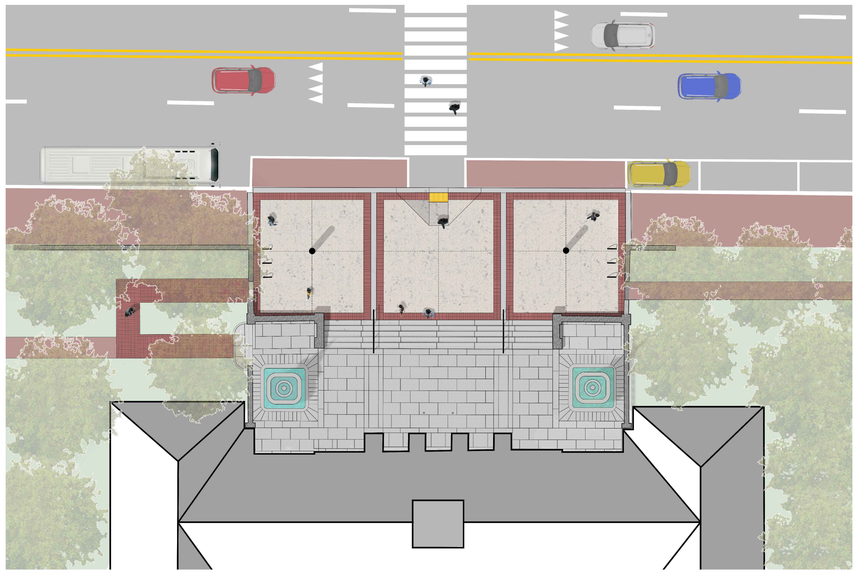
TOWN OF ARLINGTON

IMPROVEMENTS TO THE ARLINGTON TOWN HALL PLAZA



SITE PLAN RENDERING - FOR ILLUSTRATIVE PURPOSES ONLY

TOWN OF ARLINGTON, MASSACHUSETTS

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SHEET INDEX

BID ALTERNATE NO.1

SUBSURFACE RADIANT HEATING SYSTEM FOR THE LOWER PLAZA AND PATHWAY CONNECTION BETWEEN PLAZA LEVELS (ZONE 3), INCLUDING ALL PUMPS, PIPING, EQUIPMENT, ELECTRICAL AND OTHER APPURTENANCES.

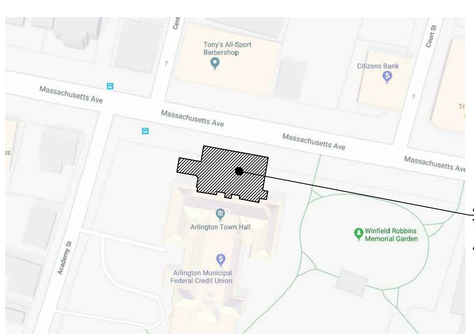
BID ALTERNATE NO.2

FURNISHING AND INSTALLING BIKE RACKS PER DRAWINGS AND SPECIFICATIONS.

BID ALTERNATE NO.3

CLEANING AND REPOINTING TOWN HALL PLAZA BALUSTRADES, RETAINING AND FREESTANDING WALLS AS WELL AS CLEANING THE BUILDING FACADE WITHIN THE CONTRACT LIMITS.

Locus Map



ARLINGTON TOWN HALL PLAZA
730 MASSACHUSETTS AVE NUE
ARLINGTON, MA 02476

BID DOCUMENTS

JULY 29, 2020

Prepared By

Weston & Sampson℠

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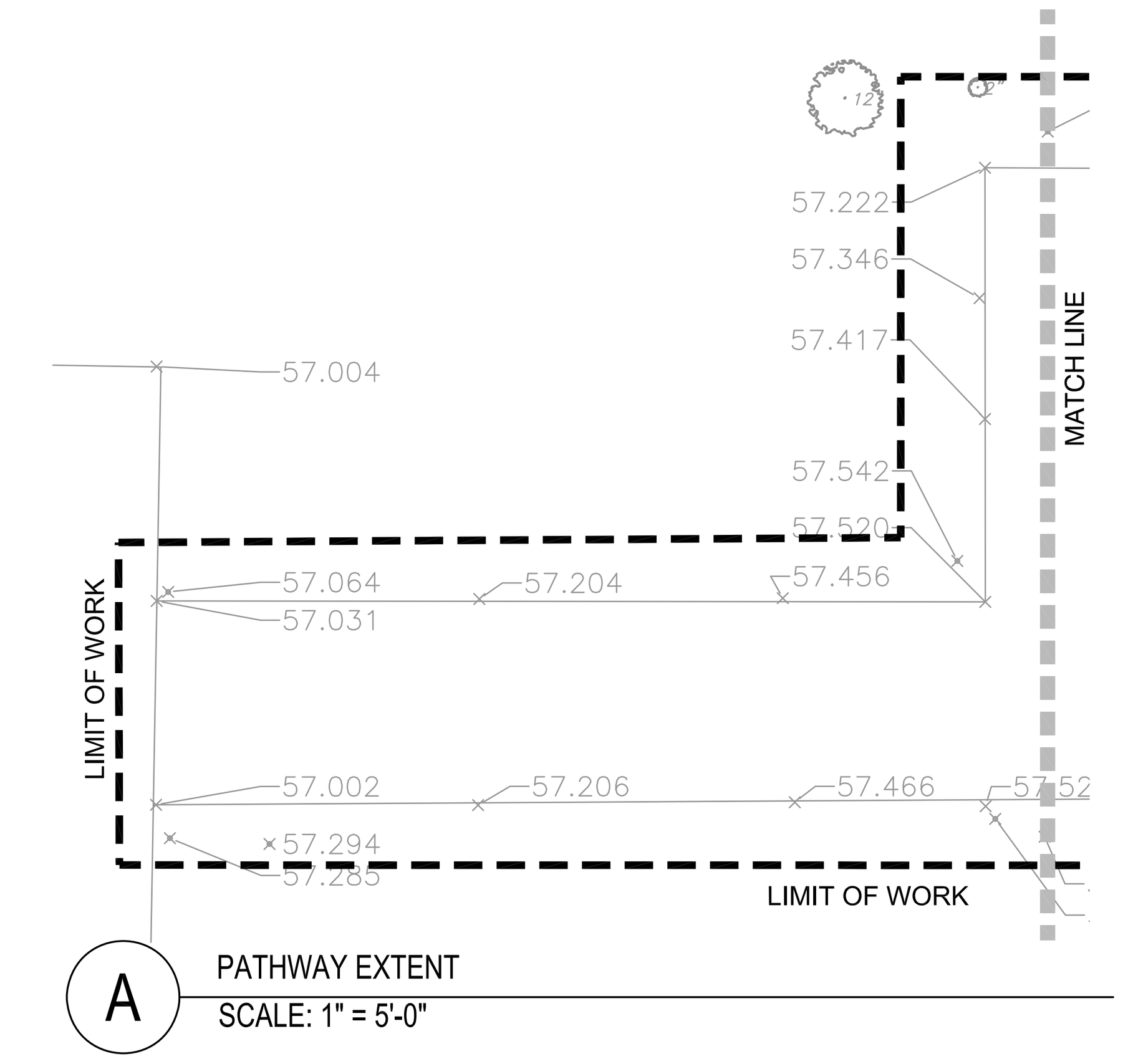
MASSACHUSETTS
CAROLYN E. ALLEN
REGISTERED LANDSCAPE ARCHITECT
NO. 1220

LEGEND

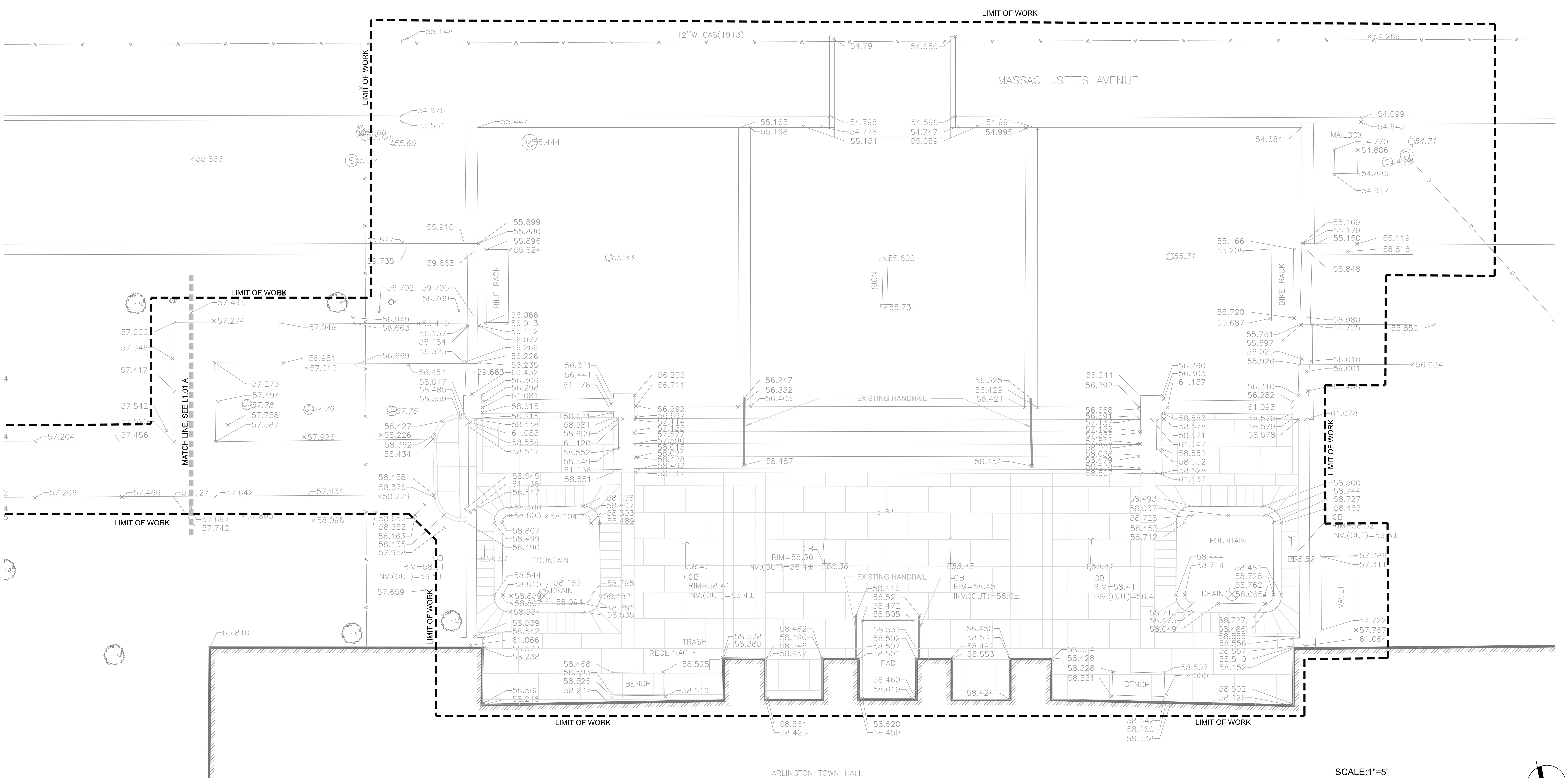
- LIMIT OF WORK
- EXISTING SHRUB
- EXISTING TREE
- LIGHT POLE
- AREA DRAIN
- ELECTRICAL MANHOLE
- UTILITY MANHOLE
- DRAINAGE MANHOLE
- WATER VALVE
- WATER SERVICE VALVE
- WATER LINE
- DRAIN LINE
- 55.148 SPOT GRADE
- CB CATCH BASIN

GENERAL NOTES

1. SITE SURVEY WAS PERFORMED BY WESTON & SAMPSON ON OCTOBER 26, 2018. THE GRANITE BLOCK PATTERNING ON THE UPPER PLAZA WAS DRAFTED IN USING RECORD DRAWINGS PROVIDED BY THE TOWN; THE CONTRACTOR SHALL FIELD MEASURE AND KEEP A LOG OF EXISTING BLOCK SIZES DURING REMOVAL AND STOCKPILING OPERATIONS.
2. THE SURVEY IS BASED ON THE MASSACHUSETTS NAD83 STATE PLANE COORDINATE SYSTEM (HORIZONTAL, AND NAVD88 (VERTICAL). REFER TO SURVEY LEGEND FOR GENERAL SYMBOLS.
3. ALL BIDDERS ARE REQUIRED TO INSPECT THE PROJECT SITE IN ITS ENTIRETY PRIOR TO SUBMITTING THEIR BID AND BECOME FAMILIAR WITH ALL CONDITIONS AS THEY MAY AFFECT THEIR BID. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL DRAWINGS AND SPECIFICATIONS PRIOR TO COMMENCING CONSTRUCTION.
4. LOCATIONS OF ANY UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF SUCH UTILITIES, PROTECTING ALL EXISTING UTILITIES AND REPAIRING ANY DAMAGE DONE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE COORDINATION WITH UTILITY COMPANIES AND PUBLIC AGENCIES AND FOR OBTAINING ALL REQUIRED PERMITS AND PAYING ALL REQUIRED FEES. IN ACCORDANCE WITH M.G.L. CHAPTER 82, SECTION 40, INCLUDING AMENDMENTS, CONTRACTORS SHALL NOTIFY ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES IN WRITING PRIOR TO EXCAVATION. CONTRACTOR SHALL ALSO CALL "DIG SAFE" AT (888) 344-7233 NO LESS THAN 72 HOURS (EXCLUSIVE OF WEEKENDS AND HOLIDAYS) PRIOR TO SUCH EXCAVATION. DOCUMENTATION OF REQUESTS SHALL BE PROVIDED TO OWNER'S REPRESENTATIVE PRIOR TO ANY EXCAVATION WORK.
5. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED BY THE CONTRACTOR WITHOUT DELAY AND THE INFORMATION SHALL BE FURNISHED TO THE OWNER'S REPRESENTATIVE FOR RESOLUTION OF THE CONFLICT.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL DRAWINGS AND SPECIFICATIONS TO DETERMINE THE EXTENT OF EXCAVATION AND DEMOLITION REQUIRED TO RECEIVE SITE IMPROVEMENTS.
7. ANY DISCREPANCIES OR CONFLICTS BETWEEN THE DRAWINGS AND EXISTING CONDITIONS, EXISTING CONDITIONS TO REMAIN, TEMPORARY CONSTRUCTION AND PERMANENT CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING. ITEMS ENCOUNTERED IN AREAS OF EXCAVATION THAT ARE NOT INDICATED ON THE DRAWINGS, BUT ARE VISIBLE ON SURFACE, SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE REMOVED AT NO ADDITIONAL COST TO THE OWNER.
8. ANY ALTERATIONS TO THESE DRAWINGS MADE IN THE FIELD DURING CONSTRUCTION SHALL BE RECORDED BY THE CONTRACTOR ON "AS BUILT" DRAWINGS.
9. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS OUTSIDE OF THE PROJECT LIMITS SHALL BE RESTORED TO THE ORIGINAL CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST AND TO THE SATISFACTION OF THE OWNER.
10. ALL WORK SHOWN ON THE PLANS AS BOLD SHALL REPRESENT PROPOSED WORK.
11. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT HIS EMPLOYEES, AS WELL AS PUBLIC USERS, FROM INJURY DURING THE ENTIRE CONSTRUCTION PERIOD USING ALL NECESSARY SAFEGUARDS, INCLUDING BUT NOT LIMITED TO, THE ERECTION OF TEMPORARY WALKS, STRUCTURES, PROTECTIVE BARRIERS, COVERING, AND FENCES AS NEEDED.
12. THE CONTRACTOR SHALL SUPPLY THE OWNER WITH THE NAME OF THE OSHA "COMPETENT PERSON" PRIOR TO CONSTRUCTION.
13. FILLING OF EXCAVATED AREAS SHALL NOT TAKE PLACE WITHOUT THE PRESENCE OR PERMISSION OF THE OWNER.
14. THE CONTRACTOR'S STAGING AREA MUST BE IN A LOCATION APPROVED BY THE OWNER. ANY OTHER AREA(S) THAT THE CONTRACTOR MAY WISH TO USE FOR STAGING MUST BE COORDINATED WITH THE OWNER.
15. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OWNER.
16. THE LIMIT OF WORK SHALL BE DELINEATED IN THE FIELD PRIOR TO THE START OF CONSTRUCTION AND AGREED UPON WITH THE OWNER'S REPRESENTATIVE.
17. HAULING OF MATERIALS TO AND FROM THE SITE SHALL BE RESTRICTED TO THE HOURS OF 7 AM TO 5 PM, MONDAY THROUGH FRIDAY.
18. WORK ON WEEKENDS SHALL ONLY BE CONDUCTED IF PRIOR WRITTEN PERMISSION IS PROVIDED BY THE TOWN.
19. NO TRUCKS SHALL BE LEFT IDLING ON TOWN STREETS DURING CONSTRUCTION. CONSTRUCTION TRAFFIC SHALL NOT IMPEDE FLOW OF REGULAR TRAFFIC AT ANY TIME.



A PATHWAY EXTENT
SCALE: 1" = 5'-0"



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0 5' 10 15'

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Project:

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TOWN OF ARLINGTON MASSACHUSETTS

730 MASSACHUSETTS AVE, ARLINGTON, MA 02476

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Consultants:

Revisions:

No.	Date	Description

Seal: MASSACHUSETTS CARILYN F. RAINS REGISTERED LANDSCAPE ARCHITECT NO. 1220

Issued For:

BID DOCUMENTS

Scale:	
Date:	07/29/2020
Drawn By:	FD/LC
Reviewed By:	CB
Approved By:	CFR
W&S Project No:	2180559
W&S File No:	

Drawing Title:

EXISTING CONDITIONS PLAN

Sheet Number:

L1.01

LEGEND

- LIMIT OF WORK
- EROSION AND SEDIMENT CONTROL - STRAW WATTLES
- 6' HT. CONSTRUCTION FENCE
- SAWCUT LINE
- R&S HANDRAIL FOR MODIFICATION
- R&D HANDRAIL, SEE PLAN NOTES
- CONSTRUCTION ENTRANCE
- R&D SITE AMENITIES
- PROTECT EXISTING SITE FEATURES TO REMAIN
- PROTECT EXISTING SMALL TREE/LARGE SHRUB TO REMAIN, SEE SITE PREPARATION AND DEMOLITION NOTES #7 AND 8 ON THIS SHEET
- R&S EX. GRANITE PAVERS FOR REUSE, SEE SPECIAL NOTE #1 ON THIS SHEET
- R&S EX. GRANITE STAIR TREADS FOR REUSE, SEE SPECIAL NOTE ON THIS SHEET
- R&D EX. GRANITE PAVERS THAT CRACKED, FORMERLY FORMING THE EDGE AROUND AN AREA DRAIN OR DAMAGED IN ANY WAY
- R&D BRICK PAVING
- SALVAGE BRICK PAVING
- R&D BITUMINOUS CONCRETE PAVEMENT
- R&D CONCRETE SLAB

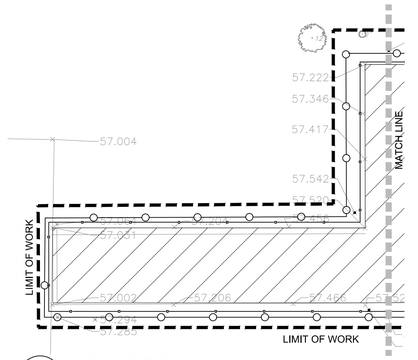
TYP.	TYPICAL
EX.	EXISTING
R&D	REMOVE AND DISPOSE
R&S	REMOVE AND STORE
R&R	REMOVE AND RELOCATE
SPEC.	SPECIFICATIONS

SPECIAL NOTES:

1. PAVERS AND STAIR TREADS THAT COMPRISE THE UPPER LEVEL OF THE PLAZA AND STAIRS SHALL BE NUMBERED ACCORDING TO THE SYSTEM NOTED ON DETAIL 1, L5.02 AND STACKED IN SUCH A WAY THAT THEY CAN BE EASILY REASSEMBLED IN THEIR ORIGINAL LOCATIONS, AS SHOWN ON THE PLANS. USING A WAX CRAYON, NUMBER EACH INDIVIDUAL GRANITE BLOCK WITH THE NUMBER SHOWN ON THE PLANS. REPEATED NUMBERS DENOTE BLOCKS OF THE SAME SHAPE AND SIZE, AND CAN BE STOCKPILED TOGETHER IN AN ORGANIZED FASHION. THE CONTRACTOR SHALL TAKE EXTREME CARE IN THE DEMOLITION, SITE PREPARATION, AND PROTECTION OF ALL GRANITE BLOCKS TO BE SALVAGED, STACKED AND REINSTALLED WITHIN THE LIMIT OF WORK. THE CONTRACTOR SHALL PROVIDE A PAVER INSTALLATION PLAN PRIOR TO COMMENCING WORK.
2. THE CONTRACTOR SHALL TAKE NOTE THAT, GIVEN THE SENSITIVE NATURE OF TOWN HALL AND SURROUNDING AREAS, EXTREME CARE MUST BE TAKEN IN THE DEMOLITION, SITE PREPARATION, AND PROTECTION OF ALL PROPERTY AND SITE ELEMENTS TO REMAIN. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT BUILDING FACADES, ORNAMENTAL WALLS, BALUSTRADES, AND FOUNTAINS WITHIN THE LIMIT OF WORK.
3. THE CONTRACTOR SHALL PROTECT THE FOUNTAINS AND ASSOCIATED SCULPTURE ELEMENTS, AND BALUSTRADES TO REMAIN. THE CONTRACTOR SHALL WRAP AND COVER EXISTING SCULPTURE WITH HEAVY-DUTY TARPAULIN COVER. THE TARP SHALL BE DURABLE, WITHSTAND WEATHERING AND PROTECT ALL OF THE SCULPTURAL ELEMENTS FOR THE DURATION OF CONSTRUCTION PERIOD. SUBMIT PROTECTION STRATEGY PLAN TO OWNER AND OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL.
4. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ENSURE THAT A STAGING AND STOCKPILING AREA IS AS SMALL AS POSSIBLE. THE CONTRACTOR SHALL REMOVE DEBRIS AT THE END OF EACH WORK DAY.
5. EXISTING FILL, ORGANIC SOILS, AND OTHER UNSUITABLE SOILS (AS DETERMINED BY THE OWNER'S REPRESENTATIVE) SHALL BE OVEREXCAVATED AND REMOVED TO A MINIMUM DEPTH OF THREE (3 FEET) BELOW SUBGRADE ELEVATION BELOW THE UPPER PLAZA, STAIRS, AND STAIR FOUNDATIONS. THE RESULTING EXCAVATION SHALL BE BACKFILLED WITH COMPACTED STRUCTURAL FILL IN ACCORDANCE WITH SPECIFICATION SECTION 31 00 00. TEMPORARY SHORING SHALL BE PROVIDED WHERE EXCAVATIONS EXTEND WITHIN THE ZONE-OF-INFLUENCE OF EXISTING SITE FEATURES TO REMAIN, INCLUDING FOUNDATIONS, UTILITIES, SLABS, SIDEWALKS, CURBING, AND FOUNTAINS.

DEMOLITION AND SITE PREPARATION NOTES

1. THE CONTRACTOR SHALL INCLUDE IN THE BID THE COST OF REMOVING ANY EXISTING SITE FEATURES AND APPURTENANCES NECESSARY TO ACCOMPLISH THE CONSTRUCTION OF THE PROPOSED SITE IMPROVEMENTS. THE CONTRACTOR SHALL ALSO INCLUDE IN THE BID THE COST NECESSARY TO RESTORE SUCH ITEMS IF THEY ARE SCHEDULED TO REMAIN AS PART OF THE FINAL SITE IMPROVEMENTS. REFER TO PLANS TO DETERMINE EXCAVATION, DEMOLITION AND TO DETERMINE THE LOCATION OF THE PROPOSED SITE IMPROVEMENTS.
2. THE OWNER RESERVES THE RIGHT TO REVIEW ALL MATERIALS DESIGNATED FOR REMOVAL AND TO RETAIN OWNERSHIP OF SUCH MATERIALS. IF THE OWNER RETAINS ANY MATERIAL, THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE OWNER TO HAVE THOSE MATERIALS REMOVED OFF SITE AT NO ADDITIONAL COST.
3. UNLESS SPECIFICALLY NOTED TO BE REMOVED / STOCKPILED (R&S) OR REMOVE/ RESET (R&R), ALL SITE FEATURES CALLED FOR REMOVAL SHALL BE REMOVED WITH THEIR FOOTINGS, ATTACHMENTS, BASE MATERIAL, ETC, AND TRANSPORTED FROM THE SITE TO BE DISPOSED OF IN A LAWFUL MANNER AT AN ACCEPTABLE DISPOSAL SITE AT NO ADDITIONAL COST TO THE OWNER.
4. ALL EXISTING SITE FEATURES TO REMAIN SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PERIOD. ANY FEATURES DAMAGED DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST.
5. DURING EARTHWORK OPERATIONS, THE CONTRACTOR SHALL TAKE CARE TO NOT DISTURB EXISTING MATERIALS TO REMAIN, OUTSIDE THE LIMITS OF EXCAVATION AND BACKFILL, AND SHALL TAKE WHATEVER MEASURES NECESSARY, AT THE CONTRACTOR'S EXPENSE, TO PREVENT ANY EXCAVATED MATERIAL FROM COLLAPSING. ALL BACKFILL MATERIALS SHALL BE PLACED AND COMPACTED AS SPECIFIED TO THE SUBGRADE REQUIRED FOR THE INSTALLATION OF THE REMAINDER OF THE CONTRACT WORK.
6. THE STORAGE OF MATERIALS AND EQUIPMENT WILL BE PERMITTED AT LOCATIONS DESIGNATED BY OWNER OR OWNER'S REPRESENTATIVE. PROTECTION OF STORED MATERIALS AND EQUIPMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
7. THE CONTRACTOR SHALL PROTECT EXISTING SMALL TREES/LARGE SHRUBS WITHIN THE LIMIT OF WORK. CONTRACTOR SHALL INSTALL A PROTECTION BARRIER (ORANGE SNOW FENCE) AND TAKE DUE CARE TO PREVENT INJURY TO SMALL TREES/LARGE SHRUBS DURING CLEARING OPERATIONS.
8. EXISTING VEGETATION TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES. NO STOCKPILING OF MATERIAL, EQUIPMENT OR VEHICULAR TRAFFIC SHALL BE ALLOWED WITHIN THE DRIP LINE OF TREES AND ROOT ZONES OF SHRUBS TO REMAIN. NO GUYS SHALL BE ATTACHED TO ANY TREE TO REMAIN. WHEN NECESSARY OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE, THE CONTRACTOR SHALL ERECT TEMPORARY BARRIERS FOR THE PROTECTION OF EXISTING TREES DURING CONSTRUCTION.
9. TREES AND SHRUBS WITHIN THE LIMITS OF WORK SHALL BE REMOVED ONLY UPON THE APPROVAL OF THE OWNER'S REPRESENTATIVE OR AS NOTED ON THE PLANS.
10. ALL UNSUITABLE UNCONTAMINATED EXCESS SOIL FROM CONSTRUCTION ACTIVITIES SHALL BE DISPOSED OF BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE TOWN. REMOVAL ACTIVITIES SHALL BE ACCORDANCE WITH STATE AND LOCAL REGULATIONS AT NO ADDITIONAL COST TO THE TOWN.



A PATHWAY EXTENT
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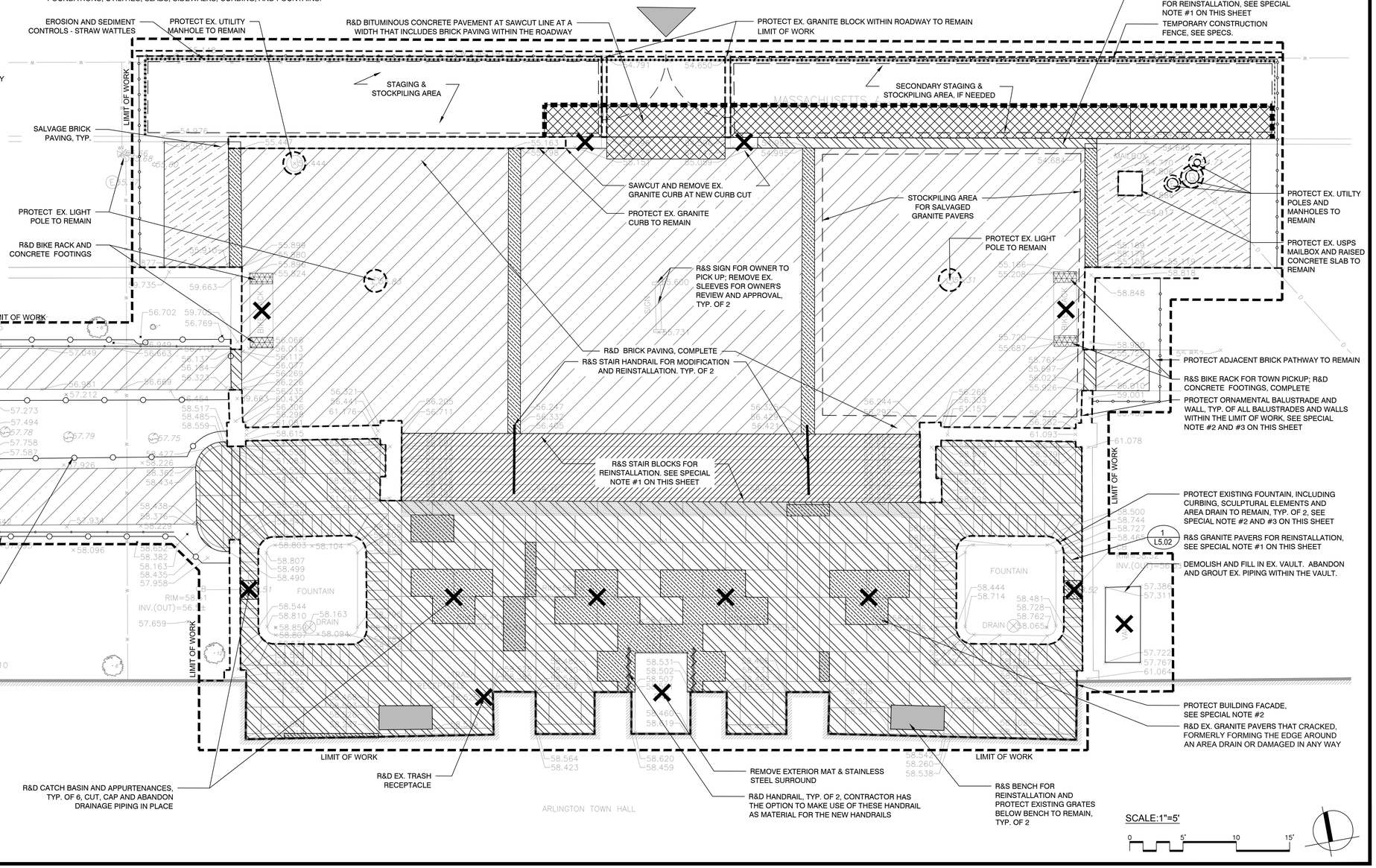

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Scale:	
Date:	07/29/2020
Drawn By:	FD/LC
Reviewed By:	CB
Approved By:	CFR
W&S Project No:	2180559
W&S File No:	

Drawing Title:

SITE PREPARATION AND DEMOLITION PLAN

Sheet Number:

L2.01

LEGEND

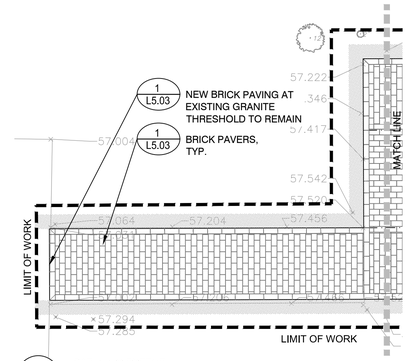
- LIMIT OF WORK
- SCORE JOINT (SJ)
- EXPANSION JOINT (EJ)
- CENTER LINE
- CAST-IN-PLACE CONCRETE PAVEMENT (SJ / EJ)
- BITUMINOUS CONCRETE PAVEMENT
- LOAM DISTURBED AREA
- BRICK PAVING, INLAY PATTERN VARIES
- SALVAGED BRICK PAVING
- 83 — SALVAGED GRANITE PAVER, SUGGESTED IDENTIFICATION NUMBER PER "ARLINGTON TOWN HALL IMPROVEMENT PLANS" DATED JULY 28, 1980 BY CAROL R. JOHNSON ASSOCIATES
- NEW GRANITE PAVER TO MATCH EXISTING (STONY CREEK GRANITE - FLAMED FINISH), SEE SPECS.
- EX. GRANITE PAVER CUT FOR THE SLOT DRAIN SYSTEM INSTALLATION
- BIKE RACK
- BUILDING FACADE
- DETECTABLE WARNING MAT
- SLOT DRAIN ACCESS UNIT
- SPECS. SPECIFICATIONS
- TYP. TYPICAL
- EX. EXISTING

SPECIAL NOTES:

1. ANY EXISTING GRANITE PAVERS THAT ARE CRACKED, FORMERLY FORMING THE EDGE AROUND AN AREA DRAIN OR DAMAGED IN ANY WAY TO BE REMOVED, AS NOTED ON THE PLANS, AND SHALL BE REPLACED IN KIND (STONY CREEK GRANITE - FLAMED FINISH). ANY GRANITE PAVERS THAT ARE CRACKED BY THE CONTRACTOR SHALL BE CONTRACTOR'S RESPONSIBILITY TO REPLACE AT NO COST TO THE OWNER.

LAYOUT AND MATERIALS NOTES

1. COORDINATE ALL LAYOUT ACTIVITIES WITH THE SCOPE OF WORK CALLED FOR BY DEMOLITION, GRADING AND UTILITIES OPERATIONS ENCOMPASSED BY THIS CONTRACT. SET, PROTECT AND REPLACE REFERENCE STAKES AS NECESSARY OR AS REQUIRED BY THE OWNER'S REPRESENTATIVE.
2. ALL WORK SHALL BE PERFORMED BY CONTRACTOR UNLESS SPECIFICALLY INDICATED THAT THE WORK WILL BE PERFORMED "BY OTHERS" OR "UNDER SEPARATE CONTRACT".
3. TO FACILITATE LAYOUT OF PROPOSED SITE FEATURES AND FACILITIES, LAYOUT INFORMATION FOR CERTAIN FUTURE WORK, WHICH IS NOT INCLUDED WITHIN THE SCOPE OF THIS CONTRACT HAS BEEN PROVIDED ON THE LAYOUT AND MATERIALS PLAN FOR INFORMATION ONLY. SOME ITEMS ARE "NOT IN CONTRACT" (NIC) AND SHOWN FOR REFERENCE ONLY.
4. THE LAYOUT OF SITE AMENITIES AND FENCES MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
5. THE LAYOUT OF ALL NEW PATHWAYS / WALKWAYS AND THE GRADING OF ALL SLOPES AND CROSS SLOPES SHALL CONFORM TO THE COMMONWEALTH OF MASSACHUSETTS RULES AND REGULATIONS FOR HANDICAP ACCESS CMR 521, AND THE AMERICANS WITH DISABILITIES ACT (ADA), TITLE 3. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND THOSE REQUIRED.
6. ALL LAYOUT LINES, OFFSETS, OR REFERENCES TO LOCATING OBJECTS ARE EITHER PARALLEL OR PERPENDICULAR UNLESS OTHERWISE DESIGNATED WITH ANGLE OFFSETS NOTED.
7. ALL PROPOSED SITE FEATURES SHALL BE LAID OUT AND STAKED FOR REVIEW AND APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF INSTALLATION. ANY REQUIRED ADJUSTMENTS TO THE LAYOUT SHALL BE UNDERTAKEN AS DIRECTED, AT NO ADDITIONAL COST TO THE OWNER. ALL LAYOUT SHALL BE PERFORMED BY A MA. REGISTERED PROFESSIONAL LAND SURVEYOR.
8. ALL PROPOSED PAVEMENTS SHALL MEET THE LINE AND GRADE OF EXISTING ADJACENT PAVEMENT SURFACES. ALL BITUMINOUS CONCRETE SHALL BE TREATED WITH AN RS-1 TACK COAT AT POINT OF CONNECTION. ALL PATHWAY WIDTHS SHALL BE AS NOTED ON THE LAYOUT AND MATERIALS PLAN.
9. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES ON THE GROUND AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE OWNER.
10. REFER TO DETAIL DRAWINGS FOR CONSTRUCTION DETAILS.
11. SURVEY CONTROL POINTS AND COORDINATES ARE INDICATED ON THE PLANS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT OR CREATE HIS OWN PROTECTED CONTROL POINTS FROM THIS INFORMATION. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL LAYOUT POINTS ARE CONSISTENT WITH CONTROL INFORMATION. RESETTING OF DAMAGED OR MISSING LAYOUT MARKERS AS NECESSARY IS AT NO ADDITIONAL COST TO THE OWNER.
12. NO FILLING SHALL OCCUR AROUND EXISTING TREES TO REMAIN WITHOUT THE APPROVAL OF THE OWNER OR OWNER'S REPRESENTATIVE.THE CONTRACTOR IS RESPONSIBLE FOR STAKING CONSTRUCTION BASELINES IN FIELD WITH A MASSACHUSETTS REGISTERED PROFESSIONAL LAND SURVEYOR. NO CONSTRUCTION WILL BE PERFORMED WITHOUT THE PROPOSED BASELINES AND LAYOUTS APPROVED BY THE OWNER'S REPRESENTATIVE.
13. NO FILL SHALL CONTAIN HAZARDOUS MATERIALS.
14. CONTRACTOR SHALL PROVIDE TEMPORARY CONSTRUCTION FENCING IN THE LOCATIONS SHOWN ON THE PLANS.
15. ANY QUANTITIES SHOWN ON PLANS ARE FOR COMPARATIVE BIDDING PURPOSES ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE PROJECT SITE TO VERIFY ALL QUANTITIES AND CONDITIONS PRIOR TO SUBMITTING BID.



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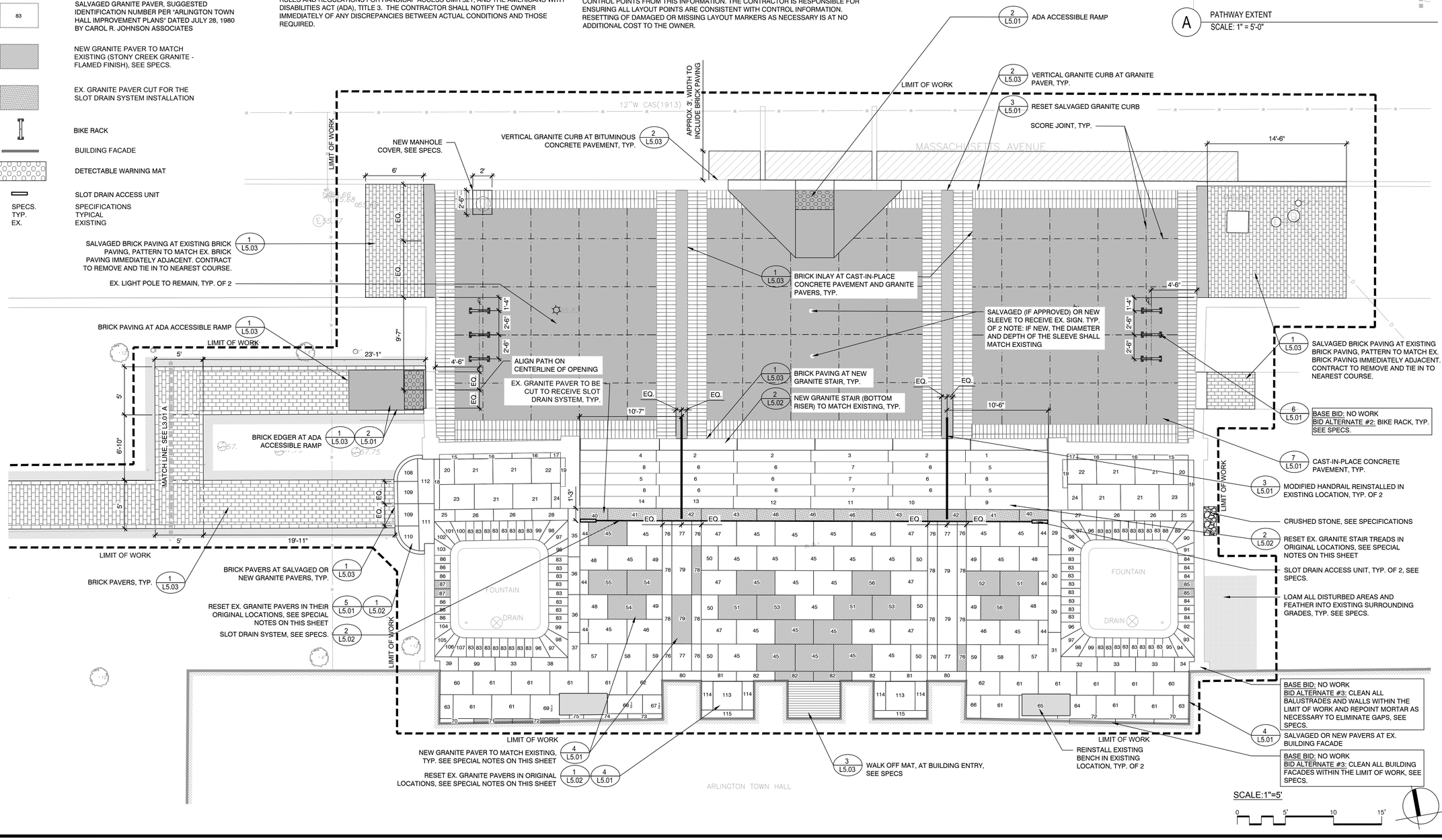

SCALE:1"=5'

0 5' 10' 15'

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LAYOUT AND MATERIALS PLAN

Sheet Number:

L3.01

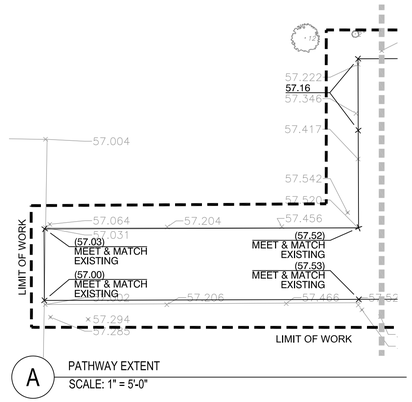
P:\MA\Arlington_MA\Town Hall Plaza\CAD\D_Current Working_Town Hall Plaza\SDs\L3.00 — Lay Pl.dwg

LEGEND

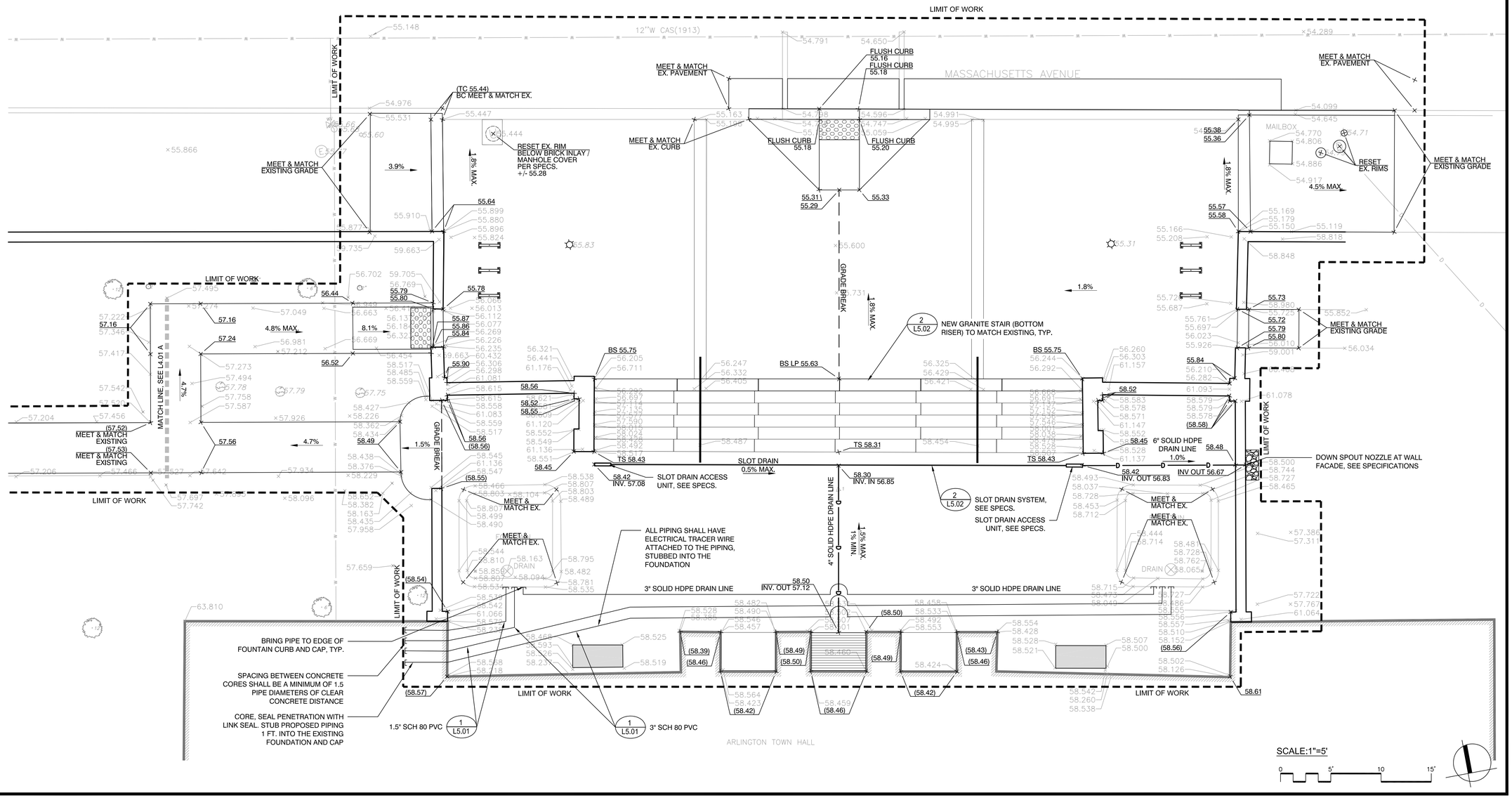
- - - - - -	LIMIT OF WORK
——D——	DRAIN LINE
56	PROPOSED CONTOURS
1.5% →	PROPOSED SLOPE
× 8.25	PROPOSED SPOT ELEVATION
EX.	EX.
TC	TOP OF CURB
BC	BOTTOM OF CURB
TS	TOP OF STAIR
BS	BOTTOM OF STAIR

GRADING AND DRAINAGE NOTES

1. ALL WORK RELATING TO INSTALLATION, RENOVATION OR MODIFICATION OF WATER, DRAINAGE AND/OR SEWER SERVICES SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS OF THE TOWN OF DANVERS DPW.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES ON THE GROUND AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE OWNER.
3. ALL GRADING IS TO BE SMOOTH AND CONTINUOUS WHERE PROPOSED SURFACES MEET EXISTING SURFACES, ELIMINATE ROUGH SPOTS AND ABRUPT GRADE CHANGES AND MEET LINE AND GRADE OF EXISTING CONDITIONS WITH NEW IMPROVEMENTS.
4. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE (1.5% MINIMUM) AWAY FROM ALL BUILDING FOUNDATIONS AND STRUCTURES.
5. CONTRACTOR SHALL ENSURE ALL AREAS ARE PROPERLY PITCHED TO DRAIN, WITH NO SURFACE WATER PONDING OR PUDDLING.
6. ALL NEW WALKWAYS / ACCESS PATHS MUST CONFORM TO CURRENT AMERICANS WITH DISABILITIES ACT (ADA) REGULATIONS: WALKWAYS SHALL MAINTAIN A CROSS PITCH OF NOT MORE THAN ONE AND A HALF PERCENT (1.5%) AND THE RUNNING SLOPE (PARALLEL TO THE DIRECTION OF TRAVEL) BETWEEN 0% MIN. AND 4.5% MAX.
7. MINIMUM CROSS SLOPE ON ALL WALKWAYS WILL BE 1:100 OR 1% TO PROVIDE POSITIVE DRAINAGE. ANY DISCREPANCIES NOT ALLOWING THIS TO OCCUR SHALL BE REPORTED TO THE OWNER PRIOR TO CONTINUING WORK.
8. ALL UTILITY GRATES, COVERS OR OTHER SURFACE ELEMENTS INTENDED TO BE EXPOSED AT GRADE SHALL BE FLUSH WITH THE ADJACENT FINISHED GRADE AND ADJUSTED TO PROVIDE A SMOOTH TRANSITION AT ALL EDGES. ALL UTILITY GRATES WITH IN PLAYING FIELDS OR INDICATED TO BE "BURIED" SHALL BE 4" BELOW FINISH GRADE AND COVERED WITH FINISH MATERIAL INDICATED ON PLANS.
9. THE CONTRACTOR SHALL SET SUBGRADE ELEVATIONS TO ALLOW FOR POSITIVE DRAINAGE AND PROVIDE EROSION CONTROL DEVICES, STRUCTURES, MATERIALS AND CONSTRUCTION METHODS TO DIRECT SILT MIGRATION AWAY FROM DRAINAGE AND OTHER UTILITY SYSTEMS, PUBLIC/PRIVATE STREETS AND WORK AREAS. CLEAN BASINS REGULARLY AS NEEDED AND AT THE END OF THE PROJECT.
10. EXCAVATION REQUIRED WITHIN PROXIMITY OF KNOWN EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO COST TO THE OWNER.
11. WHERE NEW EARTHWORK MEETS EXISTING EARTHWORK, CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY INTO EXISTING, PROVIDING VERTICAL CURVES OR ROUNDS AT ALL TOP AND BOTTOM OF SLOPES.
12. WHERE A SPECIFIC LIMIT OF WORK LINE IS NOT OBVIOUS OR IMPLIED, BLEND GRADES TO EXISTING CONDITIONS WITHIN 5 FEET OF PROPOSED CONTOURS.
13. RESTORE ALL DISTURBED AREAS AND LIMITS OF ALL REMOVALS TO LOAM UNLESS OTHERWISE NOTED.
14. SEE EARTHWORK SECTION OF SPECIFICATIONS FOR SPECIFIC EXCAVATION AND FILLING PROCEDURES.
15. FOR STRUCTURE REMODELING (REMOD), CONSTRUCTION METHODS SHALL FOLLOW MASSACHUSETTS DOT STANDARD SPEC. LATEST EDITION (SECTION 220)



A PATHWAY EXTENT
SCALE: 1" = 5'-0"



Project:

IMPROVEMENTS TO THE ARLINGTON TOWN HALL PLAZA

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Revisions:

No.	Date	Description

Seal:

CHERILYN F. RUANE
NO. 1220

Issued For:

BID DOCUMENTS

Scale:

Date:	07/29/2020
Drawn By:	FD/LC
Reviewed By:	CB
Approved By:	CFR
W&S Project No:	2180559
W&S File No:	

Drawing Title:

GRADING AND DRAINAGE PLAN

Sheet Number:

L4.01

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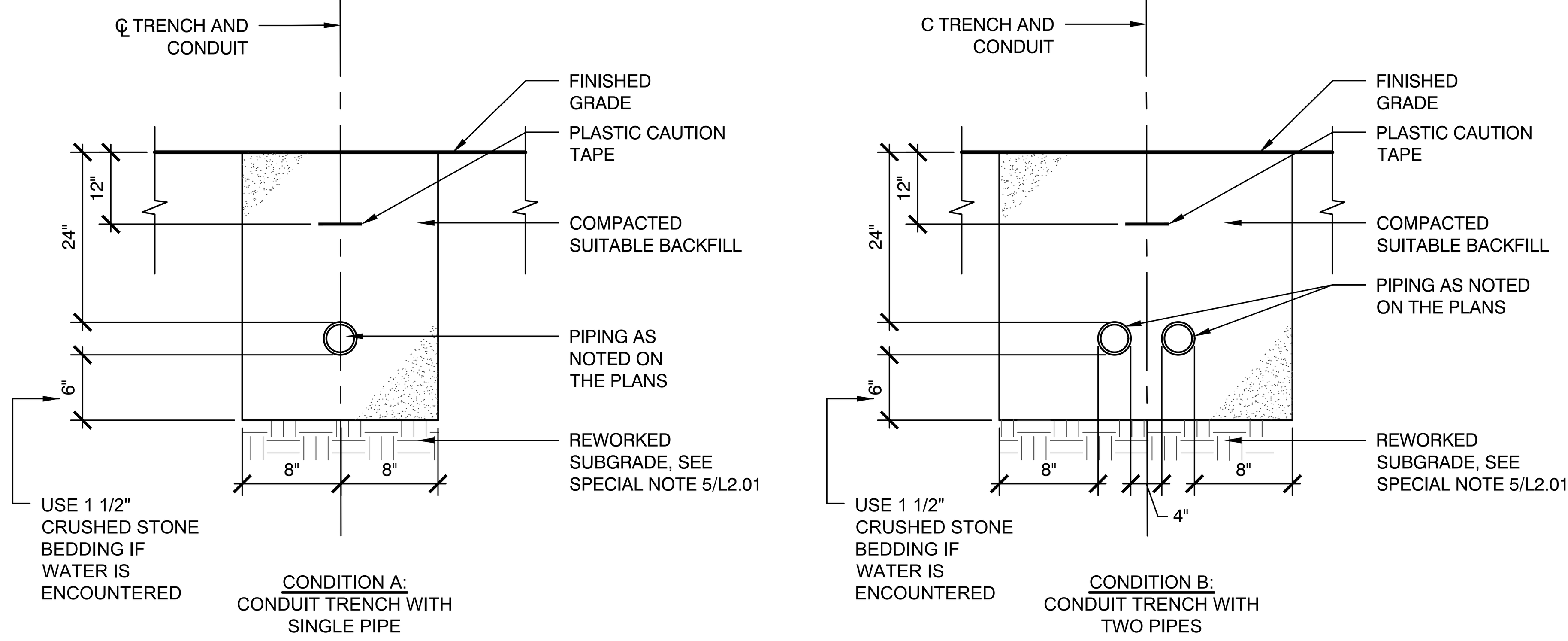
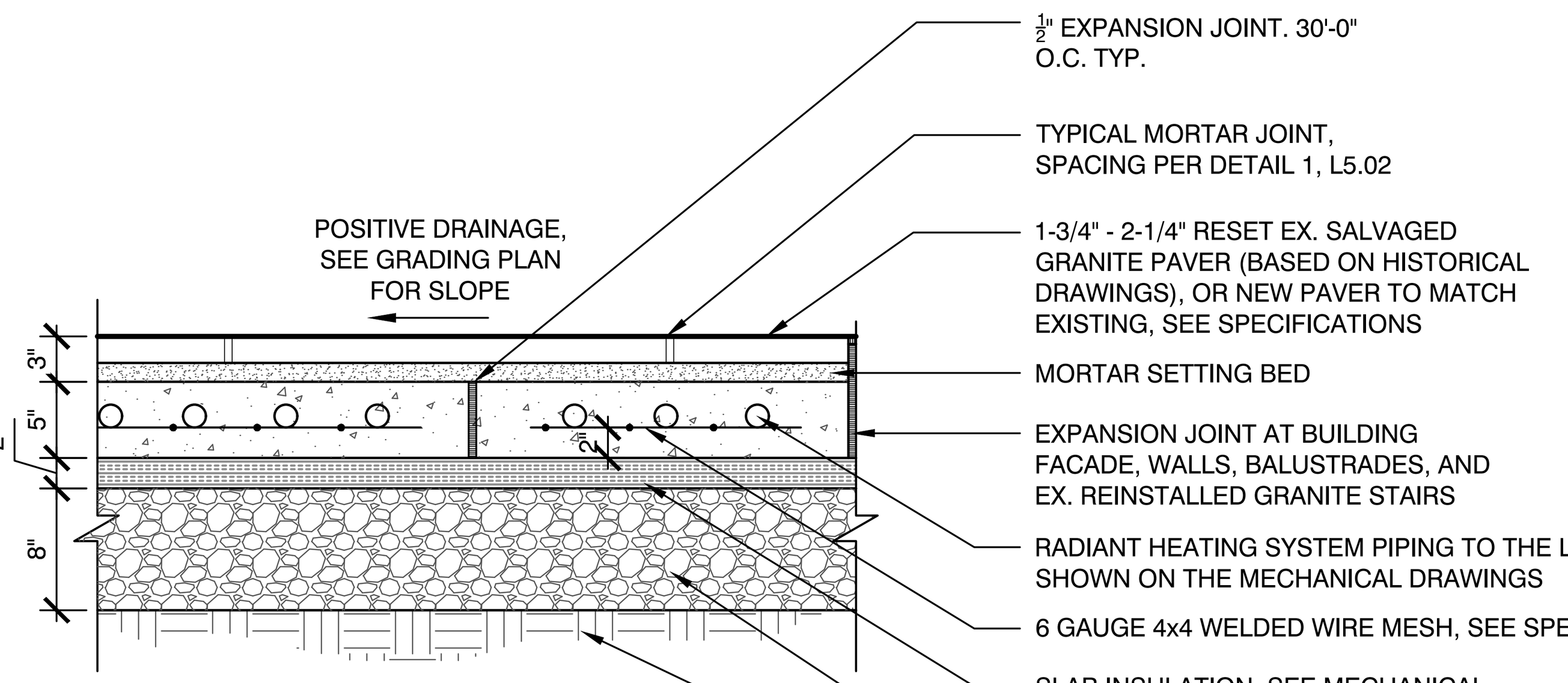
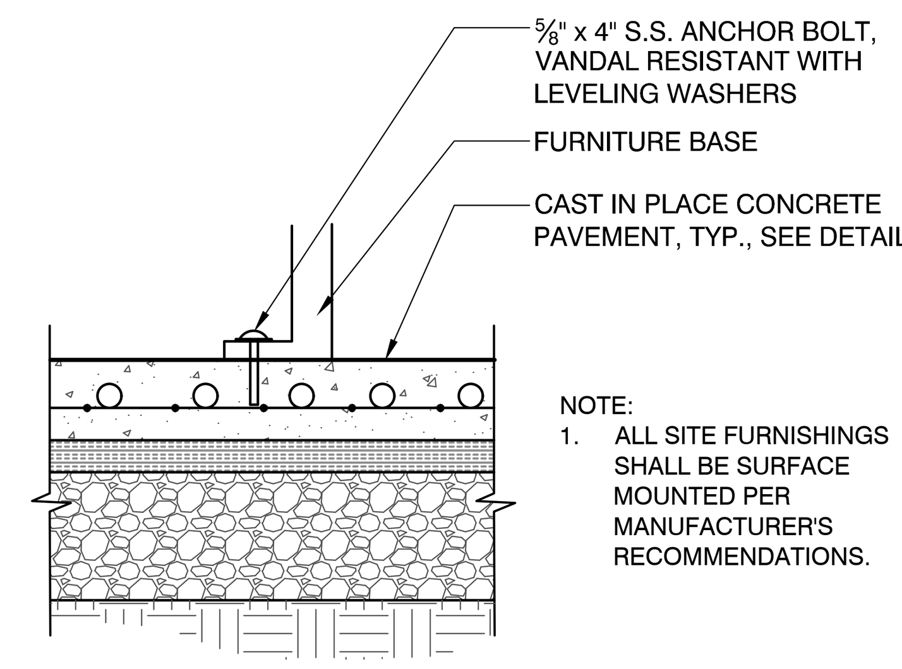


1 CONDUIT TRENCH
SCALE: NTS



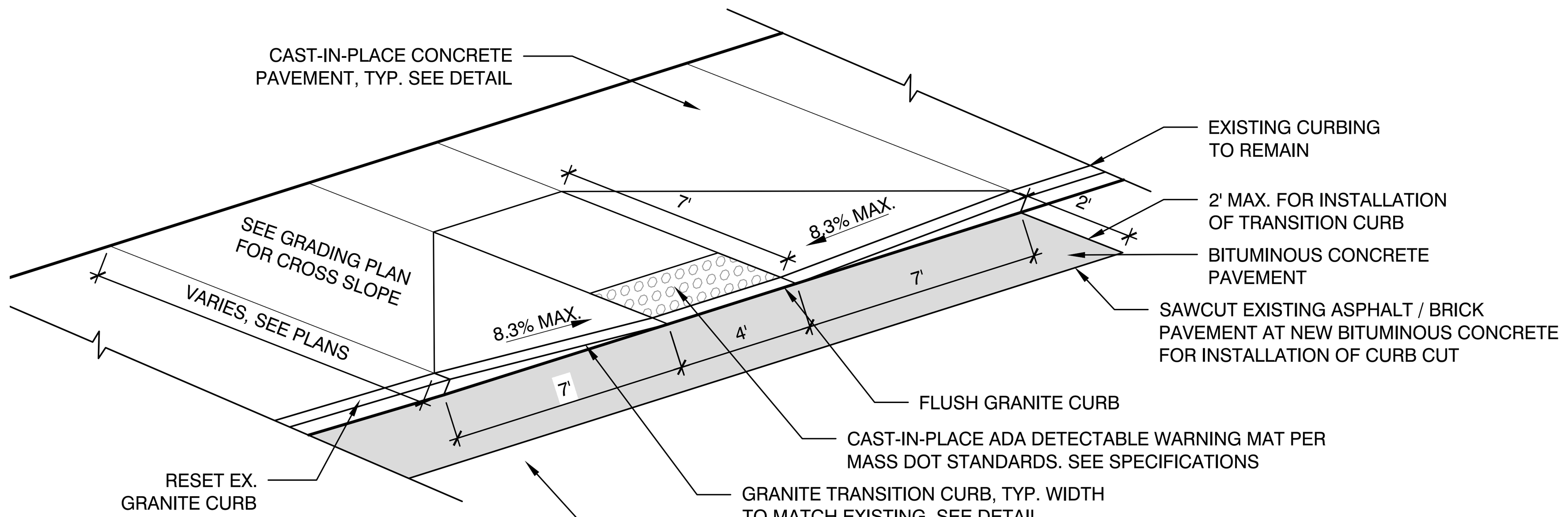
NOTES:
1. WHERE NEW CONDUIT MEETS THE CURBING SURROUNDING THE CONDUIT, THE CONTRACTOR SHALL NOT MORTAR THE GRANITE BLOCK IN PLACE. INSTEAD, SET THE PAVER ON A SAND SETTING BED AND SWEEP THE ADJACENT JOINTS WITH POLYMETRIC SAND.
2. SEE SPECIFICATIONS.

4 SALVAGED OR NEW GRANITE PAVERS
SCALE: NTS



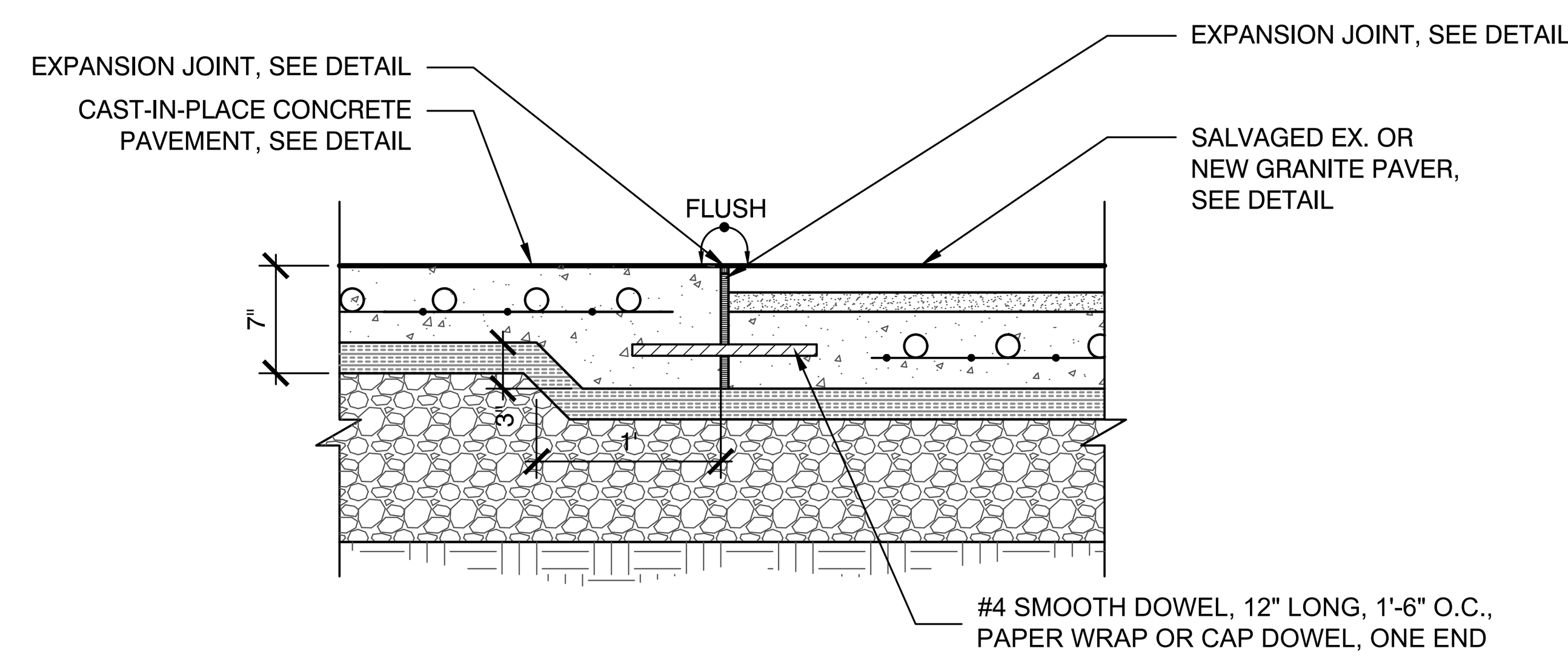
NOTE:
1. ALL SITE FURNISHINGS SHALL BE SURFACE MOUNTED PER MANUFACTURER'S RECOMMENDATIONS.

6 BIKE RACK SURFACE MOUNT
SCALE: NTS



NOTES:
1. CONTRACTOR SHALL PROVIDE CLEAN AND STRAIGHT SAWCUT LINES AT LIMIT OF REMOVAL OF EX. BITUMINOUS CONCRETE PAVEMENT TO REMAIN. CONTRACTOR SHALL VERIFY LIMITS OF EX. BITUMINOUS CONCRETE PAVEMENT REMOVAL PRIOR TO COMMENCING DEMOLITION.
2. CONTRACTOR SHALL REMOVE AND REPLACE EX. BITUMINOUS CONCRETE PAVEMENT, GRAVEL BORROW, AND SUBGRADE NECESSARY TO CONSTRUCT A CLEAN, SMOOTH TRANSITION AT ADA CURB CUT.

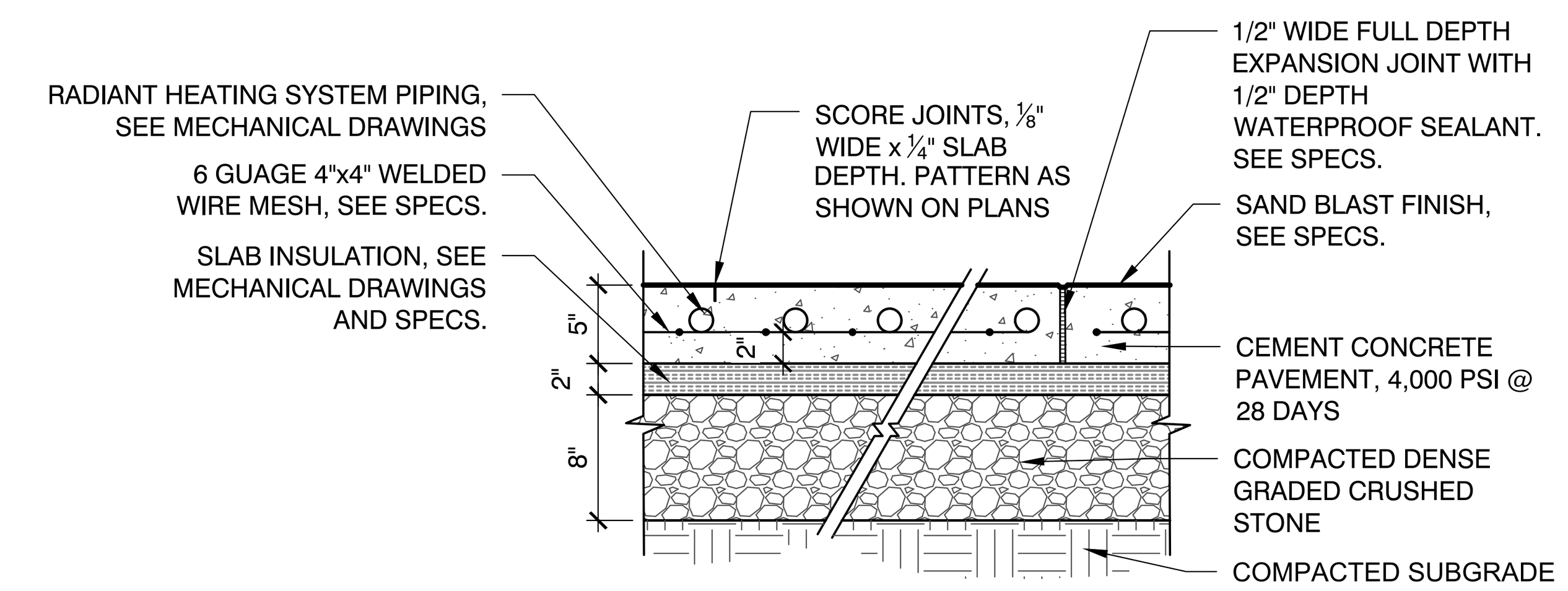
2 ADA ACCESSIBLE RAMP - TYPE A
SCALE: NTS



EXPANSION JOINT INSTALLATION NOTES:

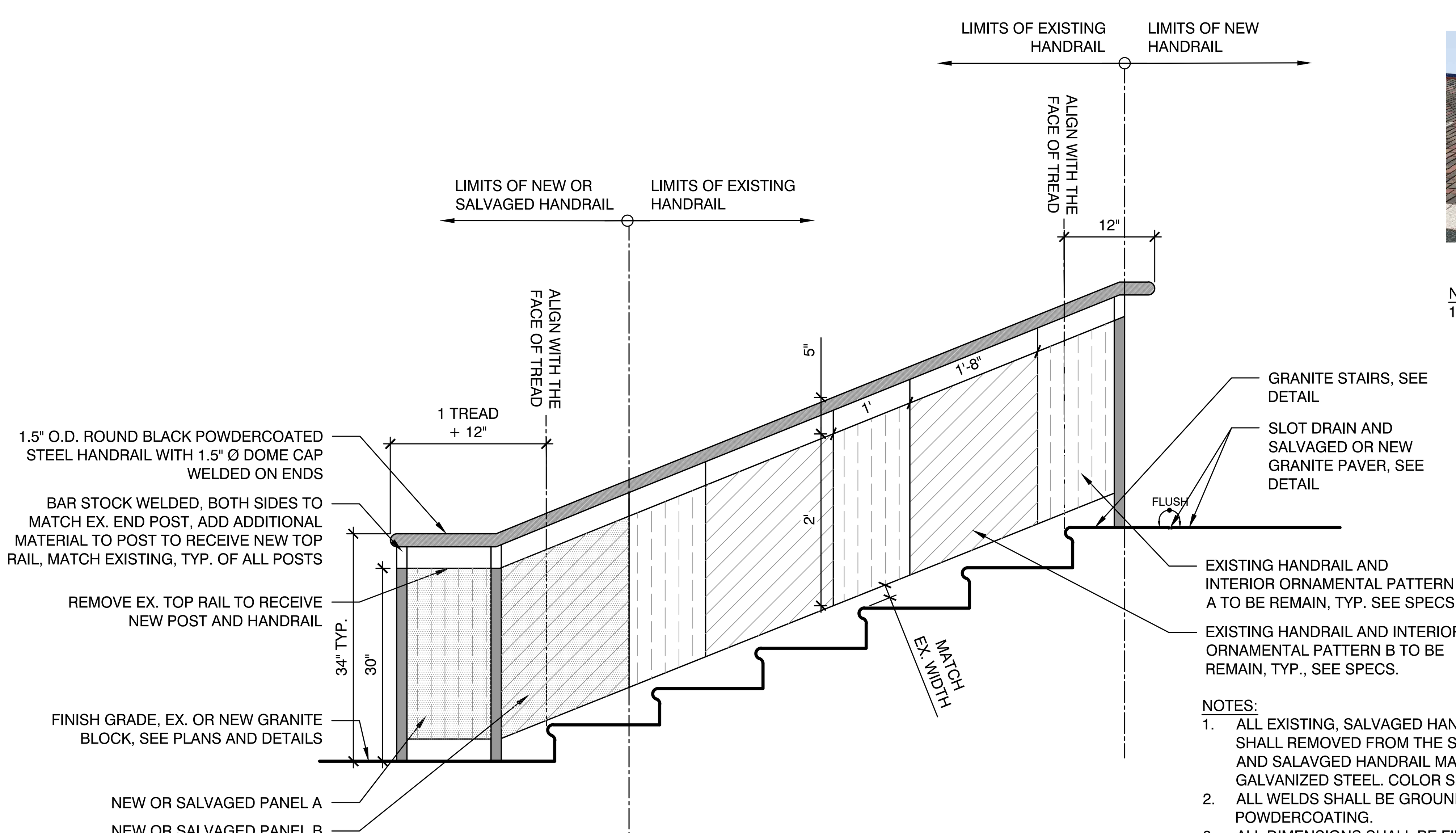
1. DELETE EXPANSION SLEEVE AND DOWEL WHERE JOINT ABUTS WALL, CURBS, OR OTHER VERTICAL SURFACES, UNLESS OTHERWISE NOTED.
2. EXPANSIONS JOINTS SHALL BE PLACED WHERE NEW CEMENT CONCRETE PAVEMENT MEETS EXISTING WALLS TO REMAIN.

5 SALVAGED OR NEW GRANITE PAVERS AT CIP CONCRETE PAVEMENT
SCALE: NTS



NOTES:
1. EXPANSION JOINTS MAX. 25'-0" O.C. UNLESS SHOWN OTHERWISE.
2. EXPANSIONS JOINTS SHALL BE PLACED WHERE NEW CEMENT CONCRETE PAVEMENT MEETS EXISTING PAVEMENT OR WALLS TO REMAIN.
3. ALL SCORE JOINTS SHALL BE SAW CUT WITHIN 24 HOURS OF PLACEMENT.

7 CAST-IN-PLACE CONCRETE PAVEMENT AND EXPANSION JOINT
SCALE: NTS



ADD NEW TOP RAIL AND ADDITIONAL PANEL PER DETAIL

EXISTING HANDRAIL

NOTE:
1. PATTERN TO REMAIN INTACT.

NOTES:
1. ALL EXISTING, SALVAGED HANDRAILS TO BE REUSED AND MODIFIED SHALL REMOVED FROM THE SITE, SANDBLASTED AND STRIPPED. NEW AND SALVGED HANDRAIL MATERIAL SHALL BE POWDERCOATED GALVANIZED STEEL. COLOR SHALL BE BLACK.
2. ALL WELDS SHALL BE GROUND DOWN CLEAN AND SMOOTH BEFORE POWDERCOATING.
3. ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION.
4. CONTRACTOR SHALL SUBMIT LARGE SCALE SHOP DRAWINGS OF HANDRAILS PRIOR TO FABRICATION.
5. INTERIOR PATTERN OF NEW PANEL SHALL MATCH EXISTING AESTHETIC, PROVIDE SHOP DRAWING FOR REVIEW AND APPROVAL

3 REINSTALLED HAND RAIL
SCALE: NTS

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Date:	07/29/2020
Drawn By:	FD/LC
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Approved By:	CFR
W&S Project No:	2180559
W&S File No:	

Drawing Title:
SITE CONSTRUCTION DETAILS

Sheet Number:
L5.01

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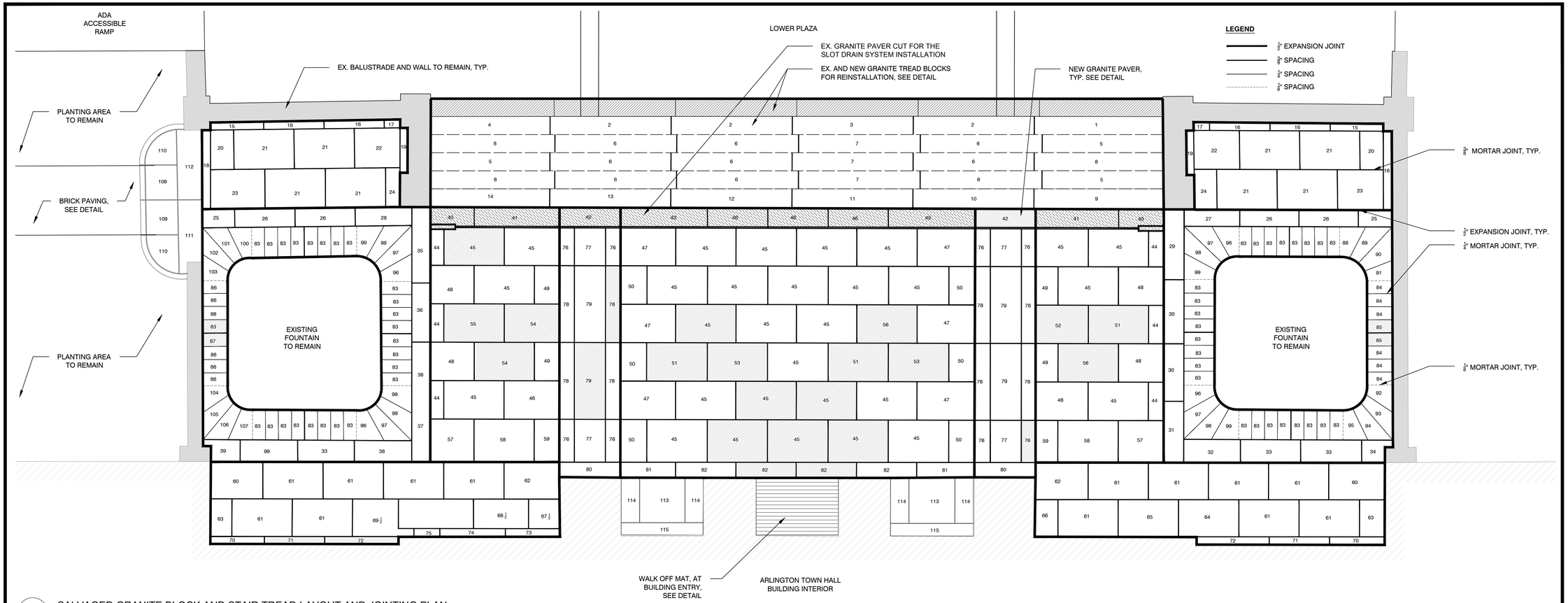
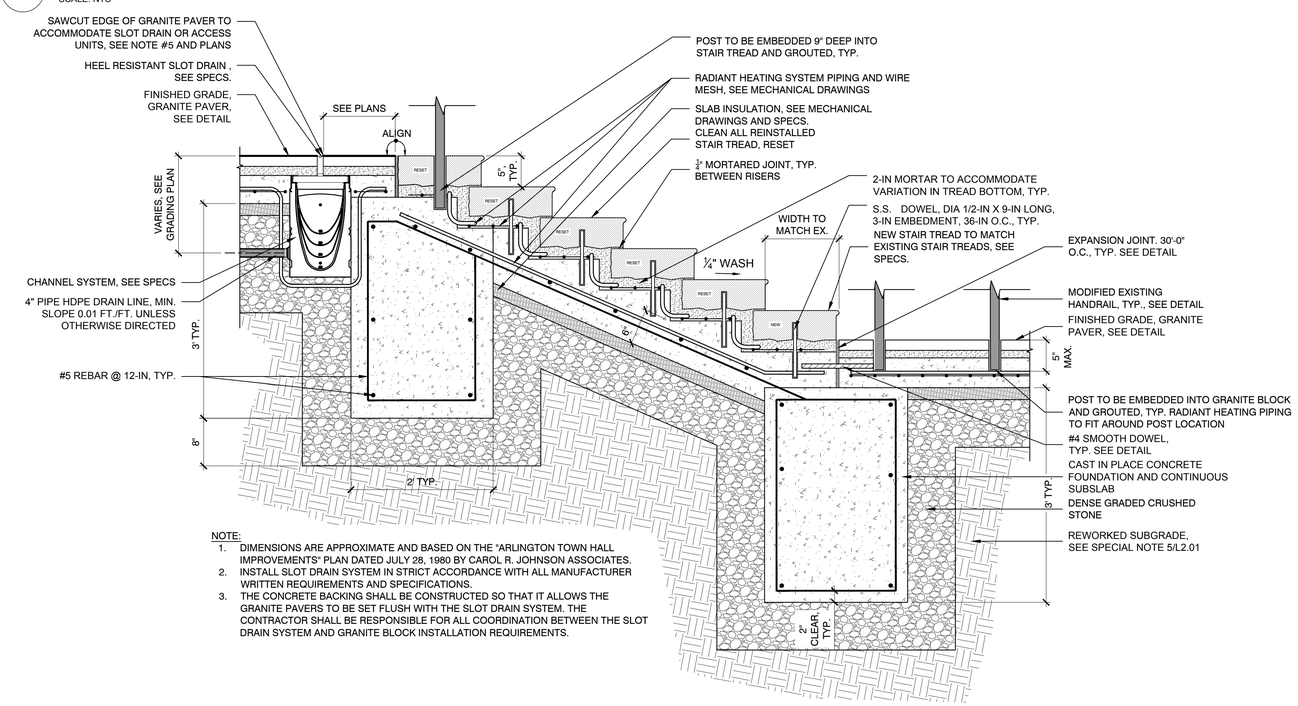


1 SALVAGED GRANITE BLOCK AND STAIR TREAD LAYOUT AND JOINTING PLAN

SCALE: NTS



NOTE:

1. DIMENSIONS ARE APPROXIMATE AND BASED ON THE "ARLINGTON TOWN HALL IMPROVEMENTS" PLAN DATED JULY 28, 1980 BY CAROL R. JOHNSON ASSOCIATES.
2. INSTALL SLOT DRAIN SYSTEM IN STRICT ACCORDANCE WITH ALL MANUFACTURER WRITTEN REQUIREMENTS AND SPECIFICATIONS.
3. THE CONCRETE BACKING SHALL BE CONSTRUCTED SO THAT IT ALLOWS THE GRANITE PAVERS TO BE SET FLUSH WITH THE SLOT DRAIN SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION BETWEEN THE SLOT DRAIN SYSTEM AND GRANITE BLOCK INSTALLATION REQUIREMENTS.

2 GRANITE STAIR REINSTALLATION SECTION

SCALE: NTS

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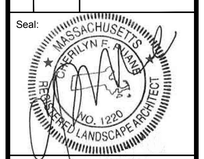

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Scale:	
Date:	07/29/2020
Drawn By:	FD/LC
Reviewed By:	CB
Approved By:	CFR
W&S Project No:	2180559
W&S File No:	

Drawing Title:

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Sheet Number:

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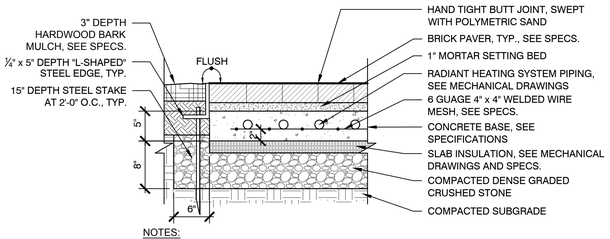
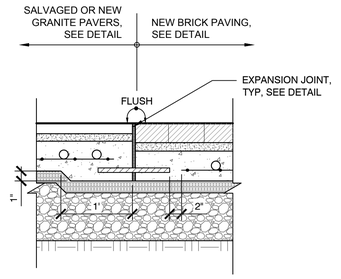
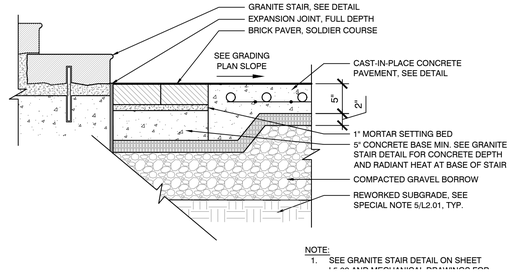


NOTES:
1. CONTRACTOR SHALL FEATHER GRADES BACK WITHIN DISTURBED LOAM AREA TO MEET EXISTING GRADES.
2. DELETE RADIANT HEATING SYSTEM PIPING, INSULATION AND WELDED WIRE MESH IN BRICK PAVING BEYOND THE LIMITS INDICATED ON THE MECHANICAL DRAWINGS. REDUCE THE CONCRETE SLAB TO 4".

TYPICAL BRICK PAVING DETAIL

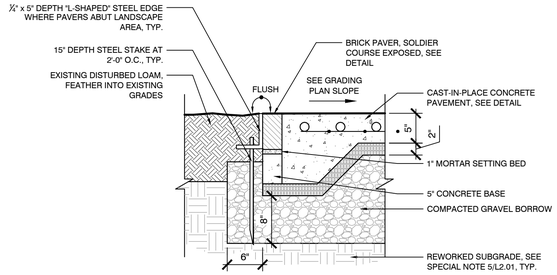


CONDITION A:
BRICK PAVING AT SALVAGED OR NEW GRANITE PAVERS

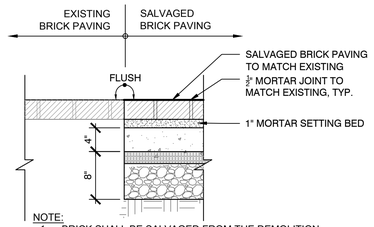


NOTE:
1. SEE GRANITE STAIR DETAIL ON SHEET

CONDITION B:
BRICK PAVING AT NEW GRANITE STAIR

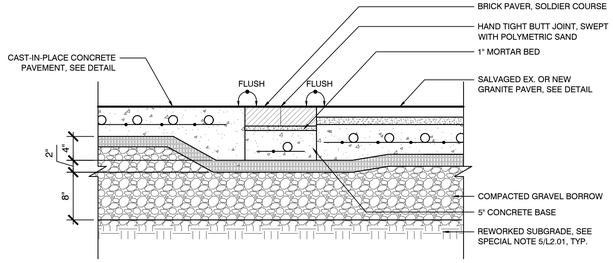


CONDITION C:
BRICK EDGER AT ADA ACCESSIBLE RAMP

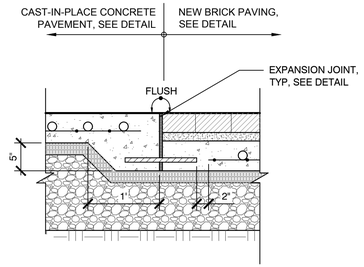


NOTE:
1. BRICK SHALL BE SALVAGED FROM THE DEMOLITION OF THE PROJECT SITE. SALVAGED BRICKS TO BE REINSTALLED SHALL BE IN GOOD CONDITION AND SOLID, FREE FROM CRACKS, AND BROKEN CORNERS.

CONDITION D:
SALVAGED BRICK PAVING AT EXISTING BRICK PAVING



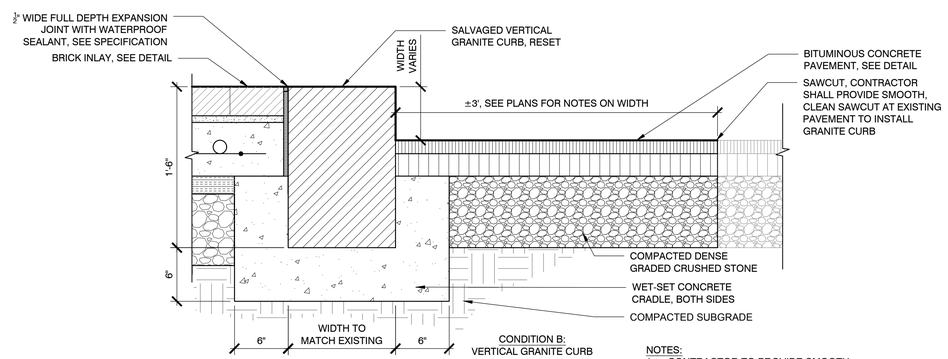
CONDITION E:
BRICK INLAY AT CAST-IN-PLACE CONCRETE PAVEMENT AND GRANITE PAVERS



CONDITION F:
BRICK PAVING AT ADA ACCESSIBLE RAMP

1 BRICK PAVING- MULTIPLE CONDITIONS

SCALE: NTS

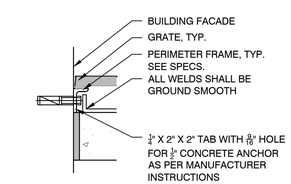


CONDITION B:
VERTICAL GRANITE CURB AT GRANITE PAVER

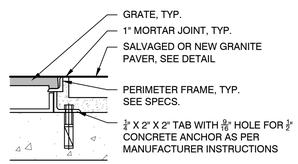
NOTES:
1. CONTRACTOR TO PROVIDE SMOOTH TRANSITION WHERE NEW PAVEMENT ABUTS EXISTING PAVEMENT, TYP.

2 VERTICAL GRANITE CURB

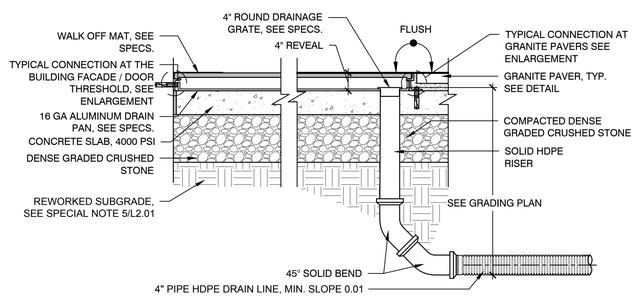
SCALE: NTS



TYPICAL CONNECTION AT THE BUILDING FACADE / DOOR THRESHOLD



TYPICAL CONNECTION AT GRANITE PAVER



NOTES:
1. COORDINATE RECESS IN CONCRETE SLAB WITH WALK OFF MAT MANUFACTURER SPECIFICATIONS.
2. ENSURE THE CONCRETE SLAB HAS POSITIVE DRAINAGE AWAY FROM THE BUILDING FACADE TOWARD THE DRAIN CONNECTION.

3 WALK OFF MAT

SCALE: NTS

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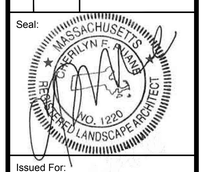

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Scale:

Date:	07/29/2020
Drawn By:	FD/LC
Reviewed By:	CB
Approved By:	CFR
W&S Project No:	2180559
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Sheet Number:

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GENERAL NOTES

1. DRAWINGS ARE DIAGRAMMATIC ONLY. THE EXACT LOCATION, MOUNTING HEIGHTS, SIZE OF EQUIPMENT AND ROUTING OF RACEWAYS SHALL BE COORDINATED AND DETERMINED IN THE FIELD.
2. ALL STRAIGHT FEEDER, BRANCH CIRCUIT AND AUXILIARY SYSTEM CONDUIT RUNS SHALL BE PROVIDED WITH SUFFICIENT PULL BOXES TO LIMIT THE MAXIMUM LENGTH OF ANY SINGLE CABLE PULL TO 150 FEET. EXACT SIZES OF PULL BOXES AND LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ELECTRICAL CONTRACTOR.
3. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE HVAC CONTRACTOR AS APPLICABLE AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EQUIPMENT; THE POWER WIRING, CONTROL WIRING AND ALL ELECTRICAL CONNECTIONS AND CONDUIT TURN-UPS SHALL BE COORDINATED WITH THE RESPECTIVE CONTRACTORS BEFORE THE START OF CONSTRUCTION IN THE FIELD.
4. SLEEVES ARE TO BE UTILIZED FOR PASSAGE OF CONDUITS THROUGH FLOORS OR WALLS. CONDUITS AND BOXES ARE TO BE SUPPORTED BY THE USE OF PRESET FASTENERS INSTALLED IN FLOORS, WALLS OR COLUMNS. CONDUITS AND BOXES ARE TO BE INSTALLED CONCEALED IN MASONRY WALLS AND ABOVE HUNG CEILINGS. ALL SLEEVES ARE TO BE SEALED WITH APPROVED FIRE STOPPING SEALANT.
5. THE LOCATION AND MOUNTING HEIGHTS OF ALL POWER SYSTEM DEVICES SHOWN ON THE ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE LOCATIONS SHOWN ON THE ELECTRICAL DRAWINGS. THE ELECTRICAL CONTRACTOR SHALL INSTALL ALL POWER SYSTEM DEVICES TO AGREE WITH THE ARCHITECTURAL DRAWINGS.
6. COMBINED HOMERUNS OF TWO (2) OR THREE (3) CIRCUITS MAY BE UTILIZED. HOWEVER, THE NEUTRAL CONDUCTOR IS TO BE INCREASED TO #10AWG. COMBINED HOMERUNS ARE TO BE LIMITED TO 20A, LIGHTING AND POWER CIRCUITS.
7. WORK SHALL CONFORM TO THE MASSACHUSETTS ELECTRICAL CODE, MASSACHUSETTS BUILDING CODE, NFPA AND REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION.
8. THE WORD "CONTRACTOR" AS USED IN THE "ELECTRICAL WORK" SHALL MEAN THE ELECTRICAL SUBCONTRACTOR.
9. CONTRACTOR SHALL PAY FOR ALL PERMITS, INSURANCE AND TESTS, AND SHALL PROVIDE LABOR AND MATERIAL TO COMPLETE THE ELECTRICAL WORK SHOWN.
10. EXCEPT AS OTHERWISE NOTED, THE ELECTRICAL WORK SHALL INCLUDE DEMOLITION, PANELBOARDS, CIRCUIT BREAKERS, FEEDERS, WIRING, RACEWAYS, LIGHTING FIXTURES, DEVICES, TELEPHONE AND DATA OUTLETS, SAFETY SWITCHES, FIRE ALARM AND NURSE CALL SYSTEMS, TRANSFORMERS AND CONNECTION NECESSARY TO OPERATE MOTORS AND OTHER EQUIPMENT.
11. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY LIGHTING AND POWER AND THE GENERAL CONTRACTOR SHALL PAY ALL ENERGY CHARGES.
12. DURING CONSTRUCTION, THE ELECTRICAL CONTRACTOR SHALL KEEP HIS PORTION OF THE WORK NEAT, CLEAN AND ORDERLY.
13. ALL SYSTEMS SHALL BE TESTED FOR SHORT CIRCUIT AND GROUNDS PRIOR TO ENERGIZING AND ANY DEFECTS SHALL BE CORRECTED.
14. ALL CUTTING AND PATCHING REQUIRED FOR ELECTRICAL WORK SHALL BE INCLUDED AS PART OF THIS SECTION.
15. COMPLETE SHOP DRAWINGS SHALL BE SUBMITTED FOR ELECTRICAL EQUIPMENT. WHERE SPECIFIED ELECTRICAL EQUIPMENT IS SUBSTITUTED, THE ELECTRICAL CONTRACTOR SHALL SUBMIT COMPLETE SPECIFICATIONS ON THE SUBSTITUTE AS WELL AS THE ITEM ORIGINALLY SPECIFIED.
16. MATERIALS SHALL BE SPECIFICATION GRADE AND UL LISTED.
17. WHERE MATERIAL IS CALLED OUT IN THE LEGEND BY MANUFACTURER, TYPE OR CATALOG NUMBER, SUCH DESIGNATIONS ARE TO ESTABLISH STANDARDS OR DESIRED QUALITY. ACCEPTANCE OR REJECTIONS OF PROPOSED SUBSTITUTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
18. WORK SHALL BE COORDINATED WITH THAT OF OTHER TRADES TO ELIMINATE INTERFERENCES.
19. EXACT LOCATIONS OF MECHANICAL EQUIPMENT, DEVICES, ETC. SHALL BE VERIFIED WITH HEATING, VENTILATION AND AIR CONDITIONING SUBCONTRACTOR PRIOR TO ROUGHING FOR SAME.
20. ELECTRICAL CONTRACTOR SHALL OBTAIN SHOP DRAWINGS/SPECIFICATIONS OF ALL EQUIPMENT FROM THE GENERAL CONTRACTOR PRIOR TO PURCHASING AND INSTALLING ELECTRICAL EQUIPMENT FOR SAME. NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN ACTUAL EQUIPMENT INSTALLED AND CONTRACT DOCUMENTS.
21. ELECTRICAL WORK SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF WHICH SYSTEM IS PUT INTO SERVICE.

22. WORK SHALL BE GROUNDED IN ACCORDANCE WITH CODE REQUIREMENTS. COMPLETE EQUIPMENT (INSULATED GREEN WIRE) GROUNDING SYSTEM SHALL BE INSTALLED.

33. BOXES SHALL BE GALVANIZED STEEL AND SHALL BE SIZED TO ACCOMMODATE THE EQUIPMENT OR APPARATUS TO BE INSTALLED. WHERE BOXES OF A STANDARD MAKE ARE NOT AVAILABLE, SPECIAL BOXES SHALL BE MANUFACTURED. FIXTURES SUPPORTED ON THE CEILING OR ON THE WALL SHALL HAVE SUITABLE FIXTURE SUPPORT FOR THE SPECIFIC FIXTURE.
34. PANELBOARDS SHALL BE DEAD FRONT, THERMAL MAGNETIC BOLT-ON CIRCUIT BREAKER TYPE, DESIGNED FOR SURFACE OR FLUSH MOUNTING AS INDICATED ON PLAN, AND HAVING CONNECTIONS TO 120/208 OR 277/480 VOLT, 3 PHASE, 4 WIRE SERVICE. ALL BUS BARS SHALL BE COPPER. CABINETS SHALL BE MADE OF CODE GAUGE GALVANIZED SHEET STEEL, WITH A MINIMUM OF 4 INCH GUTTERS, DOOR IN DOOR CONSTRUCTION, LOCKED DOOR, AND FLUSH HINGES. TYPEWRITTEN INDEX SHALL BE MOUNTED ON DOOR INSIDE TRANSPARENT COVER INDICATING LOAD SERVED. PANELS SHALL INCLUDE SEPARATE EQUIPMENT GROUND BUS.
35. PANELBOARDS, DISCONNECT SWITCHES, AND CONTROLLERS SHALL HAVE NAMEPLATES OF BLACK LAMINATED PLASTIC WITH ENGRAVED WHITE LETTERS, SECURED WITH SELF-TAPPING SCREWS.
36. CONNECTIONS AT MOTORS SHALL BE MADE WITH 18" LENGTH OF 1/2 INCH FLEXIBLE LIQUID TIGHT CONDUIT.
37. CONTRACTOR SHALL PHASE BALANCE PANELBOARDS IN THE FIELD. LOAD ON EACH PHASE SHALL BE BALANCED WITHIN 10% OF EACH OTHER.
38. TOGGLE SWITCHES SHALL BE OF THE SINGLE POLE A.C. QUIET TOGGLE TYPE FOR MOUNTING IN A SINGLE-GANG SPACING. TOGGLE SWITCHES SHALL BE FULLY RATED 20 AMPERES AT 120/277 VOLT.
39. DUPLEX WALL RECEPTACLES SHALL BE 2 POLE, 3 WIRE, GROUNDING TYPE 20 AMPERE, 125 VOLT WITH METAL PLASTER EARS. RECEPTACLES SHALL BE NEMA STANDARD CONFIGURATION 5-20R.
40. FUSED OR UNFUSED SAFETY SWITCHES SHALL BE TOTALLY ENCLOSED, HEAVY DUTY TYPE. SWITCHES SHALL HAVE VOLTAGE, HORSEPOWER AND AMPERE RATING SUITABLE FOR THE APPLICATION. PROVIDE NUMBER OF POLES AS REQUIRED. SWITCHES LOCATED EXTERIOR TO THE BUILDING OR IN DAMP/WET LOCATIONS SHALL BE IN A NEMA 3R ENCLOSURE.
41. FUSES SHALL BE DUAL ELEMENT, TIME DELAY TYPE, AS MANUFACURED BY BUSSMAN, RELIANCE OR APPROVED EQUAL.
42. FURNISH AND INSTALL SLEEVES IN FLOORS, BEAMS, WALLS, ETC. REQUIRED FOR INSTALLING THIS WORK.
43. CONDUIT PASSING THROUGH FIRE RATED WALLS AND FLOORS SHALL BE PROVIDED WITH ALL NECESSARY MATERIALS TO ENSURE THAT THE FIRE RATED INTEGRITY IS MAINTAINED.
44. FEEDER TAPS WILL NOT BE ALLOWED IN PANELBOARD GUTTERS.
45. CONTRACTOR SHALL CHECK EXISTING CONDITIONS TO DETERMINE EXACT EXTENT OF WORK TO BE PERFORMED PRIOR TO BIDDING. DIMENSIONS RELEVANT TO EXISTING WORK SHALL BE VERIFIED IN THE FIELD.
46. IN AREAS NOT AFFECTED BY THIS RENOVATION, THIS SUBCONTRACTOR SHALL MAINTAIN CONTINUITY OF ELECTRIC SERVICE.
47. WHERE CONNECTIONS ARE MADE IN EXISTING PANELS, THE PANEL INDEX SHALL BE REVISED TO INDICATE THE NEW LOADS SERVED. NEW CIRCUIT BREAKERS ADDED TO EXISTING PANELS SHALL BE THE SAME FRAME SIZE, VOLTAGE RATING AND INTERRUPTING CAPACITY AS EXISTING PANEL AND CIRCUIT BREAKERS.
48. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED POWER SUPPLIES, APPURTENANCES, FINAL CONNECTIONS, TESTING AND WORK REQUIRED FOR ADDITIONS TO THE EXISTING FIRE ALARM SYSTEM. PAY ALL COSTS ARISING THERE FROM, FOR A COMPLETE AND OPERATIONAL SYSTEM.
49. ELECTRICAL SHUTDOWN SHALL BE AT A TIME AND DATE APPROVED BY THE OWNER.
50. PROVIDE AS-BUILT "CADD" DRAWINGS AT THE COMPLETION OF THE PROJECT.
51. ELECTRICAL CONTRACTOR SHALL LABEL ALL ELECTRICAL DEVICES INCLUDING BUT NOT LIMITED TO RECEPTACLES, DISCONNECT SWITCHES, PANELBOARDS, THERMAL MOTOR SWITCHES, CONTROL PANELS, JUNCTION BOXES, ETC.
    a. RECEPTACLES - PANEL NAME AND CIRCUIT DESIGNATION
    b. DISCONNECTS/THERMAL MOTOR SWITCHES - PANEL NAME, CIRCUIT DESIGNATION AND EQUIPMENT SERVING.
    c. PANELBOARDS - PANEL NAME, VOLTAGE, AMPERAGE, PHASE AS WELL AS PANEL AND CIRCUIT IT IS FED FROM.
    d. CONTROL PANEL - PANEL NAME AND CIRCUIT DESIGNATION
    e. JUNCTION BOXES - PANEL NAME AND CIRCUIT DESIGNATION

ELECTRICAL LEGEND

RACEWAY AND WIRING

1,3 LP1B — HOMERUN TO PANELBOARD, NUMBER OF TICKS INDICATES NUMBER OF #12 AWG CONDUCTORS CONTAINED IN RACEWAY. TWO (2) #12 AWG SHALL NOT BE INDICATED BY TICKS, NUMERALS 1 AND 3 INDICATE CIRCUITS IN PANELBOARD. RACEWAYS LARGER THAN 1/2" AND CONDUCTORS LARGER THAN #12 AWG SHALL BE INDICATED ON THE DRAWINGS. PROVIDE AN INSULATED GREEN GROUND WIRE IN ALL RACEWAYS MINIMUM SIZE TO BE #12AWG.

RACEWAY CONCEALED IN CEILING OR WALLS

RACEWAY EXPOSED

RACEWAY CONCEALED IN SLAB OR LOCATED IN THE CEILING OF THE FLOOR BELOW

DIRECT HARD WIRED CONNECTION

LIGHTING CONTROL SWITCHES

(MOUNT 4'-0" AFF UNLESS NOTED OTHERWISE.)

S_{MS} — MOTOR THERMAL SWITCH

RECEPTACLES

(MOUNT 18" AFF TO CENTER LINE UNLESS NOTED OTHERWISE)

DUPLEX CONVENIENCE OUTLET RATED 20A, 125V, U-SLOT GROUNDED TYPE MOUNTED 18" ABOVE FINISHED FLOOR TO CENTER LINE. ALL OTHER MOUNTING HEIGHTS SHALL BE AS NOTED ADJACENT TO THE SYMBOL. REFER TO RECEPTACLE ABBREVIATIONS FOR SPECIAL PURPOSE RECEPTACLES.

POWER DISTRIBUTION EQUIPMENT

DISTRIBUTION PANEL

PANELBOARD-SURFACE MOUNTED

SAFETY SWITCH - RATING AND TYPE AS NOTED ON THE DRAWING.

30A/20A — FUSIBLE SAFETY SWITCH - RATING AND TYPE AS NOTED ON THE DRAWING. (30 AMP, 20 AMP FUSE, 3 POLE)

COMBINATION UNFUSED DISCONNECT SWITCH AND MAGNETIC STARTER OR CONTACTOR. RATING AND SIZE AS NOTED ON THE DRAWING.

1 — MOTOR, NUMERAL DENOTES HORSE POWER

MISCELLANEOUS POWER

J — FLUSH WALL MOUNTED JUNCTION BOX WITH BLANK COVERPLATE, SIZE AS REQUIRED BY N.E.C.

J — JUNCTION BOX WITH BLANK COVERPLATE, SIZE AS REQUIRED BY N.E.C.

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AC	ALTERNATING CURRENT
A	AMPERE
ATC	AUTOMATIC TEMPERATURE CONTROLS
ATS	AUTOMATIC TRANSFER SWITCH
BKR	BREAKER
C	CONDUIT
CKT	CIRCUIT
CB	CIRCUIT BREAKER
EC	ELECTRICAL CONTRACTOR
EMT	ELECTRIC METALLIC TUBING
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EF	EXHAUST FAN
FL	FLOOR
FLA	FULL LOAD AMPERE
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
HOA	HAND OFF AUTOMATIC
HP	HORSEPOWER
IG	ISOLATED GROUND
JB	JUNCTION BOX
KVA	KILOVOLT AMPERES
KW	KILOWATT
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
MC	MECHANICAL CONTRACTOR
MTD	MOUNTED
MTG	MOUNTING
NMC	NON-METALLIC CONDUIT
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PNL	PANELBOARD
PH	PHASE
PVC	POLYVINYL CHLORIDE CONDUIT
RSC	RIGID GALVANIZED STEEL CONDUIT
SF	SUPPLY FAN
SS	SAFETY SWITCH
TEL	TELEPHONE
TRF	TRANSFORMER
V	VOLTS
W	WATTS OR WIRE
WP	WEATHERPROOF
4WSN	4-WIRE SOLID NEUTRAL

RECEPTACLE ABBREVIATIONS

BF	BELOW FLOOR
CLG	CEILING MOUNTED
D	DEDICATED DEVICE ON INDIVIDUAL BRANCH CIRCUIT
E	EMERGENCY
GFI	GROUND FAULT CIRCUIT INTERUPTER, PERSONAL PROTECTION
IG	ISOLATED GROUND RECEPTACLE WITH SEPERATE GREEN GROUND CONDUCTOR TO ISOLATED GROUND BUS IN PANEL
SP	SURGE PROTECTION RECEPTACLE
WP	WEATHERPROOF RECEPTACLE WITH COVERPLATE LISTED FOR WET LOCATION WITH AN ATTACHMENT PLUG INSERTED.

PANELBOARD SCHEDULE

DESIGNATION: PP1A — S.C. RATING: 10,000 A RMS SYSTEM — REMARKS:

LOCATION: BOILER ROOM — SERVICE: 120/208V,3Ø,4W

RATING: 100 AMPS — MOUNTING: SURFACE

MAIN: 50 AMP MCB

CKT. NO.	LOAD DESIGNATION	BREAKER TRIP	BREAKER POLE	PHASE A	PHASE B	PHASE C	BREAKER POLE	BREAKER TRIP	LOAD DESIGNATION	CKT. NO.
1	CIRCULATING PUMP (HWP-1)	20						20	CONTROLS POWER	2
3	GLYCOL MAKE-UP UNIT (GMU-1)	20						20	CONTROLS POWER	4
● 5	CIRCULATING PUMP (HWP-2)	20						20	SPARE	6
7	-	-						20	SPARE	8
9	-	-						20	SPARE	10
11	SPARE	20						20	SPARE	12
13	SPARE	20						20	SPARE	14
15	SPARE	20						20	SPARE	16
17	SPARE	20						20	SPARE	18

● CIRCULATING PUMP (HWP-2) SHALL BE PART OF THE BID ALTERNATE

MECHANICAL EQUIPMENT SCHEDULE

EQUIP. TAG	EQUIPMENT	CHARACTERISTICS	VOLTS	PH.	PANEL	CKT. BRK.	FEEDER	CONNECTION: S	CONNECTION: ⊠	CONNECTION: VFD	CONNECTION: □	CONNECTION: ⊠ (fusible)	CONNECTION: ~	CONNECTION: WP	REMARKS
HWP-1	CIRCULATING PUMP	1/2 HP	120	1	PP1A#1	20A 1P	2#12, 1#12G., 3/4"C	X					X		120V THERMAL SWITCH
GMU-1	GLYCOL MAKE-UP UNIT	1/2 HP	120	1	PP1A#3	20A 1P	2#12, 1#12G., 3/4"C	X					X		120V THERMAL SWITCH
HWP-2	CIRCULATING PUMP	1.5 HP	208	3	PP1A #5,7,9	20A 3P	3#12, 1#12G., 3/4"C		X		X		X		240V, 30A,3P NEMA 1 DISCONNECT (HWP-2 PART OF BID ALTERNATE)

MECHANICAL EQUIPMENT SCHEDULE NOTES:

1. STARTERS (FVNR, VFD, RVNR, ETC..) SHALL BE FURNISHED BY MECHANICAL CONTRACTORS AND INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR. FOR EXACT LOCATIONS REFER TO MECHANICAL DRAWINGS.
2. E.C. SHALL COORDINATE FUSE SIZE AND OVERCURRENT PROTECTION FOR ALL MECHANICAL EQUIPMENT W/ MANUFACTURER'S RECOMMENDATIONS

Project:

IMPROVEMENTS TO THE ARLINGTON TOWN HALL PLAZA

TOWN OF ARLINGTON MASSACHUSETTS

730 MASSACHUSETTS AVE, ARLINGTON, MA 02476

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Consultants:

Revisions:

No.	Date	Description

Seal:

COMMONWEALTH OF MASSACHUSETTS ROBERT F. McALEER ELECTRICAL No. 48017 REGISTERED PROFESSIONAL ENGINEER

Issued For: BID DOCUMENTS

Scale: NTS

Date: 07/29/2020

Drawn By: MAS

Reviewed By: RFM

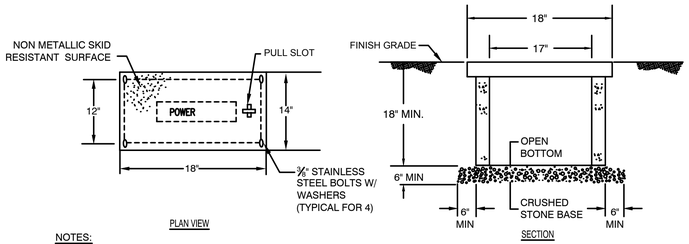
Approved By: RFM

W&S Project No: 2180559

W&S File No:

Drawing Title: ELECTRICAL LEGEND, NOTES & SCHEDULES

Sheet Number: E0.00

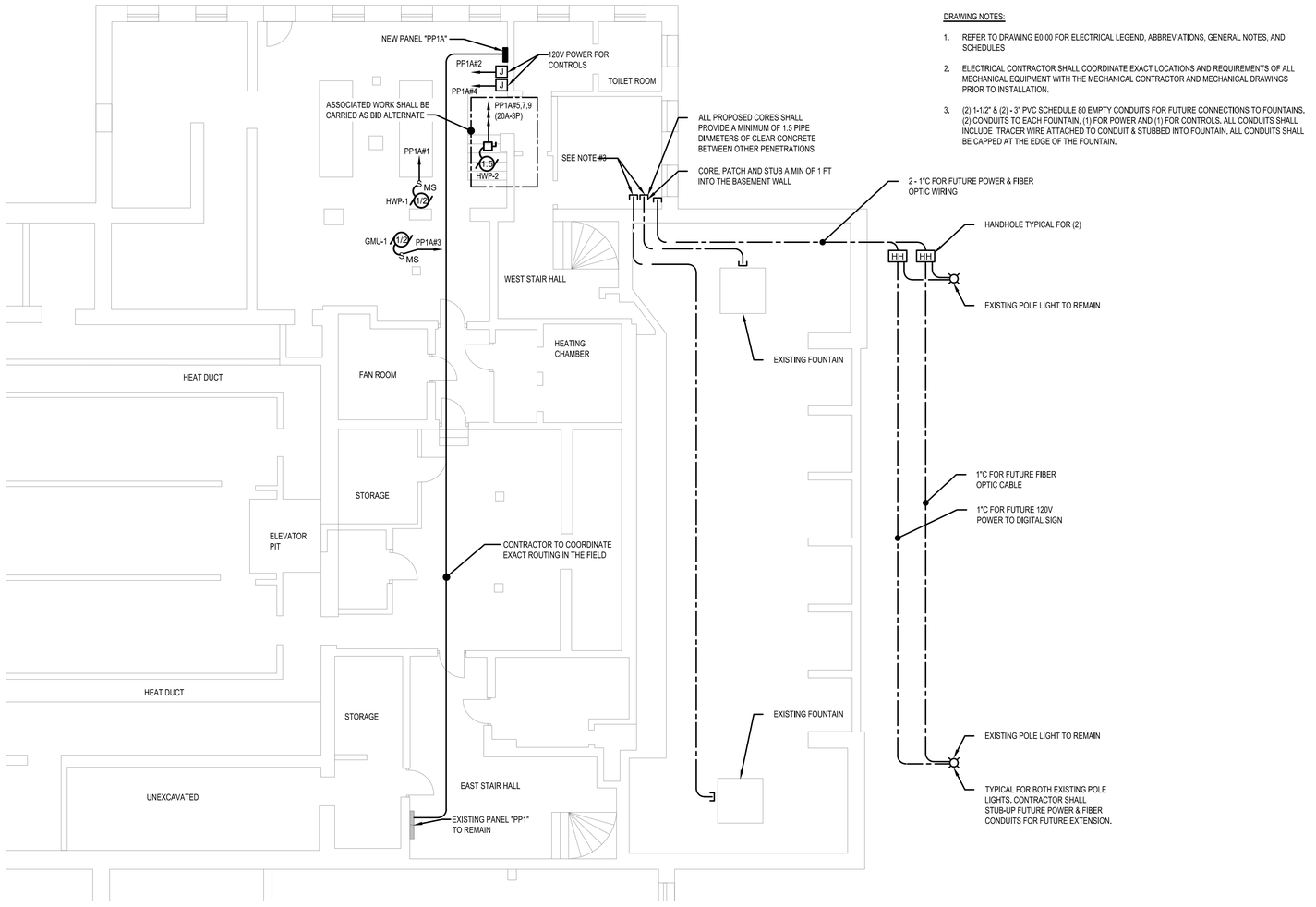


NOTES:

1. THIS HANDHOLE IS INTENDED FOR NON-DELIBERATE VEHICULAR TRAFFIC ONLY.
2. HANDHOLE SHALL BE PREFABRICATED POLYMER CONCRETE AGGREGATE EQUAL TO QUAZITE OR EQUAL PRE CAST CONCRETE CONSTRUCTION.
3. HANDHOLE DIMENSIONS ARE SHOWN FOR REFERENCE ONLY. EXACT HANDHOLE SIZES SHALL BE BY THE CONTRACTOR.

PREFABRICATED HANDHOLE "HH" DETAIL

NOT TO SCALE

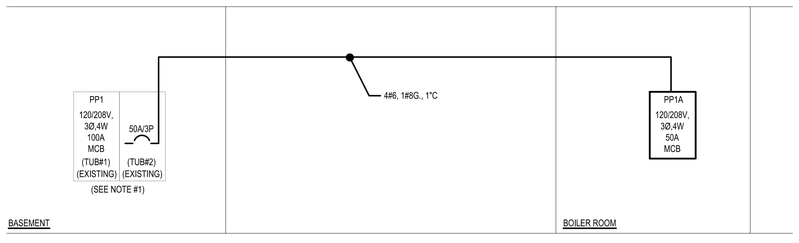


DRAWING NOTES:

1. REFER TO DRAWING E0.00 FOR ELECTRICAL LEGEND, ABBREVIATIONS, GENERAL NOTES, AND SCHEDULES
2. ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT LOCATIONS AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH THE MECHANICAL CONTRACTOR AND MECHANICAL DRAWINGS PRIOR TO INSTALLATION.
3. (2) 1-1/2" & (2) - 3" PVC SCHEDULE 80 EMPTY CONDUITS FOR FUTURE CONNECTIONS TO FOUNTAINS. (2) CONDUITS TO EACH FOUNTAIN, (1) FOR POWER AND (1) FOR CONTROLS. ALL CONDUITS SHALL INCLUDE TRACER WIRE ATTACHED TO CONDUIT & STUBBED INTO FOUNTAIN. ALL CONDUITS SHALL BE CAPPED AT THE EDGE OF THE FOUNTAIN.

ELECTRICAL BOILER ROOM POWER PLAN

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



ELECTRICAL ONE-LINE DIAGRAM

NOT TO SCALE

RISER NOTES:

1. PROVIDE A NEW 50A-3P CIRCUIT BREAKER IN EXISTING SPACE WITHIN EXISTING PANEL "PP1" TO FEED NEW PANEL "PP1A". NEW CIRCUIT BREAKER SHALL MATCH EXISTING IN STYLE AND AIC RATING. EXISTING PANELBOARD AND CIRCUIT BREAKERS ARE MANUFACTURED BY GE.

0 8 16 24
SCALE: 1/8"=1'-0"

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Drawn By:	MAS
Reviewed By:	RFM
Approved By:	RFM
W&S Project No:	2180559
W&S File No:	

Drawing Title:

ELECTRICAL BOILER ROOM POWER PLAN

Sheet Number:

E2.01

GENERAL MECHANICAL SYMBOLS

- REVISION NUMBER - SHOWN ON PLANS
- POINT WHERE NEW CONNECTS TO EXISTING
- NUMBER OF DETAIL ON SHEET / NUMBER OF SHEET WHERE DETAIL APPEARS
- KEYNOTE
- CONTINUATION SYMBOL
- ROOM NAME AND NUMBER (Room / 1)
- ITEM TO BE DEMOLISHED
- AREA NOT IN CONTRACT
- PIPE SIZE TAG (DIAMETER) (2")
- ABOVE GROUND PIPING
- PIPE SLOPE TAG (1/8" / 12" SLOPE)
- BELOW GROUND PIPING
- PIPE INVERT ELEVATION TAG (INVERT: -10' - 1")
- EXISTING PIPE TAG ((E))
- PIPING BEING DEMOLISHED

FIRE PROTECTION SYMBOLS

- FP-D — FIRE PROTECTION DRY
- FP-O — FIRE PROTECTION OTHER
- FP-PA — FIRE PROTECTION PRE-ACTION
- FP-W — FIRE PROTECTION WET
- FP-DOM-W — COMBINATION FIRE & DOMESTIC
- UPRIGHT SPRINKLER HEAD
- PENDENT SPRINKLER HEAD
- RECESSED SPRINKLER HEAD
- CONCEALED SPRINKLER HEAD
- 'D' REPRESENTS DRY SPRINKLER HEAD (D)
- SIDEWALL SPRINKLER HEAD
- EXTENDED COVERAGE SIDEWALL SPRINKLER HEAD
- 48"x18" S/A — OBSTRUCTION FROM DUCTWORK 48" AND GREATER

ABBREVIATIONS

Ø	ROUND	LVR	LOUVER
ABV	ABOVE	LWT	LEAVING WATER TEMPERATURE
AC	AIR CONDITIONING	M/A	MIXED AIR
AD	AREA DRAIN	MAX	MAXIMUM
ADD	ADDENDUM	MBH	ONE THOUSAND BTU PER HOUR
AFF	ABOVE FINISHED FLOOR	MCF	ONE THOUSAND CUBIC FEET
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MD	MOTORIZED DAMPER
ALT	ALTERNATE	MECH	MECHANICAL
AP	ACCESS PANEL	MFR	MANUFACTURER
ARCH	ARCHITECT/ARCHITECTURAL	MIN	MINIMUM
BFF	BELOW FINISHED FLOOR	MISC	MISCELLANEOUS
BLW	BELOW	MTR	MOTOR
BTU	BRITISH THERMAL UNITS	MU/A	MAKE-UP/AIR
BTUH	BRITISH THERMAL UNITS PER HOUR	NC	NOISE CRITERIA
CAP	CAPACITY	NC	NORMALLY CLOSED
CB	CATCH BASIN	NIC	NOT IN CONTRACT
CFM	CUBIC FEET PER MINUTE	NO	NUMBER
CLG	CEILING	NO	NORMALLY OPEN
CO	CLEAN OUT	NTS	NOT TO SCALE
CW	COLD WATER	O	OXYGEN
D	DEGREE	O/A	OUTSIDE AIR
DB	DRY BULB	ORD	OVERFLOW ROOF DRAIN
DIA	DIAMETER	PD	PRESSURE DROP
DN	DOWN	PIV	POST INDICATOR VALVE
DW	DISTILLED WATER	PLBG	PLUMBING
EA	EACH	PRESS	PRESSURE
EAT	ENTERING AIR TEMPERATURE	PRV	PRESSURE REDUCING VALVE
ELEC	ELECTRICAL	PSI	POUNDS PER SQUARE INCH
EQUIP	EQUIPMENT	PSIG	POUNDS PER SQUARE INCH GAUGE
EWC	ELECTRIC WATER COOLER	PWR	POWER
EWT	ENTERING WATER TEMPERATURE	R	DUCT RISER
E/A	EXHAUST AIR	R/A	RETURN AIR
EXIST	EXISTING	RCP	RADIANT CEILING PANEL
F	DEGREES FAHRENHEIT	RD	ROOF DRAIN
FCO	FLOOR CLEAN OUT	REC	RECESSED
FD	FLOOR DRAIN	RED	REDUCER
FD	FIRE DAMPER	RH	RELATIVE HUMIDITY
FDV	FIRE DEPARTMENT VALVE	RL/A	RELIEF AIR
FL	FLOOR	RM	ROOM
FO	FUEL OIL	RPM	REVOLUTIONS PER MINUTE
FOV	FUEL OIL VENT	RW	RAIN WATER
FOR	FUEL OIL RETURN	SF	SQUARE FOOT
FOS	FUEL OIL SUPPLY	S/A	SUPPLY AIR
FPM	FEET PER MINUTE	SAN	SANITARY
FS	FLOOR SINK	SF	SQUARE FOOT
FT	FOOT/FEET	SD	SMOKE DAMPER
FTR	FIN TUBE RADIATION	SM	SURFACE MOUNT
GAL	GALLON	SP	STANDPIPE
GC	GENERAL CONTRACTOR	SP	STATIC PRESSURE
GPM	GALLONS PER MINUTE	STM	STEAM
GW	GREASE WASTE	T	THERMOSTAT
HB	HOSE BIB	TD	TEMPERATURE DROP
HP	HORSE POWER	TDR	TRENCH DRAIN
HTG	HEATING	TEMP	TEMPERATURE
HTR	HEATER	TYP	TYPICAL
HW	HOT WATER	UG	UNDERGROUND
HYD	HYDRANT	VAC	VACUUM
ID	INDIRECT	V	VENT
IN	INCH	VAV	VARIABLE AIR VOLUME
INV	INVERT	VENT	VENTILATION
LB	POUND	VTR	VENT THROUGH ROOF
LB/HR	POUNDS PER HOUR	W	WASTE
LAT	LEAVING AIR TEMPERATURE	WB	WET BULB
LP	LOW PRESSURE	WCO	WALL CLEAN OUT
LPG	LIQUEFIED PETROLEUM GAS	WH	WALL HYDRANT

PLUMBING AND PIPING SYMBOLS

- CHWR — CHILLED WATER RETURN
- CHWS — CHILLED WATER SUPPLY
- CD — CONDENSATE DRAINAGE
- CWR — CONDENSER WATER RETURN
- CWS — CONDENSER WATER SUPPLY
- HWR — HEATING WATER RETURN
- HWS — HEATING WATER SUPPLY
- G — NATURAL GAS
- PG — PROPANE GAS
- REF-L — REFRIGERANT-LIQUID
- REF-S — REFRIGERANT-SUCTION
- REF-HG — REFRIGERANT-HOT GAS
- STM — STEAM
- CDR — CONDENSATE RETURN
- CWV — COMBINATION WASTE & VENT
- CA — COMPRESSED AIR
- CW — DOMESTIC COLD WATER
- H-CW — HARD COLD WATER
- S-CW — SOFT COLD WATER
- F-CW — FILTERED COLD WATER
- RO — REVERSE OSMOSIS WATER
- HW — HOT WATER
- HW 140° — HOT WATER 140°
- HW-R — HOT WATER RECIRCULATION
- HW-R 140° — HOT WATER RECIRCULATION 140°
- GV — GREASE VENT
- GW — GREASE WASTE
- IW — INDIRECT WASTE
- OV — OIL VENT
- OW — OIL WASTE
- PD — PUMP DISCHARGE
- V — SANITARY VENT
- SS — SANITARY SEWER
- SHWR — SOLAR HOT WATER RETURN
- SHWS — SOLAR HOT WATER SUPPLY
- SD — STORM DRAINAGE
- OSD — OVERFLOW STORM DRAINAGE

PIPE DROP, PIPE RISE, PIPE TEE, CAP; 4", 4", 2" — PLUG, REDUCING 45 DEGREE TEE, 45 DEGREE TEE

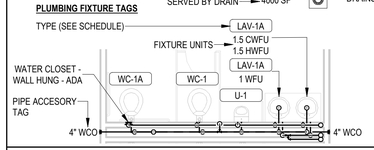
PIPE ACCESSORY TAGS

- 2" DOM. WM — DOMESTIC WATER METER
- 2" BALANCING — BALANCING VALVE
- 2" SHUTOFF — 1/4 TURN BALL VALVE
- 2" CHECK — CHECK VALVE
- 2" TMV — 3-WAY MIXING VALVE
- 2" M-CNTRL — MOTORIZED CONTROL VALVE
- 2" 3-WAY CNTRL — 3 WAY MOTORIZED CONTROL VALVE
- 2" PRV — PRESSURE REDUCING VALVE
- 3/8" SOLENOID — REFRIGERANT SOLENOID VALVE
- 2" BUTTERFLY — BUTTERFLY VALVE

DRAIN TAGS

FLOOR DRAIN (4" FD-1, TYPE (SEE SCHEDULE), 4" AD-6) — AREA DRAIN
FLOOR DRAIN (4" FD-3P, "P" - INDICATES PRIMER CONNECTION, 4" SD-29) — DECK DRAIN
FLOOR SINK (4" FS-4, 4" SD-12) — FLOW CONTROL DRAIN
HUB DRAIN (4" FD-13, 8 WFU, FIXTURE UNITS, 4" SD-15) — STORM DRAIN
ROOF AREA SERVED BY DRAIN (4000 SF, 6" SD-1) — COMBINATION DRAINS

PLUMBING FIXTURE TAGS



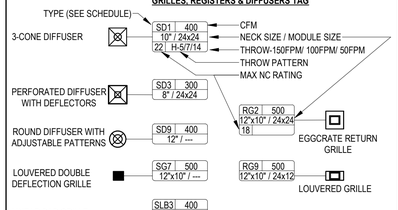
EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT	EWH	ELECTRIC WATER HEATER
ACC	AIR COOLED CONDENSER	FCU	FAN COIL UNIT
ACCU	AIR COOLING CONDENSING UNIT	FP	FIRE PUMP
AHU	AIR HANDLING UNIT	GI	GREASE INTERCEPTOR
AS	AIR SEPARATOR	GRV	GRAVITY ROOF VENTILATOR
B	BOILER	HWP	HEATING WATER PUMP
CH	CHILLER	HX	HEAT EXCHANGER
CT	COOLING TOWER	HRU	HEAT RECOVERY UNIT
CUH	CABINET UNIT HEATER	PRV	POWER ROOF VENTILATOR
CWP	CONDENSER WATER PUMP	RE	RETURN/EXHAUST FAN
CHWP	CHILLED WATER PUMP	RTU	ROOFTOP UNIT
DBP	DOMESTIC WATER BOOSTER PUMP	SEP	SEWAGE EJECTOR PUMP
DC	DUCT MOUNTED COIL	SF	SUPPLY FAN
DCP	DOMESTIC WATER CIRCULATING PUMP	SP	SUMP PUMP
EF	EXHAUST FAN	UH	UNIT HEATER
EDC	ELECTRIC DUCT COIL	WH	WATER HEATER
ET	EXPANSION TANK		

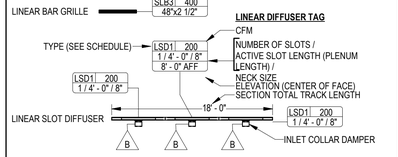
HVAC SYMBOLS

- 16"x8" — SQUARE DUCT SIZE TAG (WIDTH x HEIGHT)
- 16"/8" — OVAL DUCT SIZE TAG (WIDTH / HEIGHT)
- 16"Ø — ROUND DUCT SIZE TAG (DIAMETER)
- (E) — EXISTING DUCT TAG
- DUCT BEING DEMOLISHED
- S/A — SUPPLY AIR
- S-O/A — CONDITIONED OUTSIDE AIR
- O/A — OUTSIDE AIR
- R/A — RETURN AIR
- T/A — TRANSFER AIR
- E/A — EXHAUST AIR
- L/A — RELIEF AIR
- GE/A — GREASE EXHAUST AIR
- SE/A — SMOKE EXHAUST AIR
- FLUE — EXHAUST GAS FLUE
- C/A — COMBUSTION AIR
- DROP — RECTANGULAR SUPPLY/OUTSIDE AIR DUCT RISE
- DROP — ROUND SUPPLY/OUTSIDE AIR DUCT RISE
- DROP — RECTANGULAR RETURN/TRANSFER AIR DUCT RISE
- DROP — ROUND RETURN/TRANSFER AIR DUCT RISE
- DROP — RECTANGULAR EXHAUST/RELIEF AIR DUCT RISE
- DROP — ROUND EXHAUST/RELIEF AIR DUCT RISE

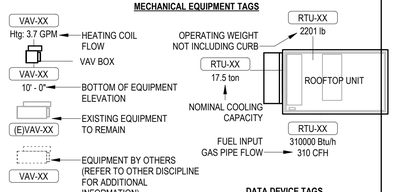
GRILLES, REGISTERS & DIFFUSERS TAG



LINEAR DIFFUSER TAG



MECHANICAL EQUIPMENT TAGS

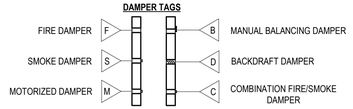


DATA DEVICE TAGS

SYMBOL
EQUIPMENT ID

- CARBON DIOXIDE SENSOR — CO2+TH — RTU-XX — TEMPERATURE & HUMIDITY SENSOR
- CARBON MONOXIDE SENSOR — CO+TS — VAV-XX — TEMPERATURE SENSOR
- NITROGEN DIOXIDE SENSOR — NO2+T — THERMOSTAT
- HUMIDITY SENSOR — HS+MS — MANUAL SWITCH
- HUMIDISTAT — H+S — SENSOR

DAMPER TAGS



HVAC DEMOLITION & EXISTING GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE STATE OF BUILDING CODES AND ALL OTHER APPLICABLE CODES AND REGULATIONS.
2. THE DRAWINGS DEPICT ONLY GENERALLY THE EXISTING CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD OBSERVATIONS AND CONFIRM WALL LOCATIONS, DUCTWORK, PIPING AND OTHER UTILITIES ABOVE EXISTING CEILINGS.
3. ALL CONFLICTS AND ITEMS FOR CLARIFICATIONS SHALL BE BROUGHT TO THE ENGINEER/ARCHITECT'S ATTENTION PRIOR TO WORK IN THE AREA.
4. THE CONTRACTOR IS RESPONSIBLE TO FOLLOW BUILDING MANAGEMENT RULES WITH REGARDS TO TRASH, ELEVATORS, NOISE, SPRINKLERS AND FIRE ALARM.
5. THE CONTRACTOR SHALL MAINTAIN IN OPERATION ALL EXISTING UTILITIES DURING CONSTRUCTION.
6. ITEMS IDENTIFIED TO BE SALVAGED SHALL BE STOCKPILED IN AN AREA FOR REMOVAL BY THE OWNER; ALL OTHER ITEMS TO BE REMOVED SHALL BE DISPOSED OF LEGALLY OFF SITE. ALL ITEMS BEING REMOVED AND NOT REUSED SHALL BE DISPOSED OF AS DIRECTED BY THE OWNER.
7. CAPPING OF ALL SERVICES SHALL BE PERFORMED TO LEAVE EXISTING SERVICES TO OTHER AREAS INTACT AND FUNCTIONAL.
8. ALL DEMOLITION WORK WILL BE SCHEDULED WITH BUILDING MANAGEMENT AND PERFORMED ONLY FOLLOWING APPROVAL.
9. THE CONTRACTOR SHALL INFORM BUILDING MANAGEMENT AND RECEIVE SCHEDULE APPROVAL FOR ANY REQUIRED UTILITY SHUTDOWN.
10. WHERE EQUIPMENT IS SHOWN TO BE REMOVED, THE EQUIPMENT SHALL BE DELIVERED TO BUILDING MANAGEMENT FOR STORAGE OR PROPERLY DISPOSED OF AS DIRECTED BY BUILDING MANAGEMENT.
11. WHERE EQUIPMENT IS SHOWN OR NOTED AS BEING REMOVED & REPLACED AFTER WALL/CEILING STRUCTURAL OR ARCHITECTURAL WORK IS PERFORMED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER, SAFE STORAGE OF SUCH EQUIPMENT.
12. ANY PIPING SHOWN TO BE REMOVED WILL BE REMOVED TO THE POINT INDICATED ON THE DRAWING OR TO THE ACTIVE MAIN AND VALVED AND CAPPED. PIPING REMOVAL SHALL INCLUDE ALL HANGERS, VALVES, INSULATION, ETC.
13. CONTRACTOR SHOULD SURVEY EXISTING CONDITIONS AND INFORM ENGINEER OF ANY DEVIATIONS PRIOR TO CONSTRUCTION.

HVAC CONSTRUCTION GENERAL NOTES

1. THE HVAC CONTRACTOR SHALL BE FAMILIAR WITH ALL CONTRACT DOCUMENTS FOR ALL TRADES AND COORDINATE WITH OTHER CONTRACTORS.
2. THE DRAWINGS ARE DIAGRAMMATIC ONLY; FINAL ROUTING OF DUCTWORK, PIPING AND EQUIPMENT LOCATIONS SHALL BE DETERMINED IN THE FIELD. PROVIDE ALL ADDITIONAL OFFSETS, ELBOWS, ETC., AT NO ADDITIONAL COST TO THE OWNER.
3. MINIMUM SIZE OF HOT WATER SUPPLY, HOT WATER RETURN AND CONDENSATE DRAIN PIPING SHALL BE 3/4" UNLESS OTHERWISE NOTED.
4. MINIMUM SIZE OF STEAM CONDENSATE RETURN PIPING SHALL BE 1" UNLESS OTHERWISE NOTED.
5. COORDINATE ALL ELECTRICAL AND PLUMBING REQUIREMENTS WITH THE ELECTRICAL AND PLUMBING CONTRACTORS.
6. PROVIDE ALL INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE HVAC WORK COMPLETE AND READY FOR OPERATION.
7. PROVIDE (FURNISH AND INSTALL) ALL HVAC WORK SHALL BE IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES.
8. INSTALL ALL HVAC EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
9. DEMOLITION WORK SHALL BE DONE BY THE HVAC CONTRACTOR. THE HVAC CONTRACTOR SHALL COORDINATE ALL WORK CONCERNING EXISTING EQUIPMENT AND SYSTEMS REMAINING IN THE BUILDING.
10. THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE INTEGRITY, CONDITION AND LOCATION OF EXISTING DUCTWORK AND PIPING WHICH IS TO BE REUSED. IF PIPING AND DUCTWORK CANNOT BE REUSED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER TO DETERMINE THE EXTENT OF REPLACEMENT.
11. PROVIDE ISOLATION VALVES IN SUPPLY AND RETURN PIPING ON EACH FLOOR, AND IN BRANCH PIPING SERVING MORE THAN ONE PIECE OF EQUIPMENT.
12. PROVIDE SHUTOFF VALVES IN THE SUPPLY AND RETURN PIPING TO ALL EQUIPMENT TO ALLOW FOR SERVICING. UNIONS OR FLANGES SHALL BE ARRANGED SUCH THAT EQUIPMENT CAN BE SERVICED WITHOUT CUTTING AND MINIMAL DISRUPTION OF PIPING SERVING THE EQUIPMENT.
13. FURNISH TO THE GENERAL CONTRACTOR ALL INFORMATION REQUIRED FOR SETTING OF WALL, ROOF AND PARTITION OPENINGS FOR HVAC WORK. THIS INFORMATION SHALL BE FURNISHED IN A TIMELY MANNER SUCH THAT CONSTRUCTION SCHEDULE IS NOT JEOPARDIZED.
14. INFORM AND COORDINATE WITH THE OWNER ALL NECESSARY INTERRUPTIONS TO EXISTING BUILDING SYSTEMS AND SERVICE THAT MAY AFFECT THE NORMAL OPERATION OF OCCUPIED PORTIONS OF THE BUILDING. THE OWNER SHALL BE INFORMED OF ANY INTERRUPTIONS AT LEAST TWO (2) WEEKS IN ADVANCE.
15. INFORM THE OWNER WELL IN ADVANCE OF ANY WORK TO BE UNDERTAKEN IN OCCUPIED AREAS OF THE BUILDING ASSOCIATED WITH THIS PROJECT. CONFORM TO THE OWNER'S CRITERIA FOR WORK HOURS, ENVIRONMENTAL ISOLATION, AND NOISE LIMITS IN THE PORTIONS OF THE BUILDING WHICH REMAIN OCCUPIED DURING CONSTRUCTION.
16. COORDINATE PHASING REQUIREMENTS FOR THE PROJECT WITH THE GENERAL CONTRACTOR.
17. FIELD MEASURE THE EXACT SIZES AND VERIFY ALL OPENINGS FOR SHAFTS AND LOUVERS PRIOR TO SUBMISSION OF SHOP DRAWINGS AND INSTALLATION.
18. MINIMAL CONTROL POWER HAS BEEN IDENTIFIED ON THE DRAWINGS. IF ANY ADDITIONAL POWER IS REQUIRED BASED ON SYSTEMS DESIGN BY THE CONTROLS CONTRACTOR THE ATC/BAS CONTRACTOR SHALL BE RESPONSIBLE TO SUPPLY THAT POWER.

* NOTE *
ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

Project:

IMPROVEMENTS TO ARLINGTON TOWN HALL PLAZA

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COMMONWEALTH OF MASSACHUSETTS — SCOTT E. HENRICKUS — MECHANICAL — No. 40721 — REGISTERED PROFESSIONAL ENGINEER

Revisions:

Rev	Date	Description

Issued For: BID DOCUMENTS

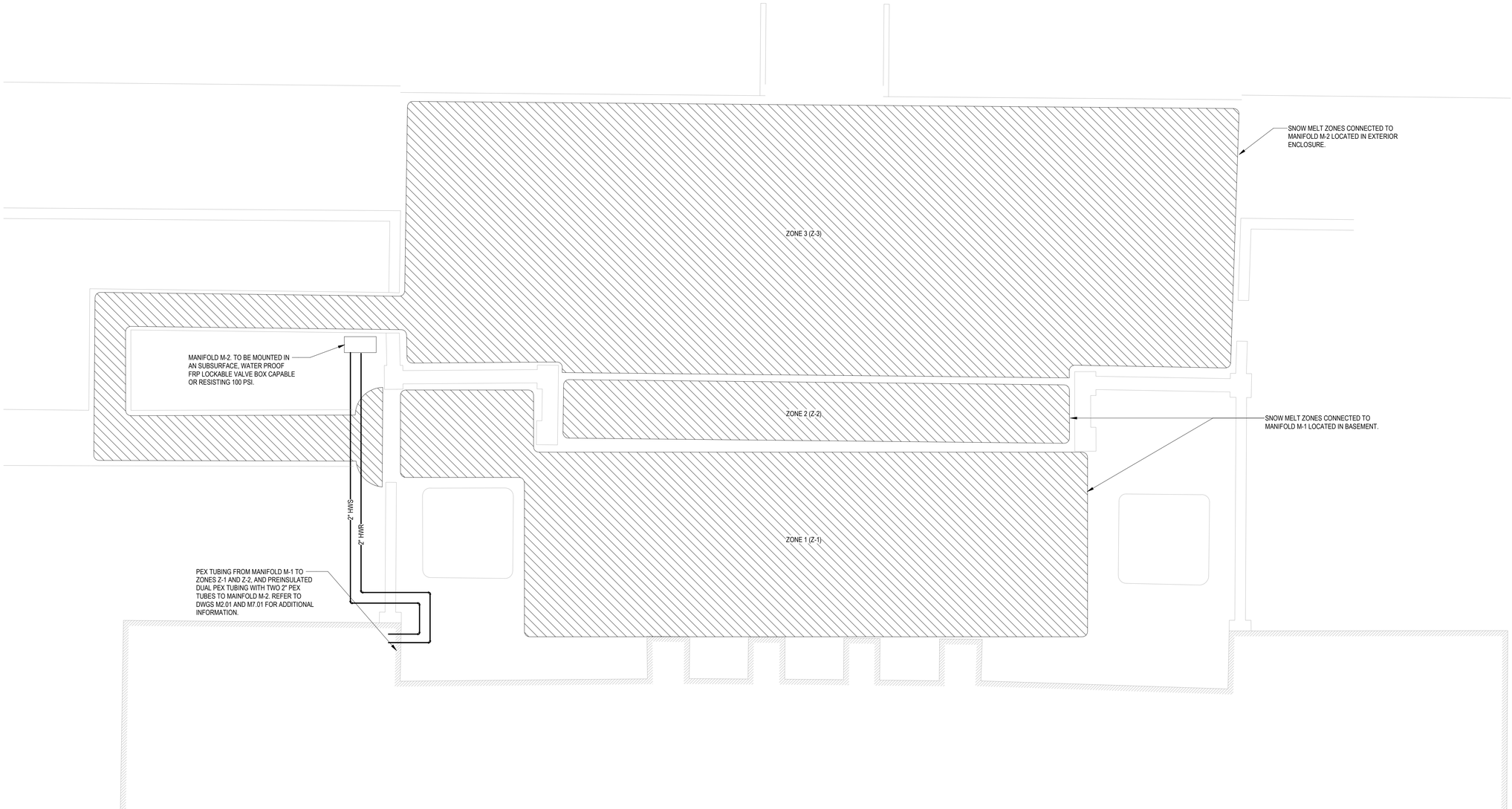
Date:	07/29/2020
Drawn By:	SES
Reviewed By:	SEH
Approved By:	SEH
W&S Project No:	2180559

Drawing Title:

MECHANICAL LEGEND

Sheet Number:

M0.00



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PROJECT TRUE

SCALE: AS NOTED

Date:	07/29/2020
Drawn By:	SES
Reviewed By:	SEH
Approved By:	SEH
W&S Project No:	2180559

Drawing Title:

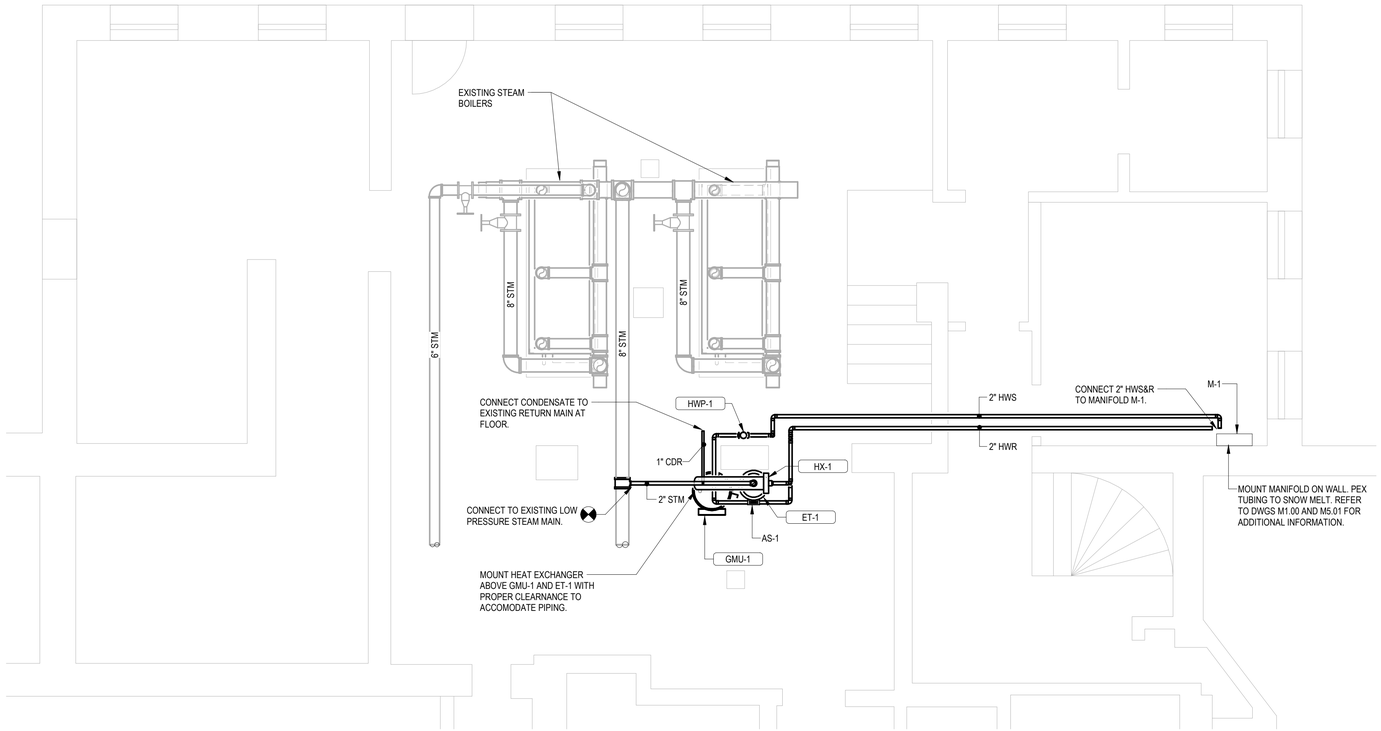
MECHANICAL SITE PLAN

Sheet Number:

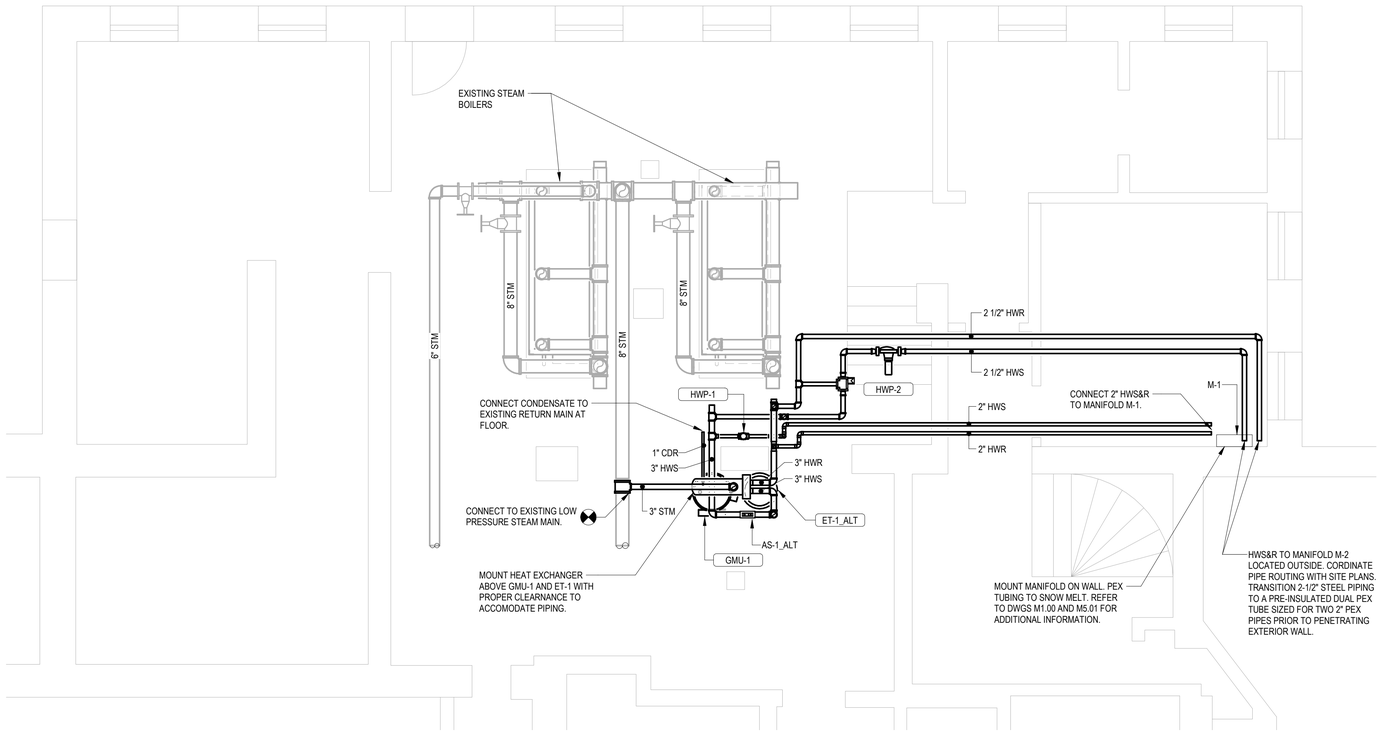
M1.00

CONSTRUCTION GENERAL NOTES

1. EXISTING EQUIPMENT AND PIPING SHOWN IN BOILER ROOM IS FOR REFERENCE. EXISTING LOW PRESSURE STEAM PLANT INCLUDES ADDITIONAL PIPING, EQUIPMENT, AND ACCESSORIES INSTALLED THROUGHOUT THE BOILER ROOM.
2. LOCATION OF NEW EQUIPMENT SHOULD BE COORDINATED WITH EXISTING CONDITIONS IN BOILER ROOM PRIOR TO INSTALLATION. ALL CLEARANCES TO EXISTING EQUIPMENT, SYSTEMS, AND ACCESS POINTS IN BOILER ROOM SHOULD BE MAINTAINED.



1 M2.01 BOILER ROOM PART PLAN - BASE BID
1/4" = 1'-0"



2 M2.01 BOILER ROOM PART PLAN - BID ALTERNATE
1/4" = 1'-0"

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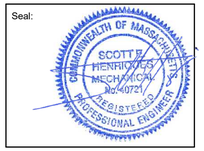

Revisions:

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PROJECT TRUE

SCALE: AS NOTED

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Drawn By:	SES
Reviewed By:	SEH
Approved By:	SEH
W&S Project No:	2180559

Drawing Title:

MECHANICAL PIPING PLAN

Sheet Number:

M2.01

STEAM TO WATER HEAT EXCHANGER SCHEDULE - BASE BID

ID	MANUFACTURER	MODEL NO.	TYPE	STEAM PRESS	STEAM FLOW (LBS/HR)	PRIMARY FLUID HEATING CAP	PRIMARY FLUID DESIGN FLOW	PRIMARY FLUID EWT	PRIMARY FLUID LWT	PRIMARY FLUID PD	PRIMARY FLUID SURFACE AREA	PRIMARY FLUID FOULING FACTOR	PRIMARY FLUID LMTD	HEATING PLANT GLYCOL TYPE	HEATING PLANT GLYCOL %	UNIT DIMENSIONS WIDTH	UNIT DIMENSIONS HEIGHT	UNIT WEIGHT	REMARKS
HX-1	TACO	GB208S	U-TUBE	5.0 psi	291	279 Btu/h	20.0 GPM	140 °F	170 °F	0.1 ftH2O	35.2 SF	0.0010	71 °F	PG	40	4' - 0"	1' - 1 1/2"	283 lb	

1. PROVIDE WITH SADDLES FOR INSTALLATION AND MOUNTING.

STEAM TO WATER HEAT EXCHANGER SCHEDULE - BID ALTERNATE

ID	MANUFACTURER	MODEL NO.	TYPE	STEAM PRESS	STEAM FLOW (LBS/HR)	PRIMARY FLUID HEATING CAP	PRIMARY FLUID DESIGN FLOW	PRIMARY FLUID EWT	PRIMARY FLUID LWT	PRIMARY FLUID PD	PRIMARY FLUID SURFACE AREA	PRIMARY FLUID FOULING FACTOR	PRIMARY FLUID LMTD	HEATING PLANT GLYCOL TYPE	HEATING PLANT GLYCOL %	UNIT DIMENSIONS WIDTH	UNIT DIMENSIONS HEIGHT	UNIT WEIGHT	REMARKS
HX-1_ALT	TACO	G10406S	U-TUBE	5.0 psi	799	768 Btu/h	55.0 GPM	140 °F	170 °F	0.8 ftH2O	81.8 SF	0.0010	71 °F	PG	40	3' - 0"	0' - 10 3/4"	409 lb	

1. PROVIDE WITH SADDLES FOR INSTALLATION AND MOUNTING.

GLYCOL MAKE-UP UNIT SCHEDULE

ID	MANUFACTURER	MODEL NO.	PUMP FLOW	PUMP HEAD	PUMP DISCHARGE PRESS	MOTOR QTY	MOTOR POWER	MOTOR RPM	UNIT VOL	UNIT WEIGHT	FLA	MCA	MOCP	VOLT	PH	REMARKS
GMU-1	BELL & GOSSETT	GMU-30	10.0 GPM	70.0 FT	30.0 psi	1	0.50 hp	3600	55.0 gal	160 lb	9.8 A	12.3 A	20.0 A	120 V	1	

CIRCULATING PUMP SCHEDULE - BASE BID

ID	MANUFACTURER	MODEL NO.	TYPE	PUMP FLOW DESIGN	PUMP HEAD	PUMP DRIVE TYPE	MOTOR POWER	MOTOR RPM	MOTOR ECM	UNIT WEIGHT	VOLT	PH	REMARKS
HWP-1	TACO	2400-50-3P	INLINE	20.0 GPM	22.0 FT	DIRECT	0.50 hp	3450	Yes	16 lb	115 V	60	

1. PROVIDE PUMP WITH MOTOR STARTER AND DISCONNECT SWITCH.

CIRCULATING PUMP SCHEDULE - BID ALTERNATE

ID	MANUFACTURER	MODEL NO.	TYPE	PUMP FLOW DESIGN	PUMP HEAD	PUMP DRIVE TYPE	MOTOR POWER	MOTOR RPM	MOTOR ECM	UNIT WEIGHT	VOLT	PH	REMARKS
HWP-2	TACO	1919 - 2x2	INLINE	35.0 GPM	53.0 FT	DIRECT	1.50 hp	1750	Yes	125 lb	208 V	3	

1. PROVIDE PUMP WITH INTEGRAL VFD, MOTOR STARTER, AND DISCONNECT SWITCH.

EXPANSION TANK SCHEDULE - BASE BID

ID	MANUFACTURER	MODEL NO.	TYPE	VOLUME TANK	VOLUME ACCEPTANCE	UNIT DIMENSIONS HEIGHT	UNIT DIMENSIONS DIAMETER	UNIT WEIGHT	REMARKS
ET-1	TACO	CBX84-125	BLADDER	22.0 gal	12.0 gal	3' - 2 9/16"	1' - 4"	150 lb	

1. AS-1 - PROVIDE AIR SCOOP. TACO MODEL 434, 2" SYSTEM CONNECTION.

EXPANSION TANK SCHEDULE - BID ALTERNATE

ID	MANUFACTURER	MODEL NO.	TYPE	VOLUME TANK	VOLUME ACCEPTANCE	UNIT DIMENSIONS HEIGHT	UNIT DIMENSIONS DIAMETER	UNIT WEIGHT	REMARKS
ET-1_ALT	TACO	CBX130-125	BLADDER	34.0 gal	19.0 gal	3' - 1 5/16"	1' - 8"	200 lb	

1. AS-1_ALT - PROVIDE AIR SCOOP. TACO MODEL 436, 3" SYSTEM CONNECTION.

SNOW MELT MANIFOLD SCHEDULE

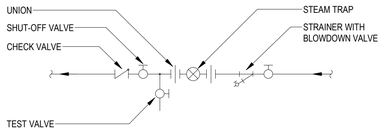
ID	MANUFACTURER	LOCATION	ZONES	CIRCUITS	FLUID	EWT (°F)	TEMP DROP (°F)	SNOW MELT LOAD (MBH)	FLOW (GPM)	WPD (FT HD)	REMARKS
M-1	VIEGA	BASEMENT	2	14	40% PG	170	30	260.8	18.9	16.6	
M-2	VIEGA	EXTERIOR	1	12	40% PG	143	30	459.4	33.3	35.4	

1. PROVIDE COPPER MAINFOLD WITH SHUT-OFF AND BALANCING VALVES.
2. SCHEDULED PRESSURE DROP INCLUDES THE MANIFOLD AND CIRCUITS.

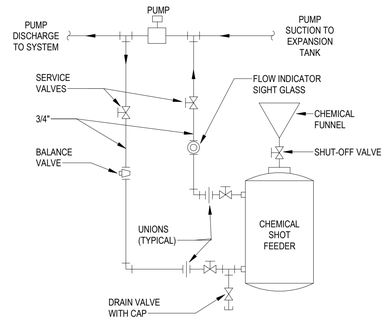
SNOW MELT ZONE SCHEDULE

ID	MANUFACTURER	MANIFOLD	ZONE LOCATION	CIRCUITS	TOTAL AREA (SF)	SLAB DEPTH (IN)	TUBE SPACING...	SNOW MELT LOAD (MBH)	REMARKS
Z-1	VIEGA	M-1	UPPER PLAZA	8	1075	7.5	6	202.5	
Z-2	VIEGA	M-1	PLAZA STAIRS	6	309	7.5	3	58.2	
Z-3	VIEGA	M-2	LOWER PLAZA & RAMP	12	2387	4.0	9	459.4	

1. PROVIDE VIEGA RAPRID GRID INSULATION SYSTEM FOR ZONES 1 AND 3. ZONE 2 SHALL BE INSTALLED WITH 2" RIGID FOAM INSULATION.
2. PROVIDE 5/8" VIEGAPEX BARRIER TUBING.
3. ZONE 2 SHALL HAVE TUBING INSTALLED IN BOTH THE TREAD AND RISE OF THE STAIRS.

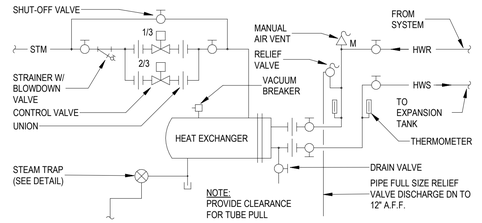


5 M5.01 STEAM TRAP PIPING DETAIL
NO SCALE



NOTE:
1. PROVIDE 2 GALLON CHEMICAL SHOT FEEDER.

6 M5.01 CHEMICAL SHOT FEEDER DIAGRAM
NO SCALE



1 M5.01 STEAM TO HOT WATER HEAT EXCHANGER PIPING DETAIL
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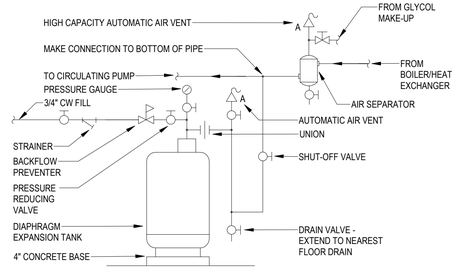

2 M5.01 EXPANSION TANK PIPING WITH COLD WATER FILL DETAIL
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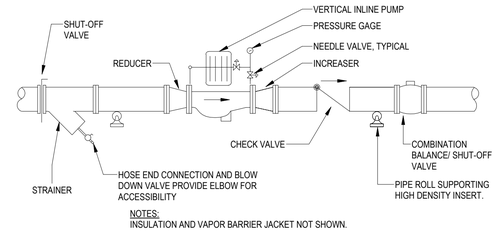
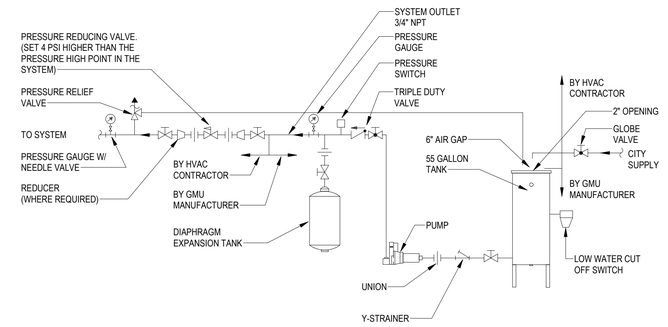


NOTES:
INSULATION AND VAPOR BARRIER JACKET NOT SHOWN.

4 M5.01 INLINE PUMP PIPING
NO SCALE



3 M5.01 GLYCOL MAKE UP UNIT
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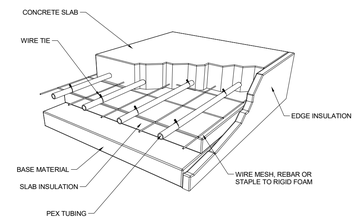

UNDERSLAB AND EDGE INSULATION

7 M5.01 UNDERSLAB AND EDGE INSULATION
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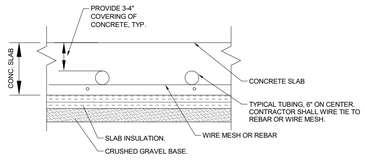

RADIANT SLAB SECTION DETAIL

8 M5.01 RADIANT SLAB SECTION DETAIL
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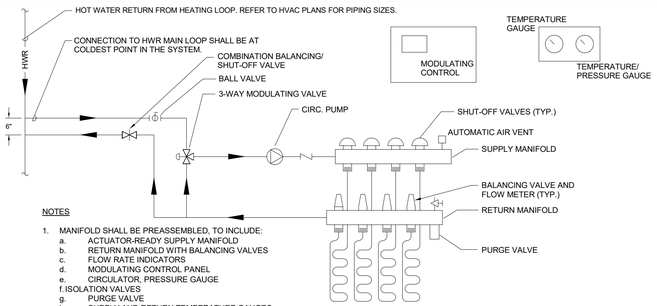

NOTES

1. MANIFOLD SHALL BE PREASSEMBLED, TO INCLUDE:
   a. ACTUATOR-READY SUPPLY MANIFOLD
   b. RETURN MANIFOLD WITH BALANCING VALVES
   c. FLOW RATE INDICATORS
   d. MODULATING CONTROL PANEL
   e. CIRCULATOR, PRESSURE GAUGE
   f. ISOLATION VALVES
   g. PURGE VALVE
   h. SUPPLY AND RETURN TEMPERATURE GAUGES
   i. 3-WAY MODULATING VALVE
2. REFER TO PLANS FOR QUANTITY OF PIPING LOOPS.
3. INSTALLATION TYPICAL FOR 4 ZONES (INCLUDING PUMPS, VALVES, ETC.).

RADIANT MANIFOLD

9 M5.01 RADIANT MANIFOLD
NO SCALE

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Issued For: BID DOCUMENTS

Date: 07/20/2020
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Approved By: SEH
W&S Project No: 2180559

Drawing Title:

MECHANICAL DETAILS & SCHEDULES

Sheet Number:

M5.01

CONTROLS LEGEND

CONTROL POINTS

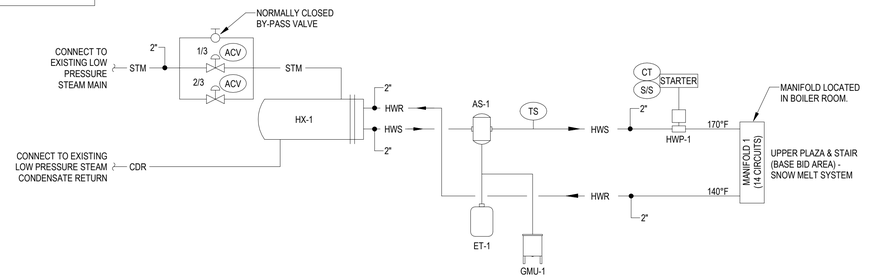
TAG	ATC CONTRACTOR PROVIDED DDC POINT AND HARDWARE

CONTROL ABBREVIATIONS

ACV	AUTOMATIC CONTROL VALVE
CT	CURRENT TRANSDUCER
MS	MOISTURE SENSOR
S/S	START/STOP
TS	TEMPERATURE SENSOR

GENERAL NOTES

1. REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS FOR ADDITIONAL INSTALLATION REQUIREMENTS INCLUDING VALVES, FITTING, AND ACCESSORIES.



TS — OUTDOOR AIR TEMPERATURE SENSOR

MS — SNOW/ICE MOISTURE SENSOR

OUTDOOR SYSTEM SENSORS

GENERAL

1. SNOW MELT SYSTEM TO BE CONTROLLED BY STAND-ALONE PACKAGED CONTROL SYSTEM WITH WIFI INTERFACE. TEKMAR WIFI SNOW MELTING CONTROL 670 OR SIMILAR.
2. SNOW MELT CONTROLLERS TO BE INSTALLED IN THE BASEMENT BOILER ROOM.
3. THE CONTROLLER SHALL INTERFACE WITH THE STEAM CONTROL VALVES, HWS TEMPERATURE SENSOR, HW PUMP, OA TEMPERATURE SENSOR, AND SNOW/ICE MOISTURE SENSOR.
4. THE SYSTEM SHALL BE CONFIGURED WITH SAFTIES AND PROTECTION TO CONTROL SLAB TEMPERATURE, MAINTAIN GLYCOL SOLUTION, WARM WEATHER CUT OFF, COLD WEATHER CUT OFF, AND ROUTINE OPERATION OF PUMPS AND CONTROL VALVES.

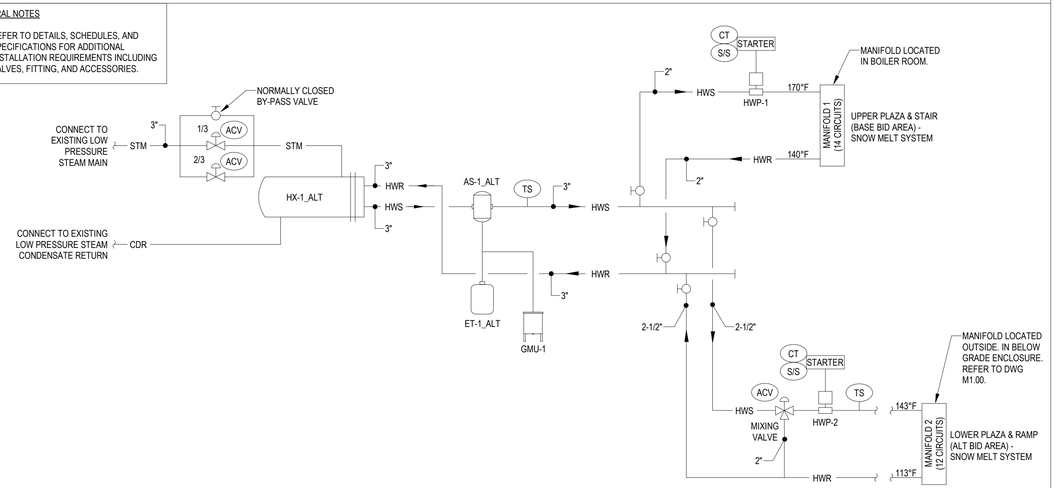
UPPER PLAZA AND STAIR

1. WHEN THE OUTDOOR AIR TEMPERATURE IS 34° (ADJUSTABLE) OR BELOW, THE SYSTEM SHALL GO INTO IDLE MODE. DURING IDLE MODE THE SLAB SHALL BE MAINTAINED AT 32°F. WHEN THE OUTDOOR AIR TEMPERATURE RISES TO 36°F (ADJUSTABLE) OR HIGHER, THE SYSTEM SHALL BE OFF.
2. WHEN THE SYSTEM IS IN IDLE MODE AND THE SNOW/ICE MOISTURE SENSOR DETECTS MOISTURE, THE SYSTEM SHALL GO INTO MELTING MODE. DURING MELTING MODE THE SLAB SHALL BE MAINTAINED AT 38°F. WHEN THE SNOW/ICE MOISTURE SENSOR NO LONGER DETECTS MOISTURE, THE SYSTEM SHALL RETURN TO IDLE MODE OR TURN OFF BASED ON THE OUTDOOR AIR TEMPERATURE.

SNOW MELT SYSTEM FLOW/CONTROL DIAGRAM - BASE BID

GENERAL NOTES

1. REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS FOR ADDITIONAL INSTALLATION REQUIREMENTS INCLUDING VALVES, FITTING, AND ACCESSORIES.



TS — OUTDOOR AIR TEMPERATURE SENSOR UPPER PLAZA

MS — SNOW/ICE MOISTURE SENSOR UPPER PLAZA

TS — OUTDOOR AIR TEMPERATURE SENSOR LOWER PLAZA

MS — SNOW/ICE MOISTURE SENSOR LOWER PLAZA

OUTDOOR SYSTEM SENSORS

GENERAL

1. SNOW MELT SYSTEM TO BE CONTROLLED BY STAND-ALONE PACKAGED CONTROL SYSTEM WITH WIFI INTERFACE. TEKMAR WIFI SNOW MELTING CONTROL 670 OR SIMILAR. PROVIDE INDIVIDUAL CONTROLLER FOR THE UPPER PLAZA AND LOWER PLAZA.
2. SNOW MELT CONTROLLERS TO BE INSTALLED IN THE BASEMENT BOILER ROOM.
3. THE CONTROLLER SHALL INTERFACE WITH THE STEAM CONTROL VALVES, HWS TEMPERATURE SENSORS, HW PUMPS, OA TEMPERATURE SENSORS, AND SNOW/ICE MOISTURE SENSORS. THE UPPER PLAZA CONTROL SHALL BE THE MASTER CONTROL FOR THE STEAM VALVES.
4. THE SYSTEM SHALL BE CONFIGURED WITH SAFTIES AND PROTECTION TO CONTROL SLAB TEMPERATURE, MAINTAIN GLYCOL SOLUTION, WARM WEATHER CUT OFF, COLD WEATHER CUT OFF, AND ROUTINE OPERATION OF PUMPS AND CONTROL VALVES.

UPPER PLAZA AND STAIR

1. WHEN THE OUTDOOR AIR TEMPERATURE IS 34° (ADJUSTABLE) OR BELOW, THE SYSTEM SHALL GO INTO IDLE MODE. DURING IDLE MODE THE SLAB SHALL BE MAINTAINED AT 32°F (ADJUSTABLE). WHEN THE OUTDOOR AIR TEMPERATURE RISES TO 36°F (ADJUSTABLE) OR HIGHER, THE SYSTEM SHALL BE OFF.
2. WHEN THE SYSTEM IS IN IDLE MODE AND THE SNOW/ICE MOISTURE SENSOR DETECTS MOISTURE, THE SYSTEM SHALL GO INTO MELTING MODE. DURING MELTING MODE THE SLAB SHALL BE MAINTAINED AT 38°F (ADJUSTABLE). WHEN THE SNOW/ICE MOISTURE SENSOR NO LONGER DETECTS MOISTURE, THE SYSTEM SHALL RETURN TO IDLE MODE OR TURN OFF BASED ON THE OUTDOOR AIR TEMPERATURE.

LOWER PLAZA AND RAMP

1. THE LOWER PLAZA WILL NOT BE CONTROLLED WITH AN IDLE MODE. THE ZONE WILL BE OFF UNLESS SIGNALED TO START BY THE MELTING MODE.
2. WHEN THE OUTDOOR AIR TEMPERAUTRE IS 34°F (ADJUSTABLE) AND BELOW AND THE SNOW/ICE MOISTURE SENSOR DETECTS MOISTURE, THE SYSTEM SHALL GO INTO MELTING MODE. DURING MELTING MODE THE SLAB SHALL BE MAINTAINED AT 38°F (ADJUSTABLE). WHEN THE SNOW/ICE MOISTURE SENSOR NO LONGER DETECTS MOISTURE AND THE OUTDOOR AIR TEMPERATURE IS HIGHER THAN 34°(ADJUSTABLE), THE SYSTEM SHALL TURN OFF.

SNOW MELT SYSTEM FLOW/CONTROL DIAGRAM - BID ALTERNATE

Project:

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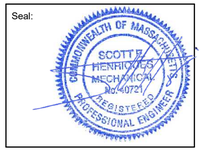

Revisions:

Rev	Date	Description

Issued For: BID DOCUMENTS

Date: 07/20/2020

Drawn By: SES

Reviewed By: SEH

Approved By: SEH

W&S Project No: 2180559

Drawing Title:

MECHANICAL CONTROL/FLOW DIAGRAMS

Sheet Number:

M7.01