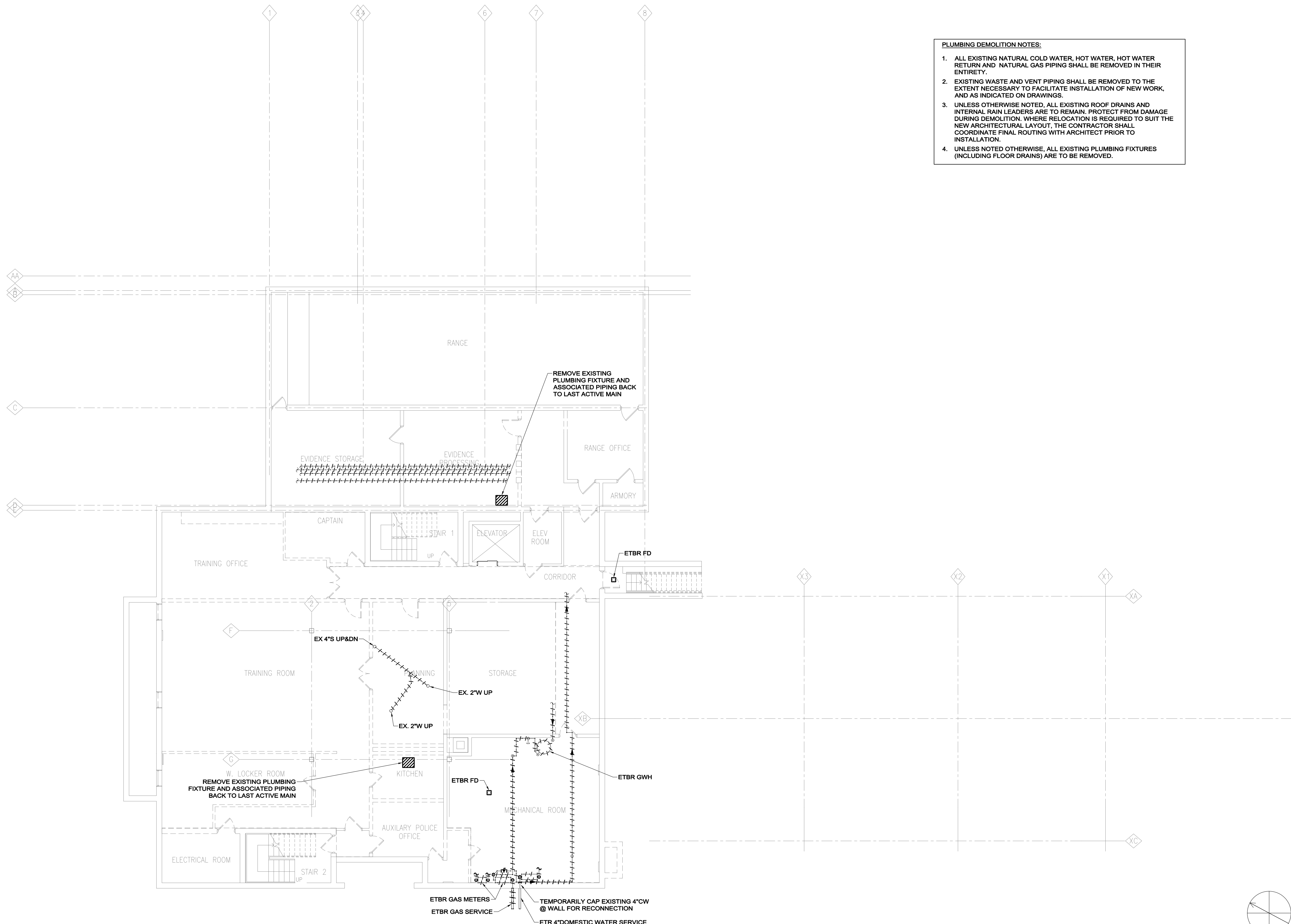
TERMINAL VOLUME BOX WITH HOT WATER SCHEDULE																					
TAG	TYPE	SERVICE	SELECTION RANGE (CFM)		INLET SIZE (IN.)	DISCHARGE SIZE (IN.)		MAX. S.P. DROP W/ COIL (IN.WG)	NC RATING	HOT WATER COIL DATA (SEE NOTES 2 AND 3)										MANUFACTURER AND MODEL NUMBER (AS STANDARD)	REMARKS
			MAX	MIN		W	H			MBH	MIN CFM	EWT (°F)	LWT (°F)	EAT (°F)	LAT (°F)	GPM	MAX WATER P.D. (FT.)	ROWS			
			VAV-1	SINGLE DUCT		RTU-1	300			180	8	10	8	.13	20	9.5	180	140	110		
VAV-2	SINGLE DUCT	RTU-1	200	120	5	10	8	.08	30	6.4	120	140	110	44	93.1	0.45	0.14	2	TRANE VCWF05	SEE NOTES	
VAV-3	SINGLE DUCT	RTU-1	600	360	10	14	12	.17	17	17.5	360	140	110	44	88.9	1.2	0.24	2	TRANE VCWF10	SEE NOTES	
VAV-4	SINGLE DUCT	RTU-1	500	300	10	14	12	.13	16	15.4	300	140	110	44	91.0	1.0	0.16	2	TRANE VCWF10	SEE NOTES	
VAV-5	SINGLE DUCT	RTU-1	200	120	5	10	8	.08	30	6.4	120	140	110	44	93.1	0.45	0.17	2	TRANE VCWF05	SEE NOTES	
VAV-6	SINGLE DUCT	RTU-1	850	510	14	19	18	.10	16	18.5	510	140	110	44	77.4	1.25	0.50	1	TRANE VCWF14	SEE NOTES	
VAV-7	SINGLE DUCT	RTU-1	1150	690	14	19	18	.15	16	32.6	690	140	110	44	97.5	2.2	0.22	2	TRANE VCWF14	SEE NOTES	
VAV-8	SINGLE DUCT	RTU-1	250	150	5	11	10	.12	32	6.4	150	140	110	44	90.2	0.45	0.20	2	TRANE VCWF04	SEE NOTES	
VAV-9	SINGLE DUCT	RTU-1	200	120	4	10	8	.05	36	6.4	120	140	110	44	93.1	0.43	0.14	2	TRANE VCWF04	SEE NOTES	
VAV-10	SINGLE DUCT	RTU-1	1300	780	16	-	-	.14	16	44.8	900	140	110	44	99.07	90.0	3.0	2	TRANE VCWF16	SEE NOTES	
VAV-11	SINGLE DUCT	RTU-1	225	135	5	10	8	.15	31	12.6	225	140	110	44	95.7	0.85	0.65	3	TRANE VCWF05	SEE NOTES	
VAV-12	SINGLE DUCT	RTU-1	225	135	5	10	8	.10	31	7.0	135	140	110	44	91.6	0.50	0.16	2	TRANE VCWF05	SEE NOTES	
VAV-13	SINGLE DUCT	RTU-1	175	105	5	10	8	.07	29	5.8	105	140	110	44	94.7	0.39	0.11	2	TRANE VCWF05	SEE NOTES	
VAV-14	SINGLE DUCT	RTU-1	1100	660	14	19	18	.14	16	31.5	660	140	110	44	88.4	2.1	0.20	2	TRANE VCWF14	SEE NOTES	
VAV-15	SINGLE DUCT	RTU-1	200	120	5	10	8	.12	30	6.4	180	140	110	44	99.0	0.70	0.50	2	TRANE VCWF05	SEE NOTES	
VAV-16	SINGLE DUCT	RTU-1	150	90	4	10	8	.03	36	3.4	90	140	110	44	78.5	0.25	0.13	1	TRANE VCWF04	SEE NOTES	
VAV-17	SINGLE DUCT	RTU-1	625	375	10	14	12	.18	17	18.0	375	140	110	44	88.4	1.2	0.26	2	TRANE VCWF10	SEE NOTES	
VAV-18	SINGLE DUCT	RTU-1	400	240	10	14	12	.09	16	13.0	325	140	110	44	90.3	1.1	0.21	2	TRANE VCWF10	SEE NOTES	
VAV-19	SINGLE DUCT	RTU-3	400	240	8	11	10	.23	21	11.3	240	140	110	47	94.0	0.75	0.08	3	TRANE VCWF08	SEE NOTES	
VAV-20	SINGLE DUCT	RTU-3	200	120	5	10	8	.08	30	6.1	120	140	110	47	90.3	0.40	0.12	2	TRANE VCWF05	SEE NOTES	
VAV-21	SINGLE DUCT	RTU-3	200	120	5	10	9	.08	30	6.1	120	140	110	47	93.7	0.40	0.12	2	TRANE VCWF05	SEE NOTES	
VAV-22	SINGLE DUCT	RTU-3	250	150	6	10	8	.08	20	6.3	150	140	110	47	85.6	0.40	0.02	2	TRANE VCWF08	SEE NOTES	
VAV-23	SINGLE DUCT	RTU-3	650	390	10	14	12	.19	17	17.6	390	140	110	47	88.7	1.2	0.25	2	TRANE VCWF10	SEE NOTES	
VAV-24	SINGLE DUCT	RTU-3	700	420	12	14	12	.16	15	18.0	420	140	110	47	86.6	1.20	0.10	2	TRANE VCWF12	SEE NOTES	
VAV-25	SINGLE DUCT	RTU-3	650	390	10	14	12	.19	17	17.6	390	140	110	47	88.7	1.2	0.25	2	TRANE VCWF10	SEE NOTES	
VAV-26	SINGLE DUCT	RTU-3	325	195	8	11	10	.16	20	9.5	195	140	110	47	92.0	0.85	0.10	3	TRANE VCWF06	SEE NOTES	
VAV-27	SINGLE DUCT	RTU-3	675	450	12	14	12	.15	15	17.5	450	140	110	47	86.8	1.2	0.10	2	TRANE VCWF12	SEE NOTES	
VAV-28	SINGLE DUCT	RTU-3	750	450	12	14	12	.17	15	19.1	450	140	110	47	86.1	1.3	0.10	2	TRANE VCWF12	SEE NOTES	
VAV-29	SINGLE DUCT	RTU-3	375	225	10	14	12	.05	16												







REVIEW BY: CIVIL: \_\_\_\_\_ ARCH: \_\_\_\_\_ STRUJ: \_\_\_\_\_ PLUM: \_\_\_\_\_ FIRE: \_\_\_\_\_ MECH: \_\_\_\_\_ ELEC: \_\_\_\_\_



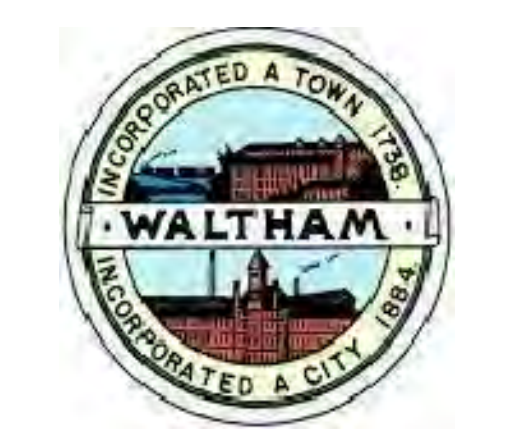
- PLUMBING DEMOLITION NOTES:**
1. ALL EXISTING NATURAL COLD WATER, HOT WATER, HOT WATER RETURN AND NATURAL GAS PIPING SHALL BE REMOVED IN THEIR ENTIRETY.
  2. EXISTING WASTE AND VENT PIPING SHALL BE REMOVED TO THE EXTENT NECESSARY TO FACILITATE INSTALLATION OF NEW WORK, AND AS INDICATED ON DRAWINGS.
  3. UNLESS OTHERWISE NOTED, ALL EXISTING ROOF DRAINS AND INTERNAL RAIN LEADERS ARE TO REMAIN. PROTECT FROM DAMAGE DURING DEMOLITION. WHERE RELOCATION IS REQUIRED TO SUIT THE NEW ARCHITECTURAL LAYOUT, THE CONTRACTOR SHALL COORDINATE FINAL ROUTING WITH ARCHITECT PRIOR TO INSTALLATION.
  4. UNLESS NOTED OTHERWISE, ALL EXISTING PLUMBING FIXTURES (INCLUDING FLOOR DRAINS) ARE TO BE REMOVED.

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REVISIONS		
Number	Description	Date

ISSUED FOR BID



WALTHAM POLICE STATION RENOVATION  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**PLUMBING BASEMENT FLOOR DEMO PLAN**

PROJECT NUMBER: 20130535  
 DESIGNED BY: NEW  
 DRAWN BY: NEW  
 CHECKED BY: RDB  
 DATE: July-Aug. 2016  
 SCALE: 1/8" = 1'-0"

SHEET NUMBER:  
**PD101**

C:\01\20130535 - Waltham Police HQ Renovation\1200 Drawings\1200 Plumbing\1200 Plumbing Basement Floor Demolition Plan.dwg (Work) July 14, 2016 - 8:54pm dhrzack

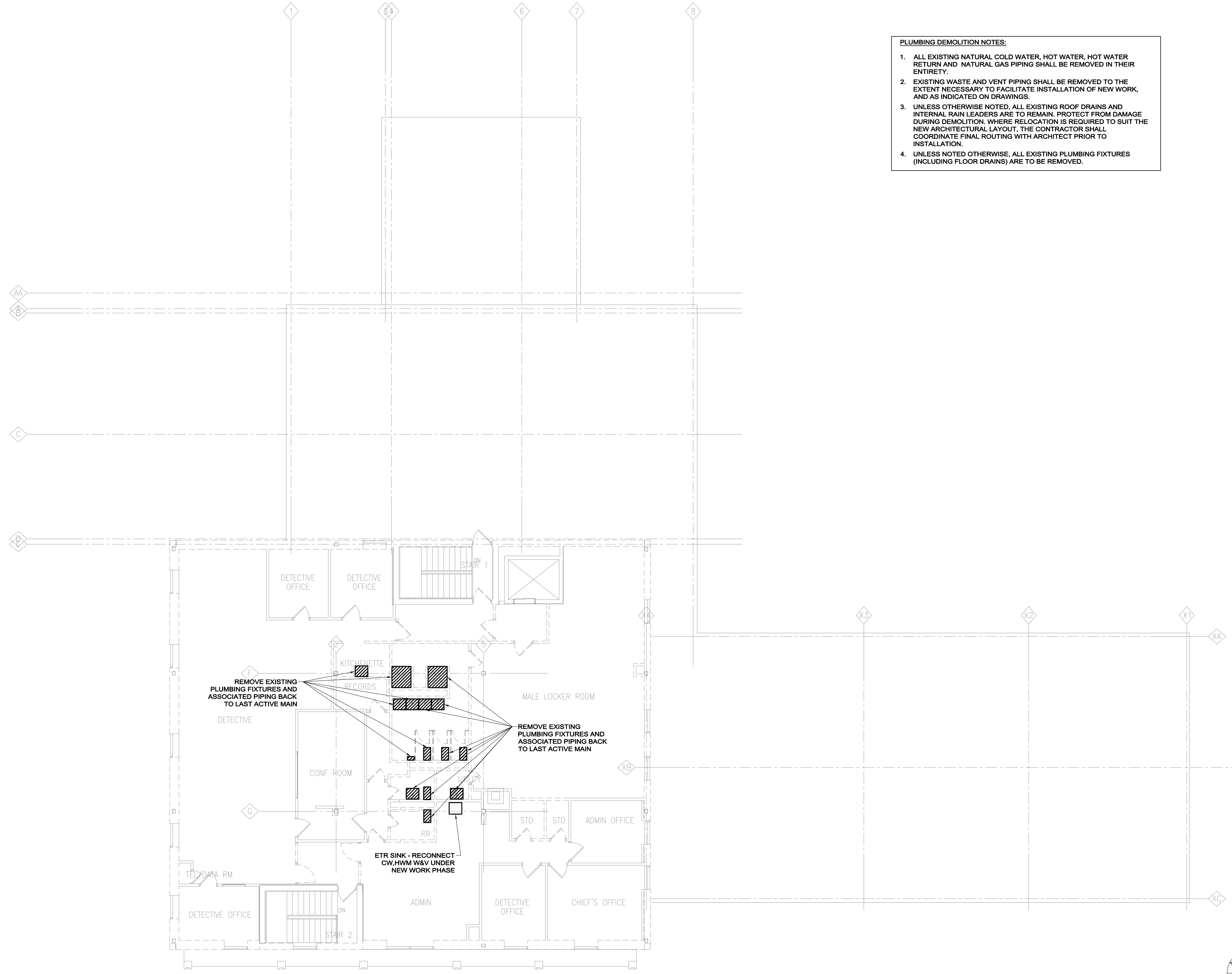






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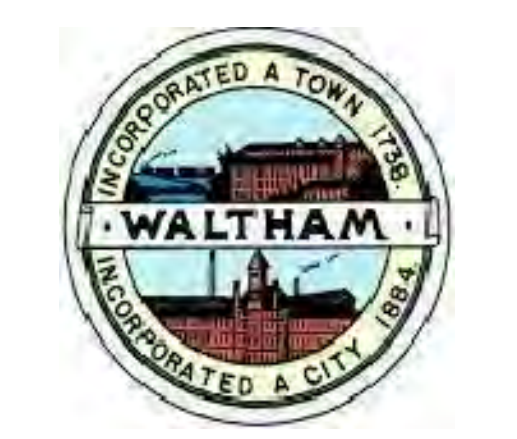
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  3. UNLESS OTHERWISE NOTED, ALL EXISTING ROOF DRAINS AND INTERNAL RAIN LEADERS ARE TO REMAIN. PROTECT FROM DAMAGE DURING DEMOLITION. WHERE RELOCATION IS REQUIRED TO SUIT THE NEW ARCHITECTURAL LAYOUT, THE CONTRACTOR SHALL COORDINATE FINAL ROUTING WITH ARCHITECT PRIOR TO INSTALLATION.
  4. UNLESS NOTED OTHERWISE, ALL EXISTING PLUMBING FIXTURES (INCLUDING FLOOR DRAINS) ARE TO BE REMOVED.

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REVISIONS		
Number	Description	Date

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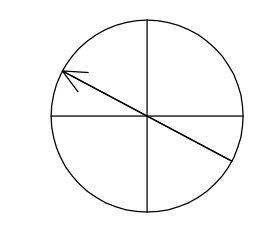
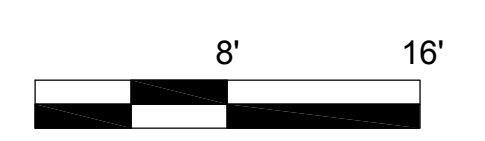


WALTHAM POLICE STATION RENOVATION  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**PLUMBING SECOND FLOOR DEMO PLAN**

PROJECT NUMBER: 20130535  
 DESIGNED BY: NEW  
 DRAWN BY: NEW  
 CHECKED BY: RDB  
 DATE: July-Aug.  
 SCALE: 2016 1/8" = 1'-0"  
 SHEET NUMBER:

**PD103**





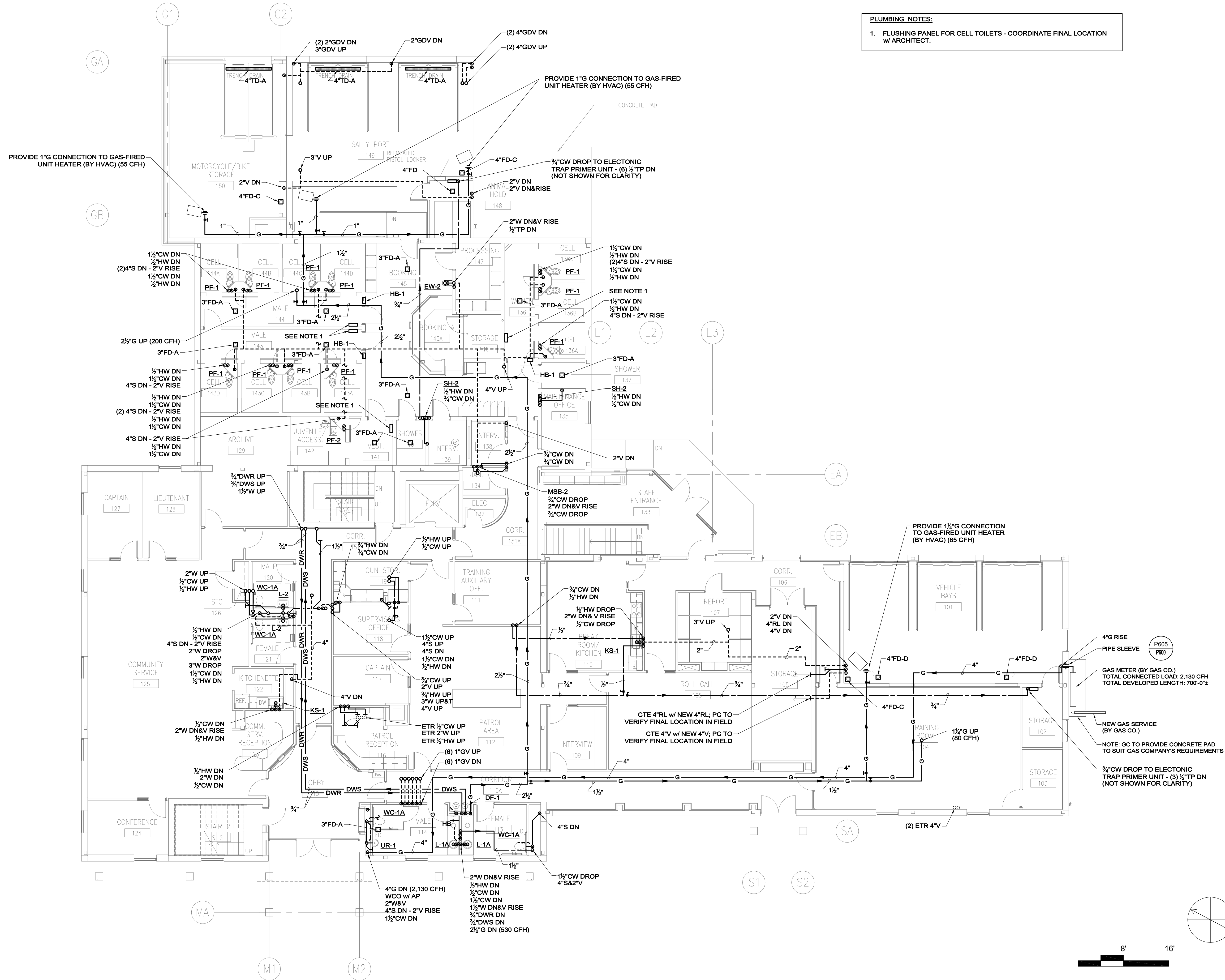








REVIEWED BY: CIVIL ARCH. STRU. PLUM. FIRE. MECH. ELEC.



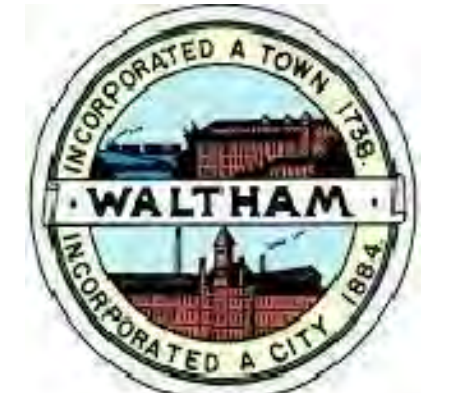
**PLUMBING NOTES:**  
 1. FLUSHING PANEL FOR CELL TOILETS - COORDINATE FINAL LOCATION w/ ARCHITECT.

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REVISIONS		
Number	Description	Date

ISSUED FOR BID



WALTHAM POLICE STATION RENOVATION

155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**PLUMBING FIRST FLOOR PLAN**

PROJECT NUMBER: 20130535  
 DESIGNED BY: NEW  
 DRAWN BY: NEW  
 CHECKED BY: RDB  
 DATE: July-Aug.  
 SCALE: 2016 1/8" = 1'-0"  
 SHEET NUMBER:

**P102**

C:\01\30130535 - Waltham Police HQ Renovation\1200 Drawings\1202 Plumbing\1st Floor Plan.dwg (Rev) July 14, 2014 - 8:53pm dfranzek



























REVIEWED BY: CIVIL; ANCH; STRU; PLUM; FIRE; MECH; ELEC;

C:\001301030535 - Waltham Police HQ Renovation\1200 Drawings\1201 Fire Protection\1201 Fire Protection Legend, Notes and Abbreviations.dwg (Plot) July 14, 2014 - 5:50pm dfranzak

SPRINKLER SCHEDULE							
SYMBOL	CONDITION	RESPONSE	ORIENTATION	COVERAGE	K-FACTOR	FINISH	TEMP RATING
●	NEW	QUICK	CONCEALED PENDENT/ PENDENT	STANDARD	5.6	WHITE/CHROME	ORDINARY
●	NEW	QUICK	CONCEALED PENDENT/PENDENT (OPTION 1)	STANDARD	5.6	WHITE/CHROME	ORDINARY
●	NEW	QUICK	CONCEALED PENDENT/PENDENT (OPTION 2)	STANDARD	5.6	WHITE/CHROME	ORDINARY
⊙	NEW	QUICK	UPRIGHT (OPTION 1)	STANDARD	5.6	BRASS	ORDINARY
⊙	NEW	QUICK	UPRIGHT (OPTION 2)	STANDARD	5.6	BRASS	ORDINARY
⊙	NEW	QUICK	DRY PENDENT/UPRIGHT	STANDARD	5.6	BRASS	ORDINARY
▼	NEW	QUICK	HORIZONTAL WET SIDEWALL	STANDARD	5.6	WHITE/CHROME/BRASS	ORDINARY
▼	NEW	QUICK	HORIZONTAL DRY SIDEWALL	STANDARD	5.6	WHITE/CHROME/BRASS	ORDINARY
▼	NEW	QUICK	HORIZONTAL SIDEWALL (OPTION 1)	STANDARD	5.6	WHITE/CHROME/BRASS	ORDINARY
▼	NEW	QUICK	HORIZONTAL SIDEWALL (OPTION 2)	STANDARD	5.6	WHITE/CHROME/BRASS	ORDINARY

GENERAL NOTES
1. FIRE PROTECTION WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE BUILDING CODE, LOCAL AMENDMENTS AND THE REFERENCED NATIONAL FIRE PROTECTION ASSOCIATION CODES INCLUDING 13, 14, 20, AND 24.
2. ALL FIRE PROTECTION SYSTEMS, EQUIPMENT, PIPING AND VALVES SHALL BE INSTALLED AND TESTED BY A SPRINKLER CONTRACTOR LICENSED BY THE STATE AND EXPERIENCED IN THE INSTALLATION OF SPRINKLER SYSTEMS.
3. OBTAIN ALL PERMITS AND PAY ALL FEES ASSOCIATED WITH THIS WORK PRIOR TO COMMENCEMENT.
4. PIPING AND EQUIPMENT IS SHOWN DIAGRAMMATICALLY THE ACTUAL ROUTING OF PIPING AND EXACT LOCATION OF EQUIPMENT SHALL BE DETERMINED IN THE FIELD.
5. THE DRAWINGS SUGGEST ROUTING OF PIPING, PIPE SIZES AND APPROXIMATE LOCATION OF HEADS. THE CONTRACTOR SHALL PRODUCE A COMPLETE SET OF WORKING PLANS IN ACCORDANCE WITH NFPA 13. THE SYSTEM SHALL BE HYDRAULICALLY CALCULATED PER THE DESIGN CRITERIA SPECIFIED. ALL PLANS AND CALCULATIONS SHALL BE STAMPED BY THE CONTRACTOR'S REGISTERED FIRE PROTECTION ENGINEER AND SHALL BE SUBMITTED TO THE LOCAL AUTHORITY AND OWNER'S UNDERWRITER FOR APPROVAL.
6. IN ADDITION TO REVIEWING AND COORDINATING WITH THE OTHER TRADES (CIVIL, STRUCTURAL, ARCHITECTURAL, HVAC AND ELECTRICAL) THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH THE DETAILS OF CONSTRUCTION.
7. FURNISH AND INSTALL ALL NECESSARY PIPING EQUIPMENT SUPPORTS AND ANY EQUIPMENT NOT SHOWN ON DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS BUT NECESSARY TO PROVIDE A COMPLETE AND WORKABLE SYSTEM.
8. PROVIDE ACCESS TO ALL EQUIPMENT REQUIRING PERIODIC SERVICE AND MAINTENANCE.
9. FURNISH ACCESS PANELS TO THE GENERAL CONTRACTOR FOR INSTALLATION UNDER THE RELATED TRADES.
10. PITCH ALL PIPING TO DRAIN, PROVIDE AN AUXILIARY DRAIN AT ALL LOW POINTS.
11. PROVIDE WATER TIGHT SLEEVES ON ALL PIPES PASSING THROUGH EXTERIOR WALLS AND BASEMENT FLOORS.
12. ALL VALVES CONTROLLING FIRE PROTECTION MAINS SHALL BE PROVIDED WITH TAMPER/SUPERVISORY SWITCHES WIRED TO THE FIRE ALARM CONTROL PANEL.
13. CONTRACTOR SHALL PROVIDE FIRE STOPPING FOR ALL PENETRATIONS THRU FIRE WALLS AND FIRE RATED SEPERATIONS, CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND RATINGS OF ALL FIRE RATED SEPERATIONS AND BARRIERS, INSTALLATION OF FIRE STOPPING SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
14. ALL FIRE PROTECTION SYSTEMS SHALL BE SEISMICALLY BRACED ACCORDING TO THE APPLICABLE SECTIONS OF THE STATE BUILDING CODE AND THE REFERENCED EDITION OF NFPA-13.

ABBREVIATIONS	
ACT	ACOUSTICAL TILE
AFF	ABOVE FINISH FLOOR
AP	ACCESS PANEL
BLDG	BUILDING
BFP	BACKFLOW PREVENTER
CLG	CEILING
CLDI	CEMENT LINED DUCTILE IRON
CONT	CONTINUATION
D	DRY SPRINKLER SYSTEM
DCVA	DOUBLE CHECK VALVE ASSEMBLY
DIA	DIAMETER
DN	DOWN
DSR	DRY SYSTEM MAIN RISER
DWG	DRAWING
EAB	ELECTRIC ALARM BELL
EL/ELEV	ELEVATION
F	FIRE SERVICE MAIN/BUILDING WET SUPPLY PIPING
FDC	FIRE DEPARTMENT CONNECTION
FFE	FINISH FLOOR ELEVATION
FLR	FLOOR
FP	FIRE PROTECTION
FS	FLOW SWITCH
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GPM	GALLONS PER MINUTE
INV	INVERT
LPS	LOW PRESSURE SWITCH
MECH	MECHANICAL
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
NIC	NOT IN CONTRACT
OED	OPEN END DRAIN
OS&Y	OUTSIDE SCREW & YOLK
PG	PRESSURE GAUGE
PIV	POST INDICATOR VALVE
PRV	PRESSURE REDUCING/REGULATING VALVE
PS	PRESSURE SWITCH
PSI	POUNDS PER SQUARE INCH
SPEC	SPECIFICATION
SPD	SPRINKLER DRAIN
SPR	WET PIPE SPRINKLER SYSTEM
TS	TAMPER SWITCH
TYP	TYPICAL
VIV	VALVE IN VERTICAL
WSR	WET SYSTEM MAIN RISER
ZCA	SPRINKLER ZONE CONTROL ASSEMBLY

PIPING LINETYPES	
— F —	FIRE SERVICE/MAIN/BUIDING WET PIPING
— SPR —	WET PIPE SPRINKLER SYSTEM
— FDC —	FIRE DEPARTMENT CONNECTION PIPING
— SPD —	SPRINKLER DRAIN
— D —	DRY PIPE SPRINKLER SYSTEM

PIPING SYMBOLS	
○ OED	OPEN END DRAIN
→	DIRECTION OF SLOPE
○	ELBOW UP OR RISE
○	ELBOW DOWN OR DROP
○	TEE LOOKING DOWN
○	TEE LOOKING UP
⊥	VALVE IN VERTICAL
▶	FLOW IN DIRECTION OF ARROW
—	CAP OR END OF PIPE
—	REDUCER/INCREASER
—	PIPE SLEEVE
	UNION

EQUIPMENT & VALVES	
○	WET SYSTEM MAIN RISER
○	DRY SYSTEM MAIN RISER
⊥	ANGLE VALVE
○	BALL VALVE
⊥	SUPERVISED BUTTERFLY VALVE
⊥	CHECK VALVE
⊥	BACKFLOW PREVENTER
⊥	SPRINKLER ZONE CONTROL ASSEMBLY
⊥	FLOW SWITCH
⊥	GLOBE VALVE
⊥	SUPERVISED OS&Y VALVE
⊥	PRESSURE REDUCING/REGULATING VALVE
⊥	PRESSURE SWITCH
⊥	PRESSURE GAUGE
⊥	ELECTRIC ALARM BELL
⊥	WALL MOUNTED FIRE DEPARTMENT INLET CONNECTION

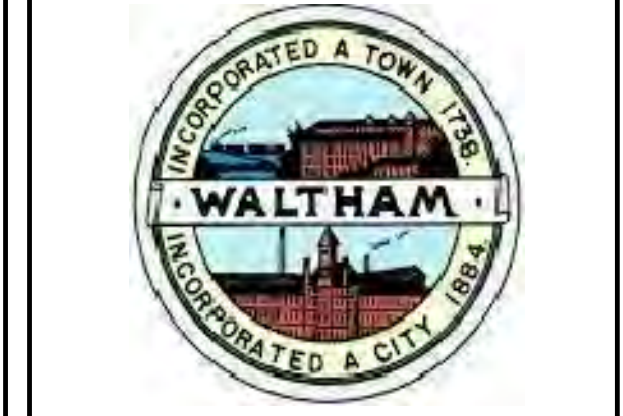
ANNOTATIONS	
1	DETAIL DESIGNATION NUMBER
FP-1	DETAIL DESIGNATION DRAWING
#	HYDRAULIC CALCULATION NODE POINT

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REVISIONS		
Number	Description	Date

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WALTHAM POLICE STATION RENOVATION  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**FIRE PROTECTION LEGEND, NOTES & ABBREVIATIONS**

PROJECT NUMBER: 20130535  
 DESIGNED BY: NEW  
 DRAWN BY: NEW  
 CHECKED BY: RDB  
 DATE: July-Aug. 2016  
 SCALE: N.T.S.

SHEET NUMBER:  
**FP000**













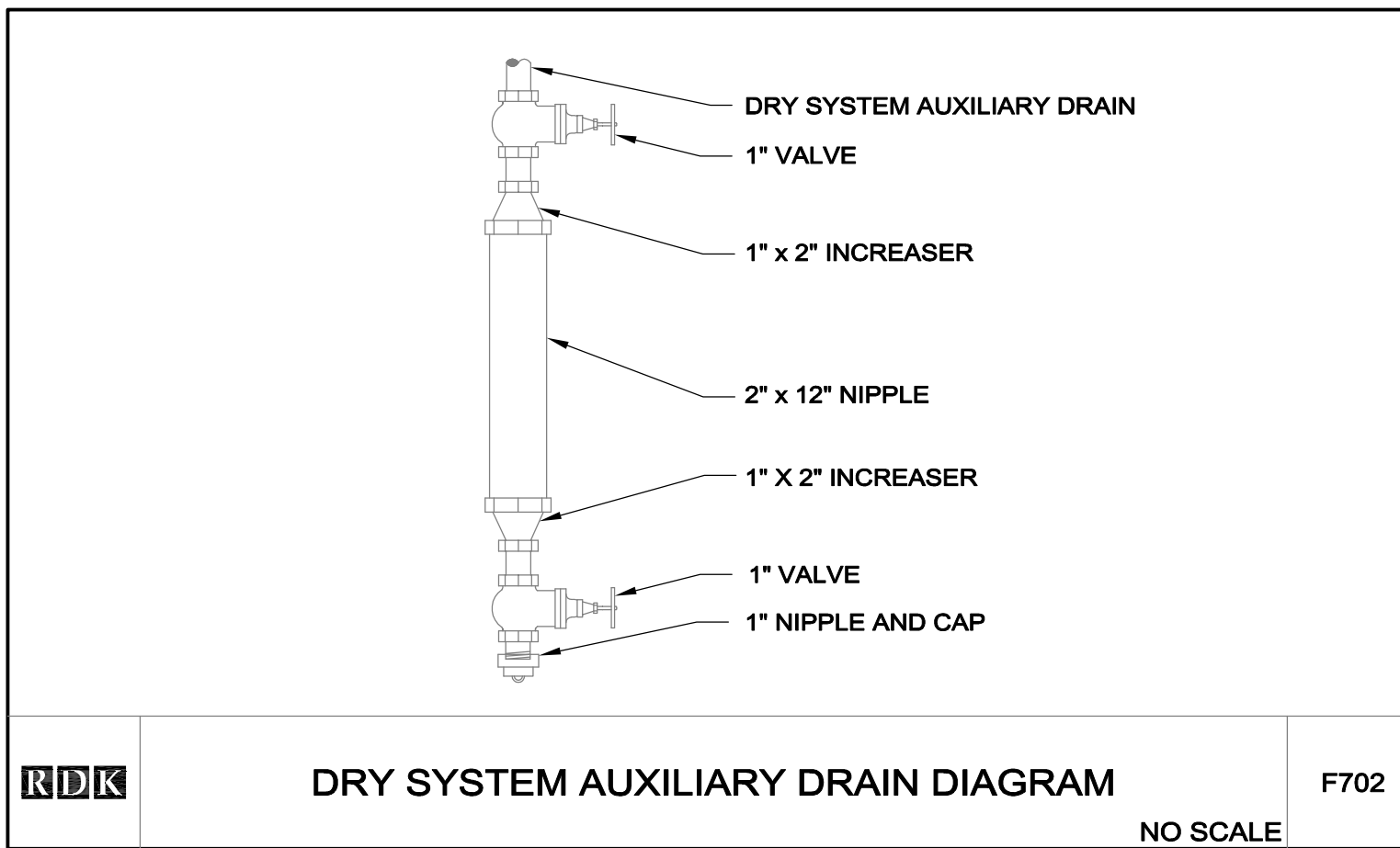




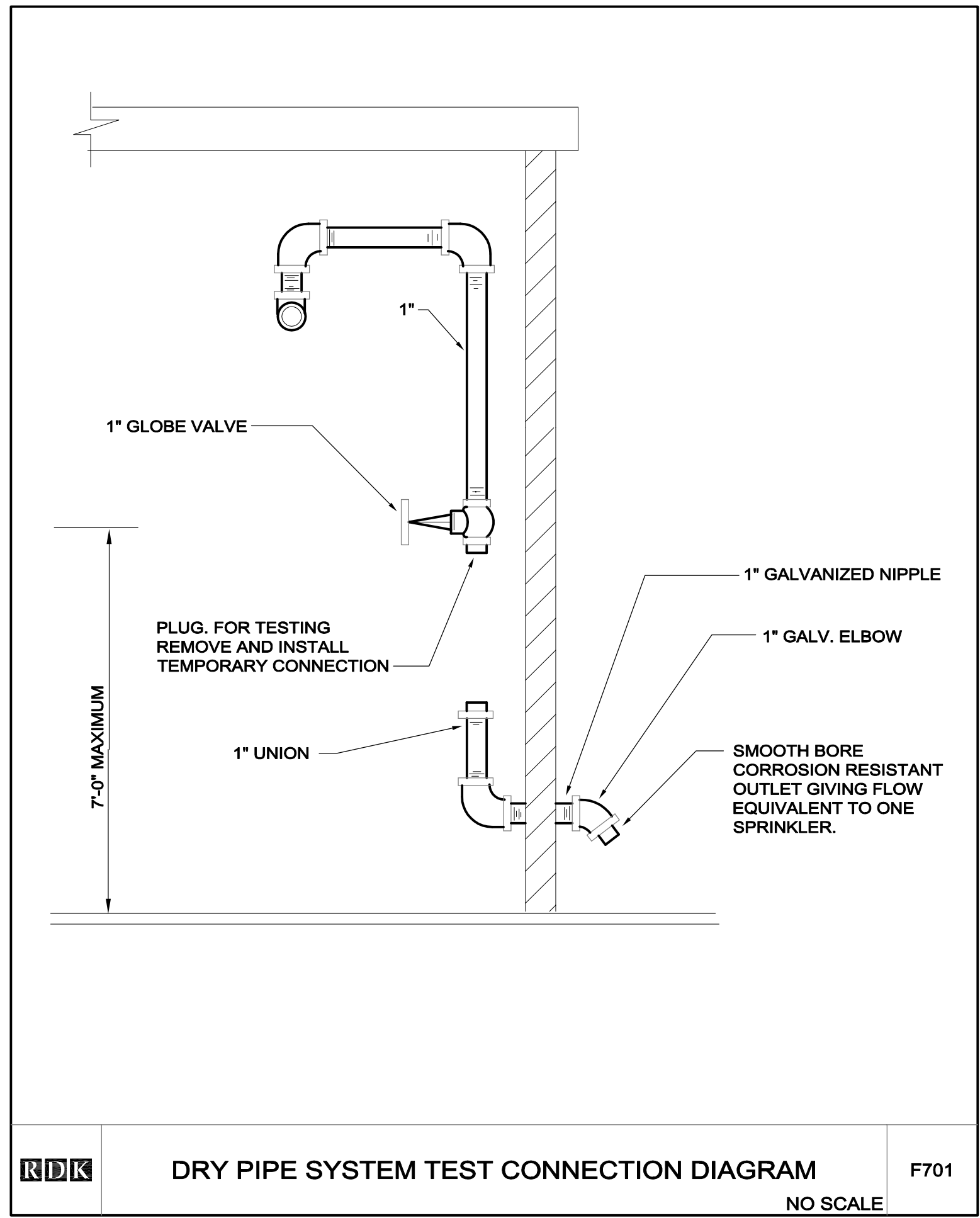


REVIEWED BY: CIVIL: \_\_\_\_\_ ARCH: \_\_\_\_\_ STWJ: \_\_\_\_\_ PLUM: \_\_\_\_\_ FIRE: \_\_\_\_\_ MECH: \_\_\_\_\_ ELEC: \_\_\_\_\_

C:\001\30103035 - Waltham Police HQ Renovation\1200 Drawings\1201 Fire Protection\Detail Files\Fire Protection Details - Copy.dwg (Work) July 14, 2014 - 5:06pm dlmack



**DRY SYSTEM AUXILIARY DRAIN DIAGRAM** F702  
NO SCALE



**DRY PIPE SYSTEM TEST CONNECTION DIAGRAM** F701  
NO SCALE

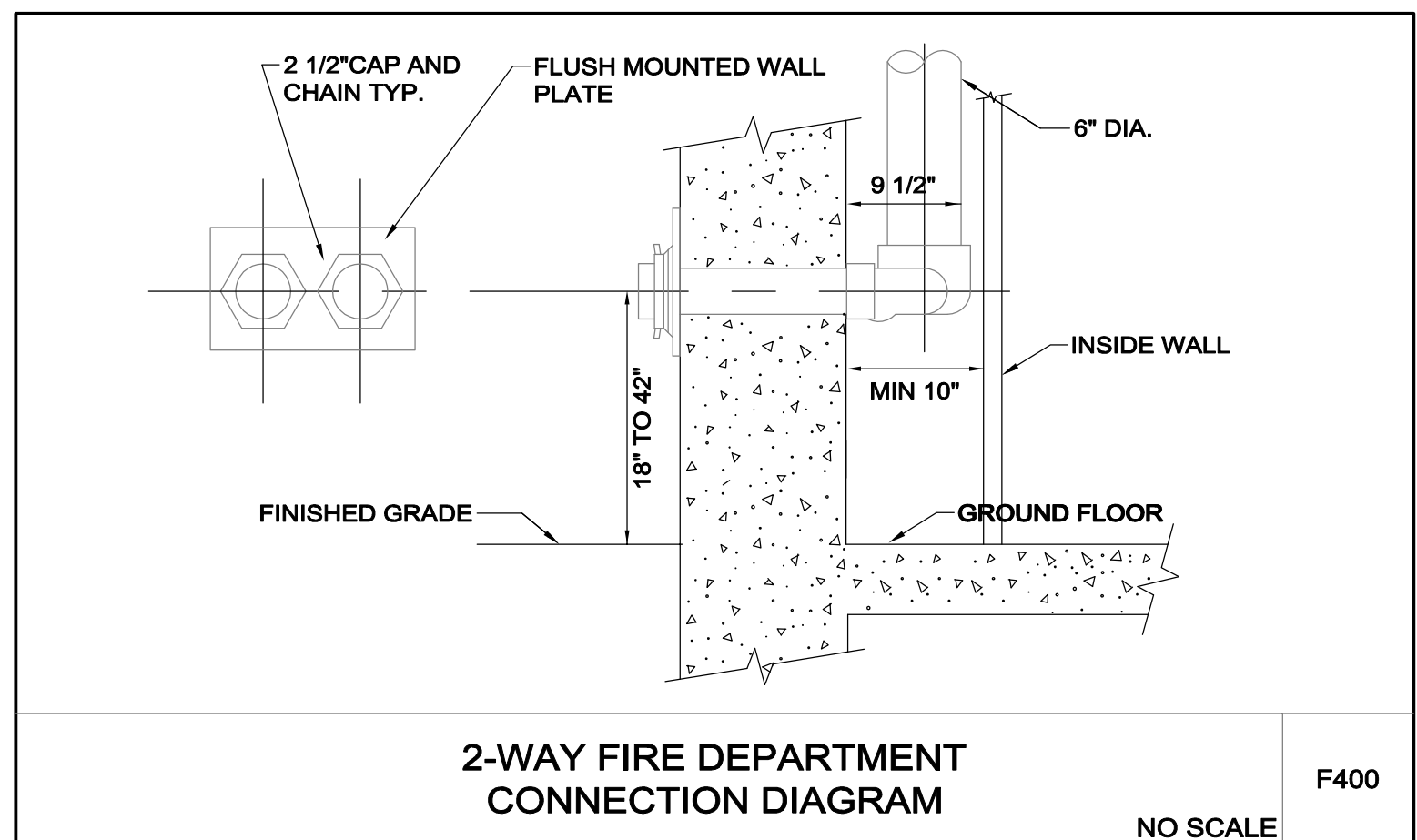
A HYDRANT FLOW TEST WAS PERFORMED AT 8:15 PM ON FRIDAY, NOVEMBER 8TH, 2013 AT THE PROJECT SITE (155 LEXINGTON STREET IN WALTHAM, MA) BY RDK ENGINEERS AND AN EMPLOYEE OF THE WALTHAM DEPARTMENT OF PUBLIC WORKS.

THE HYDRANT USED TO READ THE STATIC AND RESIDUAL PRESSURES WAS LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF LEXINGTON STREET AND DALE STREET. THE HYDRANT USED TO MEASURE THE FLOW WAS LOCATED ON LEXINGTON STREET, DIRECTLY ACROSS FROM THE POLICE STATION. THE DISTANCE BETWEEN THE TWO HYDRANTS IS APPROXIMATELY SIX HUNDRED FEET. THE CHANGE IN ELEVATION BETWEEN THE TWO HYDRANTS IS APPROXIMATELY FIVE FEET.

THE RESULTS ARE AS FOLLOWS:

STATIC PRESSURE:	94	PSI
RESIDUAL PRESSURE:	80	PSI
FLOW:	1,028	GPM

**HYDRANT FLOW TEST DATA** F1000  
NO SCALE



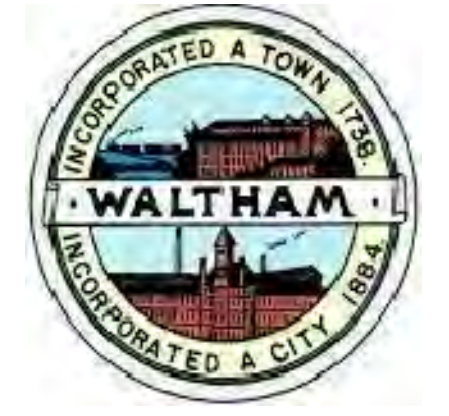
**2-WAY FIRE DEPARTMENT CONNECTION DIAGRAM** F400  
NO SCALE

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REVISIONS		
Number	Description	Date

ISSUED FOR BID



**WALTHAM POLICE STATION RENOVATION**  
155 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS

**FIRE PROTECTION DETAILS**

PROJECT NUMBER: 20130535  
DESIGNED BY: NEW  
DRAWN BY: NEW  
CHECKED BY: RDB  
DATE: July-Aug. 2016  
SCALE: N.T.S.

SHEET NUMBER:  
**FP601**

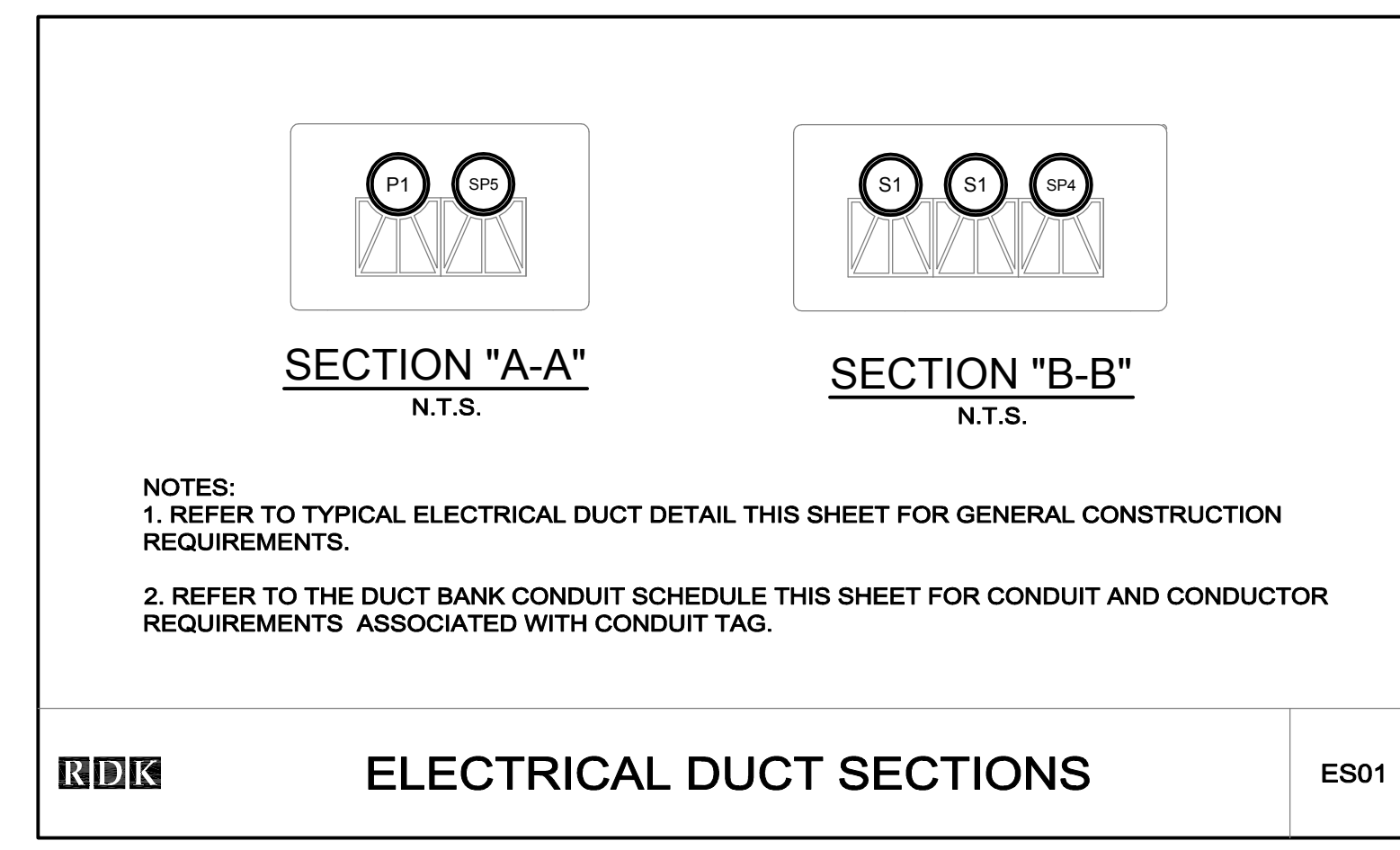
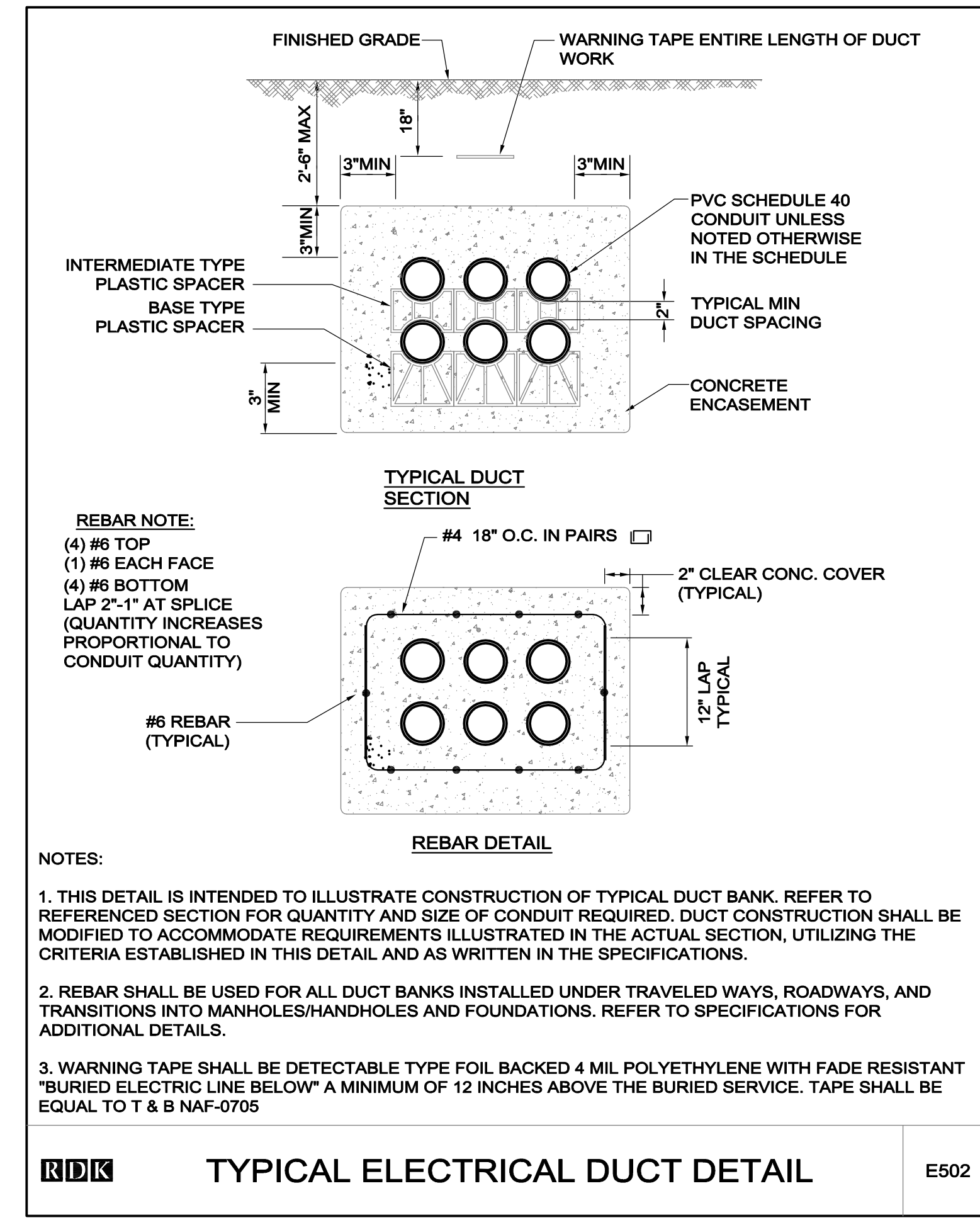
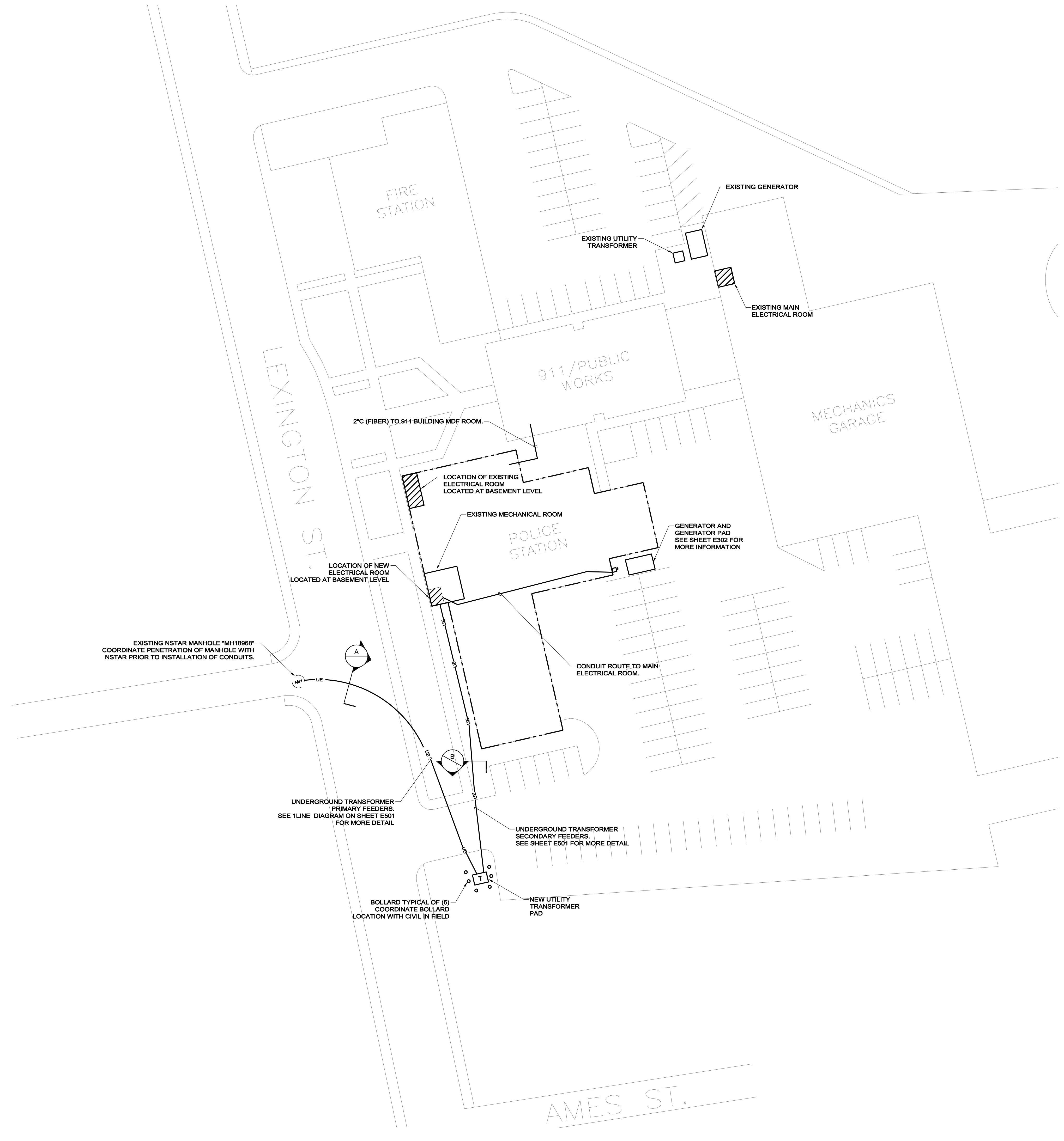






ELEC. \_\_\_\_\_  
 MECH. \_\_\_\_\_  
 FIRE. \_\_\_\_\_  
 PLUM. \_\_\_\_\_  
 STNU. \_\_\_\_\_  
 ANCH. \_\_\_\_\_  
 REVIEW BY: CIVIL \_\_\_\_\_

C:\01\20160535 - Waltham Police HQ Renovation\1200 Drawings\1204 Electrical\Plt Final\20160535 E100 ELECTRICAL SITE PLAN.dwg (View) July 14, 2016 - 8:41 pm dfranzak

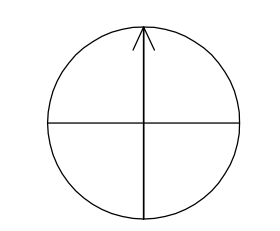


**DUCT BANK CONDUIT SCHEDULE**

TAG	DESCRIPTION	CONDUIT	CONDUCTORS
P1	TRANSFORMER PRIMARY FEEDERS	5" C	BY NSTAR
S1	TRANSFORMER SECONDARY FEEDERS	4" C	REFER TO ONE LINE
SP5	SPARE	5"	NOTE 6
SP4	SPARE	4"	NOTE 6

**NOTES:**  
 1. REFER TO DUCT BANK SECTIONS FOR CORRESPONDING CONDUIT AND CONDUCTOR.  
 2. REFER TO THE TYPICAL DUCT BANK SECTION FOR DETAILS REQUIRED IN THE CONSTRUCTION OF THE DUCT BANK ENVELOPE.  
 3. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION INCLUDING BUT NOT LIMITED TO DUCT BANK REINFORCEMENT REQUIRED UNDER PAVED AREAS INTENDED FOR VEHICULAR TRAFFIC AND AT MANHOLE/BUILDING INTERFACES.  
 4. ALL CONDUCTORS INSTALLED IN DUCT SHALL BE SUITABLE FOR WET LOCATIONS.  
 5. ALL SERVICE ENTRANCE AND GENERATOR OUTPUT CONDUCTORS INSTALLED IN DUCT SHALL BE TYPE USE.  
 6. PROVIDE ALL EMPTY/SPARE CONDUIT WITH NYLON PULL STRING.

- NOTES:**
- REFER TO DRAWING E000 FOR LEGEND, SYMBOLS AND GENERAL NOTES.
  - REFER TO APPLICABLE DETAILS ON THIS SHEET AND E101 FOR ADDITIONAL SCOPE.



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REVISIONS		
Number	Description	Date

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WALTHAM POLICE STATION RENOVATION  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**ELECTRICAL SITE PLAN**

PROJECT NUMBER: 20130535  
 DESIGNED BY: AM  
 DRAWN BY: DF  
 CHECKED BY: GM  
 DATE: July-Aug.  
 SCALE: 2016 N.T.S.

SHEET NUMBER:  
**E100**  
 SHEET 120 OF 157





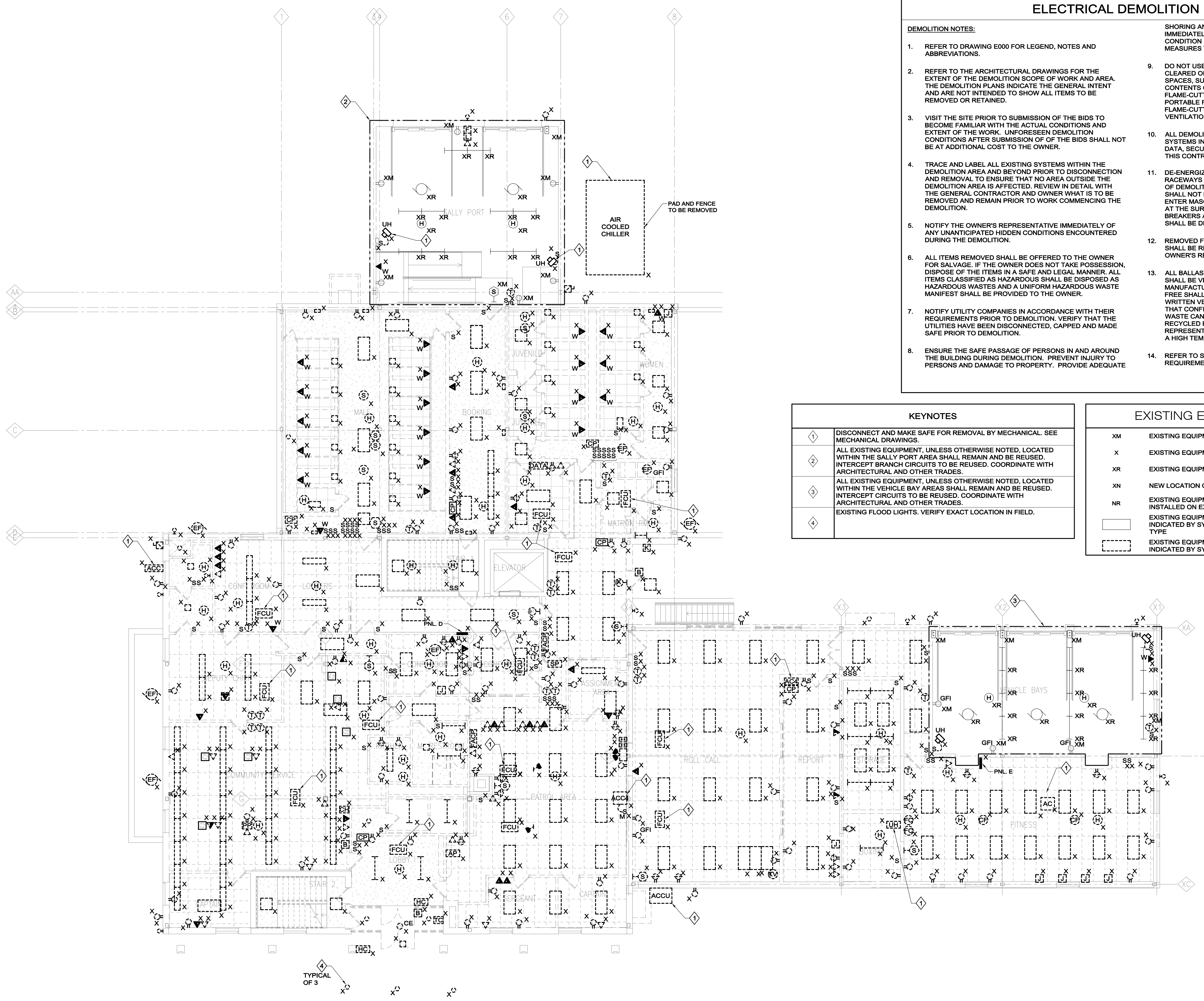






REVISION BY: CIVIL ANCH. STRU. PLUM. FIRE. MECH. ELEC.

C:\001300130535 - Waltham Police HQ Renovation\1200 Drawings\1204 Electrical\1202 Electrical First Floor Demolition Plan.dwg (Work) July 14, 2014, 8:42pm dhwazak



### ELECTRICAL DEMOLITION NOTES

- DEMOLITION NOTES:**
- REFER TO DRAWING E000 FOR LEGEND, NOTES AND ABBREVIATIONS.
  - REFER TO THE ARCHITECTURAL DRAWINGS FOR THE EXTENT OF THE DEMOLITION SCOPE OF WORK AND AREA. THE DEMOLITION PLANS INDICATE THE GENERAL INTENT AND ARE NOT INTENDED TO SHOW ALL ITEMS TO BE REMOVED OR RETAINED.
  - VISIT THE SITE PRIOR TO SUBMISSION OF THE BIDS TO BECOME FAMILIAR WITH THE ACTUAL CONDITIONS AND EXTENT OF THE WORK. UNFORESEEN DEMOLITION CONDITIONS AFTER SUBMISSION OF THE BIDS SHALL NOT BE AT ADDITIONAL COST TO THE OWNER.
  - TRACE AND LABEL ALL EXISTING SYSTEMS WITHIN THE DEMOLITION AREA AND BEYOND PRIOR TO DISCONNECTION AND REMOVAL TO ENSURE THAT NO AREA OUTSIDE THE DEMOLITION AREA IS AFFECTED. REVIEW IN DETAIL WITH THE GENERAL CONTRACTOR AND OWNER WHAT IS TO BE REMOVED AND REMAIN PRIOR TO WORK COMMENCING THE DEMOLITION.
  - NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY UNANTICIPATED HIDDEN CONDITIONS ENCOUNTERED DURING THE DEMOLITION.
  - ALL ITEMS REMOVED SHALL BE OFFERED TO THE OWNER FOR SALVAGE. IF THE OWNER DOES NOT TAKE POSSESSION, DISPOSE OF THE ITEMS IN A SAFE AND LEGAL MANNER. ALL ITEMS CLASSIFIED AS HAZARDOUS SHALL BE DISPOSED AS HAZARDOUS WASTES AND A UNIFORM HAZARDOUS WASTE MANIFEST SHALL BE PROVIDED TO THE OWNER.
  - NOTIFY UTILITY COMPANIES IN ACCORDANCE WITH THEIR REQUIREMENTS PRIOR TO DEMOLITION. VERIFY THAT THE UTILITIES HAVE BEEN DISCONNECTED, CAPPED AND MADE SAFE PRIOR TO DEMOLITION.
  - ENSURE THE SAFE PASSAGE OF PERSONS IN AND AROUND THE BUILDING DURING DEMOLITION. PREVENT INJURY TO PERSONS AND DAMAGE TO PROPERTY. PROVIDE ADEQUATE SHORING AND BRACING TO PREVENT COLLAPSE. IMMEDIATELY REPAIR DAMAGED PROPERTY TO THE CONDITION BEFORE BEING DAMAGED. TAKE EFFECTIVE MEASURES TO PREVENT WINDBLOWN DUST.
  - DO NOT USE CUTTING TORCHES UNTIL WORK AREA IS CLEARED OF FLAMMABLE MATERIALS. AT CONCEALED SPACES, SUCH AS PIPE INTERIORS, VERIFY CONDITION AND CONTENTS OF HIDDEN SPACE BEFORE STARTING FLAME-CUTTING OPERATIONS. MAINTAIN FIRE WATCH AND PORTABLE FIRE-SUPPRESSION DEVICES DURING FLAME-CUTTING OPERATIONS. MAINTAIN ADEQUATE VENTILATION WHEN USING CUTTING TORCHES.
  - ALL DEMOLITION SCOPE ASSOCIATED WITH LOW VOLTAGE SYSTEMS INCLUDING BUT NOT LIMITED TO TELEPHONE, DATA, SECURITY, PAGING, CCTV, ETC. SHALL BE INCLUDED IN THIS CONTRACT.
  - DE-ENERGIZE AND REMOVE ALL CONDUCTORS AND RACEWAYS TO THEIR POINTS OF ORIGIN WITHIN THE AREA OF DEMOLITION SCOPE. ITEMS IDENTIFIED FOR DEMOLITION SHALL NOT BE ABANDONED IN PLACE. RACEWAYS THAT ENTER MASONRY WALLS AND FLOORS SHALL BE CUT FLUSH AT THE SURFACE FOR PATCHING BY OTHERS. ALL CIRCUIT BREAKERS ASSOCIATED WITH THE DEMOLITION SCOPE SHALL BE DE-ENERGIZED AND LABELED SPARE.
  - REMOVED FLUORESCENT AND HID LAMPS AND BATTERIES SHALL BE RECYCLED BY A FACILITY APPROVED BY THE OWNER'S REPRESENTATIVE.
  - ALL BALLASTS IN LIGHTING FIXTURES TO BE DISPOSED SHALL BE VERIFIED TO BE PCB FREE. ALL BALLASTS MANUFACTURED PRIOR TO 1979 AND NOT LABELED AS PCB FREE SHALL BE CONSIDERED TO CONTAIN PCBs. PROVIDE WRITTEN VERIFICATION TO THE OWNER'S REPRESENTATIVE THAT CONFIRMS PCB FREE WASTE. WHERE PCB FREE WASTE CANNOT BE VERIFIED, BALLASTS SHALL BE RECYCLED BY A FACILITY APPROVED BY THE OWNER'S REPRESENTATIVE, WITH PCB COMPONENTS ELIMINATED BY A HIGH TEMPERATURE INCINERATION.
  - REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

KEYNOTES	
1	DISCONNECT AND MAKE SAFE FOR REMOVAL BY MECHANICAL. SEE MECHANICAL DRAWINGS.
2	ALL EXISTING EQUIPMENT, UNLESS OTHERWISE NOTED, LOCATED WITHIN THE SALLY PORT AREA SHALL REMAIN AND BE REUSED. INTERCEPT BRANCH CIRCUITS TO BE REUSED. COORDINATE WITH ARCHITECTURAL AND OTHER TRADES.
3	ALL EXISTING EQUIPMENT, UNLESS OTHERWISE NOTED, LOCATED WITHIN THE VEHICLE BAY AREAS SHALL REMAIN AND BE REUSED. INTERCEPT CIRCUITS TO BE REUSED. COORDINATE WITH ARCHITECTURAL AND OTHER TRADES.
4	EXISTING FLOOD LIGHTS. VERIFY EXACT LOCATION IN FIELD.

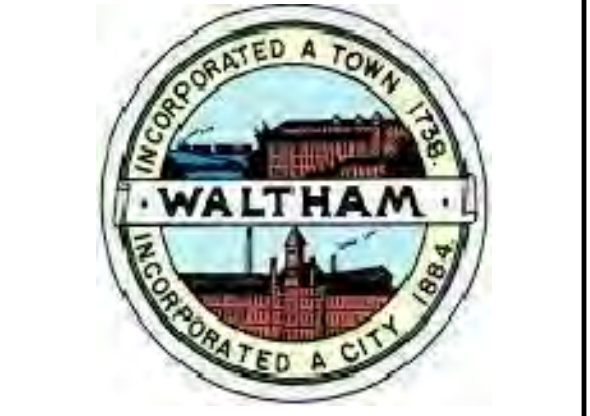
EXISTING EQUIPMENT LEGEND	
XM	EXISTING EQUIPMENT TO REMAIN
X	EXISTING EQUIPMENT TO BE REMOVED
XR	EXISTING EQUIPMENT TO BE RELOCATED
XN	NEW LOCATION OF EXISTING RELOCATED EQUIPMENT
NR	EXISTING EQUIPMENT TO BE REMOVED AND NEW EQUIPMENT TO BE INSTALLED ON EXISTING BRANCH/FEEDER
[Symbol]	EXISTING EQUIPMENT FOR INFORMATION ONLY- INDICATED BY SYMBOL WITH LIGHT AND OUT OF FUNCTION LINE TYPE
[Symbol]	EXISTING EQUIPMENT TO BE REWORKED- INDICATED BY SYMBOL WITH DASHED AND IN FUNCTION LINE TYPE

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REVISIONS		
Number	Description	Date

ISSUED FOR BID



WALTHAM POLICE STATION RENOVATION  
155 LEXINGTON STREET  
WALTHAM, MASSACHUSETTS

ELECTRICAL FIRST FLOOR DEMO PLAN

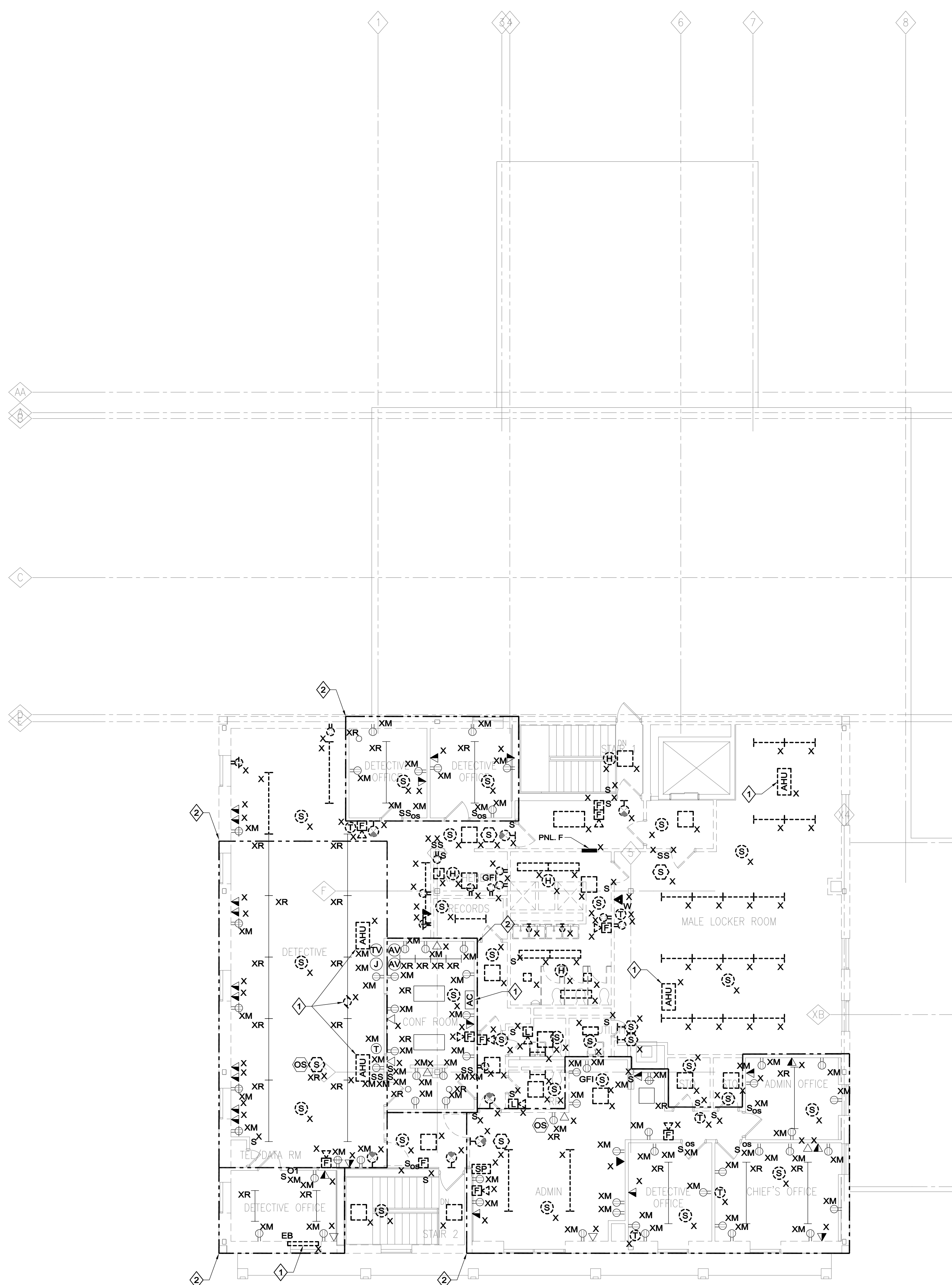
PROJECT NUMBER: 20130535  
DESIGNED BY: AM  
DRAWN BY: DF  
CHECKED BY: GM  
DATE: July-Aug.  
SCALE: 2016 1/8" = 1'-0"  
SHEET NUMBER:

ED102



REVIEW BY: CIVIL ANCH. STRUC. PLUM. FIRE. MECH. ELEC.

C:\00130130535 - Waltham Police HQ Renovation\1200 Drawings\1204 Electrical\2nd Floor Demolition Plan.dwg [Wed Jul 14, 2014 - 8:43pm drawack]



### ELECTRICAL DEMOLITION NOTES

- DEMOLITION NOTES:**
- REFER TO DRAWING E000 FOR LEGEND, NOTES AND ABBREVIATIONS.
  - REFER TO THE ARCHITECTURAL DRAWINGS FOR THE EXTENT OF THE DEMOLITION SCOPE OF WORK AND AREA. THE DEMOLITION PLANS INDICATE THE GENERAL INTENT AND ARE NOT INTENDED TO SHOW ALL ITEMS TO BE REMOVED OR RETAINED.
  - VISIT THE SITE PRIOR TO SUBMISSION OF THE BIDS TO BECOME FAMILIAR WITH THE ACTUAL CONDITIONS AND EXTENT OF THE WORK. UNFORESEEN DEMOLITION CONDITIONS AFTER SUBMISSION OF THE BIDS SHALL NOT BE AT ADDITIONAL COST TO THE OWNER.
  - TRACE AND LABEL ALL EXISTING SYSTEMS WITHIN THE DEMOLITION AREA AND BEYOND PRIOR TO DISCONNECTION AND REMOVAL TO ENSURE THAT NO AREA OUTSIDE THE DEMOLITION AREA IS AFFECTED. REVIEW IN DETAIL WITH THE GENERAL CONTRACTOR AND OWNER WHAT IS TO BE REMOVED AND REMAIN PRIOR TO WORK COMMENCING THE DEMOLITION.
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  - ALL ITEMS REMOVED SHALL BE OFFERED TO THE OWNER FOR SALVAGE. IF THE OWNER DOES NOT TAKE POSSESSION, DISPOSE OF THE ITEMS IN A SAFE AND LEGAL MANNER. ALL ITEMS CLASSIFIED AS HAZARDOUS SHALL BE DISPOSED AS HAZARDOUS WASTES AND A UNIFORM HAZARDOUS WASTE MANIFEST SHALL BE PROVIDED TO THE OWNER.
  - NOTIFY UTILITY COMPANIES IN ACCORDANCE WITH THEIR REQUIREMENTS PRIOR TO DEMOLITION. VERIFY THAT THE UTILITIES HAVE BEEN DISCONNECTED, CAPPED AND MADE SAFE PRIOR TO DEMOLITION.
  - ENSURE THE SAFE PASSAGE OF PERSONS IN AND AROUND THE BUILDING DURING DEMOLITION. PREVENT INJURY TO PERSONS AND DAMAGE TO PROPERTY. PROVIDE ADEQUATE SHORING AND BRACING TO PREVENT COLLAPSE. IMMEDIATELY REPAIR DAMAGED PROPERTY TO THE CONDITION BEFORE BEING DAMAGED. TAKE EFFECTIVE MEASURES TO PREVENT WINDBLOWN DUST.
  - DO NOT USE CUTTING TORCHES UNTIL WORK AREA IS CLEARED OF FLAMMABLE MATERIALS. AT CONCEALED SPACES, SUCH AS PIPE INTERIORS, VERIFY CONDITION AND CONTENTS OF HIDDEN SPACE BEFORE STARTING FLAME-CUTTING OPERATIONS. MAINTAIN FIRE WATCH AND PORTABLE FIRE-SUPPRESSION DEVICES DURING FLAME-CUTTING OPERATIONS. MAINTAIN ADEQUATE VENTILATION WHEN USING CUTTING TORCHES.
  - ALL DEMOLITION SCOPE ASSOCIATED WITH LOW VOLTAGE SYSTEMS INCLUDING BUT NOT LIMITED TO TELEPHONE, DATA, SECURITY, PAGING, CCTV, ETC. SHALL BE INCLUDED IN THIS CONTRACT.
  - DE-ENERGIZE AND REMOVE ALL CONDUCTORS AND RACEWAYS TO THEIR POINTS OF ORIGIN WITHIN THE AREA OF DEMOLITION SCOPE. ITEMS IDENTIFIED FOR DEMOLITION SHALL NOT BE ABANDONED IN PLACE. RACEWAYS THAT ENTER MASONRY WALLS AND FLOORS SHALL BE CUT FLUSH AT THE SURFACE FOR PATCHING BY OTHERS. ALL CIRCUIT BREAKERS ASSOCIATED WITH THE DEMOLITION SCOPE SHALL BE DE-ENERGIZED AND LABELED SPARE.
  - REMOVED FLUORESCENT AND HID LAMPS AND BATTERIES SHALL BE RECYCLED BY A FACILITY APPROVED BY THE OWNER'S REPRESENTATIVE.
  - ALL BALLASTS IN LIGHTING FIXTURES TO BE DISPOSED SHALL BE VERIFIED TO BE PCB FREE. ALL BALLASTS MANUFACTURED PRIOR TO 1979 AND NOT LABELED AS PCB FREE SHALL BE CONSIDERED TO CONTAIN PCBs. PROVIDE WRITTEN VERIFICATION TO THE OWNER'S REPRESENTATIVE THAT CONFIRMS PCB FREE WASTE. WHERE PCB FREE WASTE CANNOT BE VERIFIED, BALLASTS SHALL BE RECYCLED BY A FACILITY APPROVED BY THE OWNER'S REPRESENTATIVE, WITH PCB COMPONENTS ELIMINATED BY A HIGH TEMPERATURE INCINERATION.
  - REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

**KEYNOTES**

①	DISCONNECT AND MAKE SAFE FOR REMOVAL BY MECHANICAL. SEE MECHANICAL DRAWINGS
②	ALL EXISTING EQUIPMENT, UNLESS OTHERWISE NOTED, LOCATED WITHIN HIGHLIGHTED AREAS SHALL REMAIN AND BE REUSED. INTERCEPT BRANCH CIRCUITS TO BE REUSED. COORDINATE WITH ARCHITECTURAL AND OTHER TRADES.

**EXISTING EQUIPMENT LEGEND**

XM	EXISTING EQUIPMENT TO REMAIN
X	EXISTING EQUIPMENT TO BE REMOVED
XR	EXISTING EQUIPMENT TO BE RELOCATED
XN	NEW LOCATION OF EXISTING RELOCATED EQUIPMENT
NR	EXISTING EQUIPMENT TO BE REMOVED AND NEW EQUIPMENT TO BE INSTALLED ON EXISTING BRANCH/FEEDER
[Symbol: Solid box]	EXISTING EQUIPMENT FOR INFORMATION ONLY - INDICATED BY SYMBOL WITH LIGHT AND OUT OF FUNCTION LINE TYPE
[Symbol: Dashed box]	EXISTING EQUIPMENT TO BE REWORKED - INDICATED BY SYMBOL WITH DASHED AND IN FUNCTION LINE TYPE

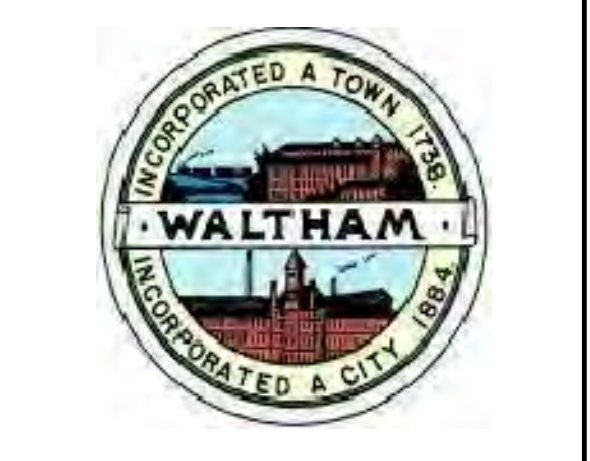
**COR MAGUIRE**  
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 200 Brickstone Square  
 Andover, MA 01810-1488  
 T. 978-296-6200

**REVISIONS**

Number	Description	Date

**ISSUED FOR BID**

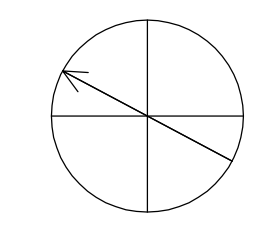
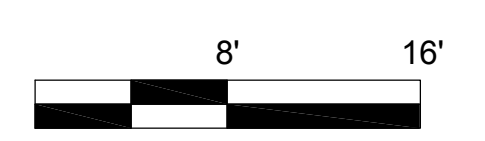


**WALTHAM POLICE STATION RENOVATION**  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

**ELECTRICAL SECOND FLOOR DEMO PLAN**

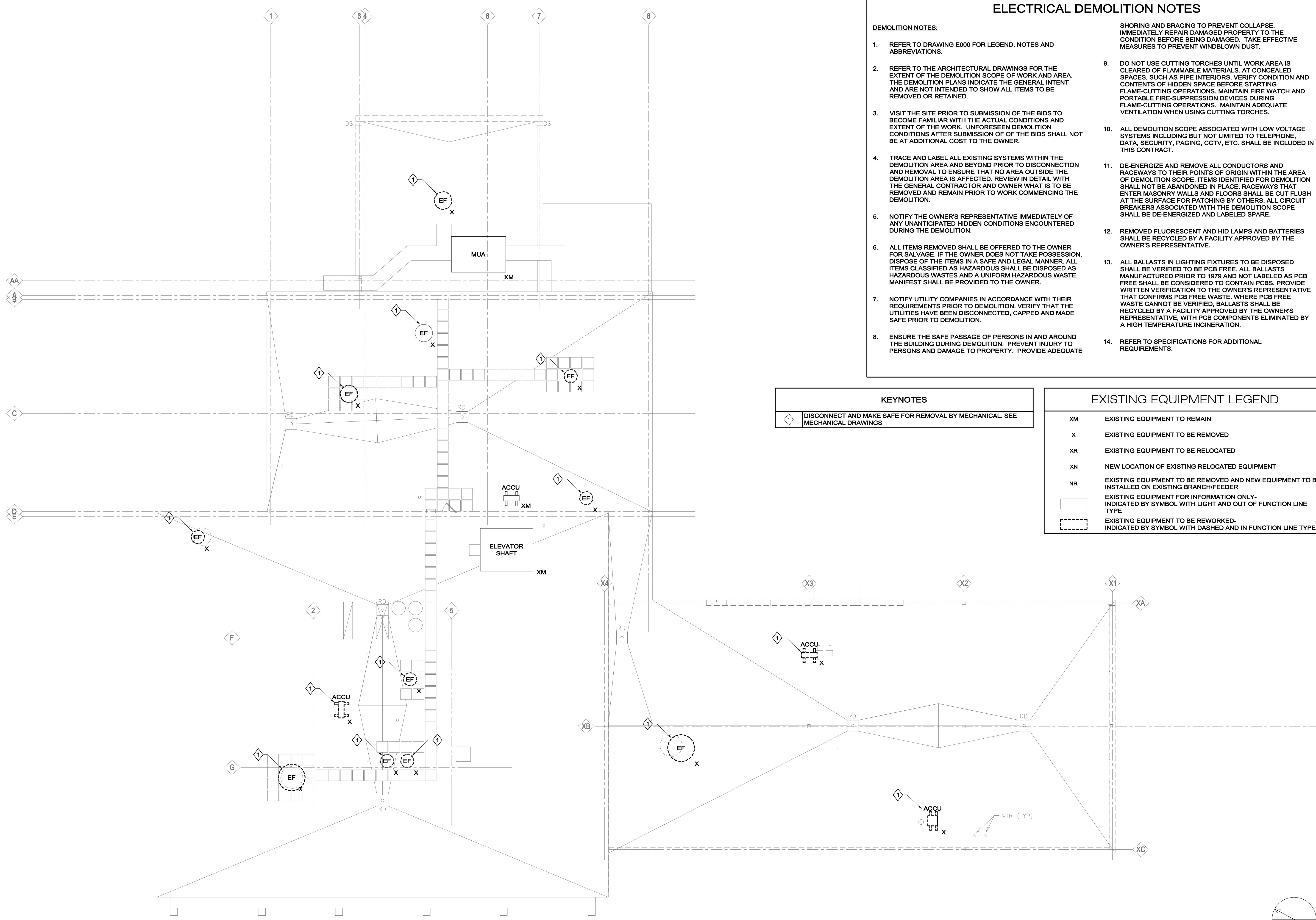
PROJECT NUMBER: 20130535  
 DESIGNED BY: AM  
 DRAWN BY: DF  
 CHECKED BY: GM  
 DATE: July-Aug.  
 SCALE: 2016 1/8" = 1'-0"  
 SHEET NUMBER:

**ED103**





ELEC: \_\_\_\_\_  
 MECH: \_\_\_\_\_  
 FIRE: \_\_\_\_\_  
 PLUM: \_\_\_\_\_  
 STRU: \_\_\_\_\_  
 ANCH: \_\_\_\_\_  
 CIVIL: \_\_\_\_\_



### ELECTRICAL DEMOLITION NOTES

- DEMOLITION NOTES:**
- REFER TO DRAWING E000 FOR LEGEND, NOTES AND ABBREVIATIONS.
  - REFER TO THE ARCHITECTURAL DRAWINGS FOR THE EXTENT OF THE DEMOLITION SCOPE OF WORK AND AREA. THE DEMOLITION PLANS INDICATE THE GENERAL INTENT AND ARE NOT INTENDED TO SHOW ALL ITEMS TO BE REMOVED OR RETAINED.
  - VISIT THE SITE PRIOR TO SUBMISSION OF THE BIDS TO BECOME FAMILIAR WITH THE ACTUAL CONDITIONS AND EXTENT OF THE WORK. UNFORESEEN DEMOLITION CONDITIONS AFTER SUBMISSION OF THE BIDS SHALL NOT BE AT ADDITIONAL COST TO THE OWNER.
  - TRACE AND LABEL ALL EXISTING SYSTEMS WITHIN THE DEMOLITION AREA AND BEYOND PRIOR TO DISCONNECTION AND REMOVAL TO ENSURE THAT NO AREA OUTSIDE THE DEMOLITION AREA IS AFFECTED. REVIEW IN DETAIL WITH THE GENERAL CONTRACTOR AND OWNER WHAT IS TO BE REMOVED AND REMAIN PRIOR TO WORK COMMENCING THE DEMOLITION.
  - NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY UNANTICIPATED HIDDEN CONDITIONS ENCOUNTERED DURING THE DEMOLITION.
  - ALL ITEMS REMOVED SHALL BE OFFERED TO THE OWNER FOR SALVAGE. IF THE OWNER DOES NOT TAKE POSSESSION, DISPOSE OF THE ITEMS IN A SAFE AND LEGAL MANNER. ALL ITEMS CLASSIFIED AS HAZARDOUS SHALL BE DISPOSED AS HAZARDOUS WASTES AND A UNIFORM HAZARDOUS WASTE MANIFEST SHALL BE PROVIDED TO THE OWNER.
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  - REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

**KEYNOTES**

⬡	DISCONNECT AND MAKE SAFE FOR REMOVAL BY MECHANICAL. SEE MECHANICAL DRAWINGS
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**EXISTING EQUIPMENT LEGEND**

XM	EXISTING EQUIPMENT TO REMAIN
X	EXISTING EQUIPMENT TO BE REMOVED
XR	EXISTING EQUIPMENT TO BE RELOCATED
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⬡	EXISTING EQUIPMENT FOR INFORMATION ONLY- INDICATED BY SYMBOL WITH LIGHT AND OUT OF FUNCTION LINE TYPE
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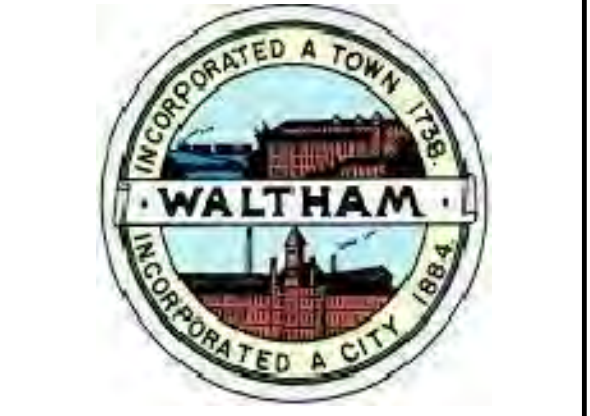
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 T. 978-296-6200

**REVISIONS**

Number	Description	Date

**ISSUED FOR BID**



**WALTHAM POLICE STATION RENOVATION**  
 155 LEXINGTON STREET  
 WALTHAM, MASSACHUSETTS

### ELECTRICAL ROOF DEMOLITION PLAN

**PROJECT NUMBER:** 20130535  
**DESIGNED BY:** AM  
**DRAWN BY:** DF  
**CHECKED BY:** GM  
**DATE:** July-Aug.  
**SCALE:** 2016 1/8" = 1'-0"  
**SHEET NUMBER:**

**ED104**

C:\01\20130535 - Waltham Police HD Renovation\1200 Drawings\1204 Electrical\Roof Demolition Plan.dwg (Work) July 14, 2014 - 8:42pm dfranzak



























































ELEC. MECH. FIRE. PLUM. STNU. ARCH. REVIEW BY: CIVL.

### SPECIAL PURPOSE RECEPTACLE SCHEDULE

TAG	NEMA CONF.	RATING	CIRCUIT BREAKER	BRANCH CIRCUIT
1	5-30R	30A 125V 2P 3W	30A-1P	2#10 & 1#10G - 3/4"
2	5-50R	50A 125V 2P 3W	50A-1P	2#6 & 1#10G - 3/4"
3	6-15R	15A 250V 2P 3W	15A-2P	2#12 & 1#12G - 3/4"
4	6-20R	20A 250V 2P 3W	20A-2P	2#12 & 1#12G - 3/4"
5	6-30R	30A 250V 2P 3W	30A-2P	2#10 & 1#10G - 3/4"
6	6-50R	50A 250V 2P 3W	50A-2P	2#6 & 1#10G - 3/4"
7	14-20R	20A 125/250V 3P 4W	20A-2P	3#12 & 1#12G - 3/4"
8	14-30R	30A 125/250V 3P 4W	30A-2P	3#10 & 1#10G - 3/4"
9	14-50R	50A 125/250V 3P 4W	50A-2P	3#6 & 1#10G - 3/4"
10	14-60R	60A 125/250V 3P 4W	60A-2P	3#6 & 1#10G - 3/4"
11	15-20R	20A 250V 3P 4W	20A-3P	3#12 & 1#12G - 3/4"
12	15-30R	30A 250V 3P 4W	30A-3P	3#10 & 1#10G - 3/4"
13	15-50R	50A 250V 3P 4W	50A-3P	3#6 & 1#10G - 3/4"
14	15-60R	60A 250V 3P 4W	60A-3P	3#6 & 1#10G - 3/4"
15	L5-15R	15A 125V 2P 3W	15A-1P	2#12 & 1#12G - 3/4"
16	L5-20R	20A 125V 2P 3W	20A-1P	2#12 & 1#12G - 3/4"
17	L5-30R	30A 125V 2P 3W	30A-1P	2#10 & 1#10G - 3/4"
18	L6-15R	15A 250V 2P 3W	15A-2P	2#12 & 1#12G - 3/4"
19	L6-20R	20A 250V 2P 3W	20A-2P	2#12 & 1#12G - 3/4"
20	L6-30R	30A 250V 2P 3W	30A-2P	2#10 & 1#10G - 3/4"
21	L14-20R	20A 125/250V 3P 4W	20A-2P	3#12 & 1#12G - 3/4"
22	L14-30R	30A 125/250V 3P 4W	30A-2P	3#10 & 1#10G - 3/4"
23	L15-20R	20A 250V 3P 4W	20A-3P	3#12 & 1#12G - 3/4"
24	L15-30R	30A 250V 3P 4W	30A-3P	3#10 & 1#10G - 3/4"
25	L16-20R	20A 480V 3P 4W	20A-3P	3#12 & 1#12G - 3/4"
26	L16-30R	30A 480V 3P 4W	30A-3P	3#10 & 1#10G - 3/4"
27	L21-20R	20A 208V 4P 5W	20A-3P	4#12 & 1#12G - 3/4"
28	L21-30R	30A 208V 4P 5W	30A-3P	4#10 & 1#10G - 3/4"
29	L22-20R	20A 480V 4P 5W	20A-3P	4#12 & 1#12G - 3/4"
30	L22-30R	30A 480V 4P 5W	30A-3P	4#10 & 1#10G - 3/4"

**NOTES:**  
1. DEVICE NEMA CONFIGURATION SHALL BE CONFIRMED PRIOR TO INSTALLATION. MATCH CONFIGURATION OF EQUIPMENT CORD CAP. NOTIFY OWNER'S REPRESENTATIVE OF RATING DISCREPANCY.  
2. CONDUCTOR SIZES ARE THE MINIMUM ALLOWED BASED UPON NEC TABLE 310.15(B)(16) WITH NO GREATER THAN THREE CURRENT CARRYING CONDUCTORS PER RACEWAY IN AN AMBIENT NOT TO EXCEED 30 DEGREES C.  
3. VOLTAGE DROP IS NOT CONSIDERED IN BRANCH CIRCUIT SIZES. ALL BRANCH CIRCUITS WHICH EXCEED 75 FEET SHALL BE INCREASED A MINIMUM OF ONE SIZE TO LIMIT VOLTAGE DROP TO LESS THAN 3%.  
4. RACEWAY SIZES ARE THE MINIMUM ALLOWED BASED UPON NEC TABLE C1 FOR THHW/THWN CONDUCTORS IN EMT. RACEWAY SIZES SHALL BE INCREASED TO ACCOMMODATE DIFFERING INSULATION SYSTEMS AND RACEWAY TYPES TO LIMIT RACEWAY FILL TO LESS THAN 40%.

### DISTRIBUTION PANEL SCHEDULE

CIRCUIT NO.	LOAD DESIGNATION	OVERCURRENT DEVICE			LOAD		REMARKS
		FRAME	TRIP	POLE	KVA	HP	
1	TVSS	100	100	3	-	-	
2	PANEL P2G	225	225	3	55.25	-	
3	PANEL L2G	100	100	3	7.33	-	
4	PANEL H2GA H2GB	400	400	3	115.86	-	
5	PANEL P21A P21B	250	250	3	68.57	-	
6	PANEL L21	100	100	3	28.12	-	
7	PANEL P22	225	150	3	25.83	-	
8	PANEL P	225	125	3	30.79	-	

**NOTES:**  
1. PROVIDE LUGS TO ACCOMMODATE FEEDER SIZES AS IDENTIFIED ON THE RISER DIAGRAM FOR SUPPLY AND ALL LOADS. (THIS NOTE APPLICABLE TO ALL TERMINATIONS.)  
2. "SPACE" SHALL CONSTITUTE ALL REQUIRED BUS, SUPPORTS AND HARDWARE NECESSARY TO INSTALL THE PROTECTIVE DEVICE UP TO THE FRAME LIMITATION INDICATED.  
3. NOTES 4-8 ARE OPTIONS WHICH SHALL BE SPECIFICALLY NOTED IN REMARKS FOR INCLUSION.  
4. PROVIDE WITH FEED THRU LUGS.  
5. PROVIDE WITH 200% NEUTRAL.  
6. PROVIDE WITH ISOLATED GROUND BUS.  
7. PROVIDE SHUNT TRIP AUXILIARY ATTACHMENT TO THE CIRCUIT BREAKER.  
8. PROVIDE TRANSIENT VOLTAGE SURGE SUPPRESSION. REFER TO SPECIFICATIONS FOR CLASS.

### MECHANICAL EQUIPMENT SCHEDULE

LOAD TAG	STARTER LOCATION	LOAD					NEMA SIZE	TYPE	STARTER					POWER SOURCE					CONNECTION					REMARKS				
		HP	FLA	KVA	VOLT	PH			CB	RK1 FUSE	MCP	PB	HOA	R	G	A	CPT	CONTACTS NO	NC	PANEL	C/B	FLEX	J/B		REC	AS	AF	NEMA
ACU-1	TEL/DATA 013	-	0.38	0.07	208	1	-	NOTE 8	-	-	-	-	-	-	-	-	H2GA-1.3	15A-2P	X	-	-	30	-	1	2#12 & #12G - 3/4"			
ACU-1 mini condensate Pump		-	-	0.08	120	1	-	-	-	-	-	-	-	-	-	-	H2GA-13	20A-1P	-	-	-	-	-	-	2#12 & #12G - 3/4"			
ACCU-1	LOWER ROOF	-	0.75	0.16	208	1	-	NOTE 8	-	-	-	-	-	-	-	-	H2GA-9.11	25A-2P	X	-	-	30	-	3R	2#12 & #12G - 3/4"			
HP-1	FITNESS 015	-	0.36	0.07	208	1	-	NOTE 8	-	-	-	-	-	-	-	-	H2GA-5.7	15A-2P	X	-	-	30	-	1	2#12 & #12G - 3/4"			
HP-1 mini condensate Pump		-	-	0.08	120	1	-	-	-	-	-	-	-	-	-	-	H2GA-13	20A-1P	-	-	-	-	-	-	2#12 & #12G - 3/4"			
ACCU-2	LOWER ROOF	-	0.75	0.16	208	1	-	NOTE 8	-	-	-	-	-	-	-	-	H2GA-31.35	25A-2P	X	-	-	30	-	3R	2#12 & #12G - 3/4"			
HP-2	FITNESS 015	-	0.36	0.07	208	1	-	NOTE 8	-	-	-	-	-	-	-	-	H2GA-5.7	15A-2P	X	-	-	30	-	1	2#12 & #12G - 3/4"			
HP-2 mini condensate Pump		-	-	0.08	120	1	-	-	-	-	-	-	-	-	-	-	H2GA-13	20A-1P	-	-	-	-	-	-	2#12 & #12G - 3/4"			
ACCU-3	LOWER ROOF	-	0.75	0.16	208	1	-	NOTE 8	-	-	-	-	-	-	-	-	H2GA-35.37	25A-3P	X	-	-	30	-	3R	2#12 & #12G - 3/4"			
RTU-1	UPPER ROOF	7.50	56.10	20.21	208	3	-	NOTE 8	-	-	-	-	-	-	-	-	H2GA-8.10.12	80A-3P	X	X	-	-	-	-	3#4, 1#8N & #8G - 1 1/4"	NOTE 7,10		
RTU-2	LOWER ROOF	1.00	32.20	11.60	208	3	-	NOTE 8	-	-	-	-	-	-	-	-	H2GA-14.16.18	45A-3P	X	X	-	-	-	-	4#8 & #10G - 3/4"	NOTE 7,10		
RTU-3	UPPER ROOF	5.00	72.00	25.94	208	3	-	NOTE 8	-	-	-	-	-	-	-	-	H2GB-1.3.5	90A-3P	X	X	-	-	-	-	3#2, 1#8N & #8G - 1 1/4"	NOTE 7,10		
UH-1	MECHANICAL RM	-	0.80	0.09	115	1	0	NOTE 8	-	-	-	-	-	-	-	-	H2GA-19	20A1P	X	X	-	-	-	-	2#12 & (1)#12G - 3/4"	NOTE 7		
EP-1	LOWER ROOF	1/4	3.70	0.43	115	1	0	FVNR	15	-	7	-	X	X	X	X	-	2	2	H2GA-15	20A-1P	X	X	-	-	2#12 & (1)#12G - 3/4"	NOTE 7	
EP-2	LOWER ROOF	1/4	3.70	0.43	115	1	0	FVNR	15	-	7	-	X	X	X	X	-	2	2	H2GA-17	20A-1P	X	X	-	-	2#12 & (1)#12G - 3/4"	NOTE 7	
EP-3	UPPER ROOF	1/6	3.40	0.39	115	1	0	FVNR	15	-	7	-	X	X	X	X	-	2	2	H2GA-15	20A-1P	X	X	-	-	2#12 & (1)#12G - 3/4"	NOTE 7	
EP-4	NOT USED																											
EP-5	UPPER ROOF	1/4	3.70	0.43	115	1	0	FVNR	15	-	7	-	X	X	X	X	-	2	2	H2GA-15	20A-1P	X	X	-	-	2#12 & (1)#12G - 3/4"	NOTE 7	
ERU-1	LOWER ROOF	-	67.7	24.37	208	3	-	NOTE 8	-	-	-	-	-	-	-	-	H2GB-7.9.11	80A3P	X	X	-	-	-	-	3#4, 1#8N & #8G - 1 1/4"	NOTE 7,10		
CUH-1	STAIR #2 BASEMENT	1/15	0.8	0.1	115	1	-	NOTE 8	-	-	-	-	-	-	-	-	H2GA-21	15A1P	X	X	-	-	-	-	2#12 & #12G - 3/4"	NOTE 7		
CUH-2	LOBBY 115	1/10	1.4	0.2	115	1	-	NOTE 8	-	-	-	-	-	-	-	-	H2GA-21	15A1P	X	X	-	-	-	-	2#12 & #12G - 3/4"	NOTE 7		
CUH-3	LOBBY 115	1/10	2.2	0.3	115	1	-	NOTE 8	-	-	-	-	-	-	-	-	H2GA-21	15A1P	X	X	-	-	-	-	2#12 & #12G - 3/4"	NOTE 7		
CUH-4	STAFF ENTRANCE	1/10	2.2	0.3	115	1	-	NOTE 8	-	-	-	-	-	-	-	-	H2GA-23	15A1P	X	X	-	-	-	-	2#12 & #12G - 3/4"	NOTE 7		
CUH-5	STAIR #2 2ND FLOOR	1/15	0.8	0.1	115	1	-	NOTE 8	-	-	-	-	-	-	-	-	H2GA-21	15A1P	X	X	-	-	-	-	2#12 & #12G - 3/4"	NOTE 7		
CUH-6	STAIR #3 2ND FLOOR	1/15	0.8	0.1	115	1	-	NOTE 8	-	-	-	-	-	-	-	-	H2GA-23	15A1P	X	X	-	-	-	-	2#12 & #12G - 3/4"	NOTE 7		
GUH-1	VEHICLE BAYS	1/8	2.2	0.3	115	1	-	NOTE 8	-	-	-	-	-	-	-	-	H2GA-2	15/1P	X	-	-	30	-	1	2#12 & #12G - 3/4"			
GUH-2	SALLYPORT	1/8	1.3	0.1	115	1	-	NOTE 8	-	-	-	-	-	-	-	-	H2GA-4	15/1P	X	-	-	30	-	1	2#12 & #12G - 3/4"			
GUH-3	SALLYPORT	1/8	1.3	0.1	115	1	-	NOTE 8	-	-	-	-	-	-	-	-	H2GA-4	15/1P	X	-	-	30	-	1	2#12 & #12G - 3/4"			
GUH-4	MOTOBIKE STORAGE	1/8	1.3	0.1	115	1	-	NOTE 8	-	-	-	-	-	-	-	-	H2GA-4	15/1P	X	-	-	30	-	1	2#12 & #12G - 3/4"			
B-1	MECHANICAL RM	-	2.7	0.3	120	1	00	NOTE 8	15	-	7	-	X	X	X	X	-	2	2	H2GA-6	15A1P	X	-	30	-	1	2#12 & #12G - 3/4"	
B-2	MECHANICAL RM	-	2.7	0.3	120	1	00	NOTE 8	15	-	7	-	X	X	X	X	-	2	2	H2GA-6	15A1P	X	-	30	-	1	2#12 & #12G - 3/4"	
P-1	MECHANICAL RM	3/4	3.0	1.08	208	3	0	FVNR	30	-	15	-	X	X	X	X	-	2	2	H2GB-2.4.6	15A3P	X	-	30	-	1	4#12 & #12G - 3/4"	
P-2	MECHANICAL RM	3/4	3.0	1.08	208	3	0	FVNR	30	-	15	-	X	X	X	X	-	2	2	H2GB-8.10.12	15A3P	X	-	30	-	1	4#12 & #12G - 3/4"	
P-3	MECHANICAL RM	1 1/2	6.6	2.38	208	3	-	VFD	-	-	-	-	X	X	X	X	-	2	2	H2GB-14.16.18	15A3P	X	-	30	-	1	4#12 & #12G - 3/4"	NOTE 6
P-4	MECHANICAL RM	1 1/2	6.6	2.38	208	3	-	VFD	-	-	-	-	X	X	X	X	-	2	2	H2GB-20.22.24	15A3P	X	-	30	-	1	4#12 & #12G - 3/4"	NOTE 6
RP-1	MECHANICAL RM	1/8	1.2	0.13	115	1	00	FVNR	15	-	7	-	X	X	X	-	2	2	H2GA-25	15A1P	X	-	30	-	1	2#12 & #12G - 3/4"		
RP-2	MECHANICAL RM	1/8	1.2	0.13	115	1	00	FVNR	15	-	7	-	X	X	X	-	2	2	H2GA-27	15A1P	X	-	30	-	1	2#12 & #12G - 3/4"		
GW-1	MECHANICAL RM	-	-	0.12	120	1	-	-	-	-	-	-	-	-	-	-	H2GA-29	20A1P	X	X	-	-	-	-	2#12 & #12G - 3/4"			
DWCH-1	MECHANICAL RM	-	9.0	1.0	115	1	-	-	-	-	-	-	-	-	-	-	H2GA-20	20/1P	X	X	-	-	-	-	2#12 & #12G - 3/4"			
GB-1	MECHANICAL RM	1/2	3.0	1.08	208	3	0	FVNR	30	-	15	-	X	X	X	X	-	2	2	H2GB-30.32.34	20A3P	X	-	30	-	1	4#12 & #12G - 3/4"	

**NOTES:**  
1. NOTES 2-6 APPLY TO ALL APPLICABLE LOADS.  
2. PROVIDE THERMAL OVERLOAD UNITS FOR ALL STARTERS SIZED TO MATCH LOAD NAMEPLATE AND NEC REQUIREMENTS.  
3. BRANCH CIRCUIT WIRING METHODS SHALL BE AS NOTED ON THE DRAWINGS AND/OR SPECIFICATIONS FOR THE APPLICABLE LOCATION. THE FINAL THREE FEET (MAXIMUM) SHALL BE FLEXIBLE METAL OR LIQUID TIGHT FLEXIBLE METAL CONDUIT.  
4. COPPER BRANCH CIRCUIT CONDUCTOR SIZING BASED UPON NEC TABLE 310.15(B)(16). MAKE ADJUSTMENTS TO CONDUCTORS FOR TEMPERATURE OR VOLTAGE DROP THAT EXCEED NEC AND SPECIFICATION CRITERIA.  
5. RACEWAY SIZES ARE BASED UPON GRSC AND LFMC WITH THWN CONDUCTORS.  
6. VFD SHALL BE CONTROLLED VIA REMOTE 4-20mA OR 0-5V SIGNAL PROVIDED BY THE HVAC ATC CONTRACTOR.  
7. REQUIRED DISCONNECT IS PROVIDED INTEGRAL/PREWIRED TO MECHANICAL EQUIPMENT.  
8. REQUIRED STARTER IS PROVIDED INTEGRAL/PREWIRED TO MECHANICAL EQUIPMENT.  
9. DISCONNECT FOR 2S1W AND 2S2W MOTORS SHALL BE SIX POLE.  
10. PROVIDE NEUTRAL FROM SOURCE TO STARTER ONLY FOR 120V CONTROL POWER OF 208V 3PH UNITS.  
11. FUSES FOR DISCONNECT SWITCHES SHALL BE CLASS RK5.

**KEY:**  
FVNR FULL VOLTAGE NON-REVERSING  
FVR FULL VOLTAGE REVERSING  
2S1W TWO SPEED SINGLE WINDING  
2S2W TWO SPEED TWO WINDING  
RVAT REDUCED VOLTAGE AUTOTRANSFORMER  
RVPW REDUCED VOLTAGE PART WINDING  
RVYDOT REDUCED VOLTAGE WYE DELTA OPEN TRANSITION  
RVYDCT REDUC



































































