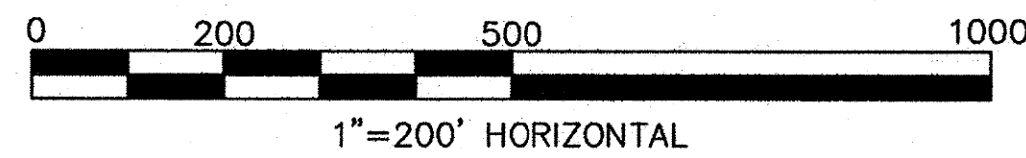
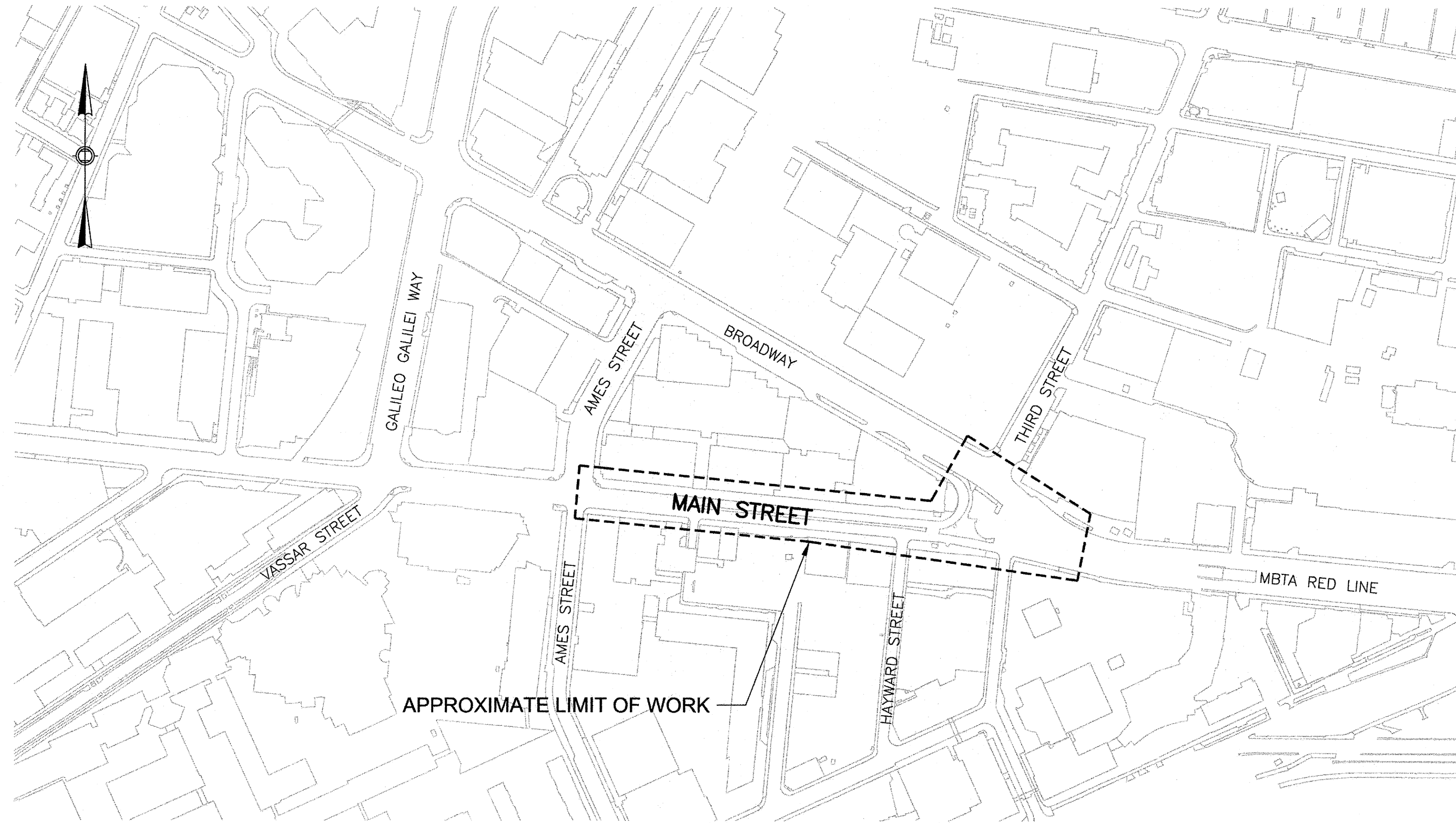


RECONSTRUCTION OF MAIN STREET KENDALL SQUARE

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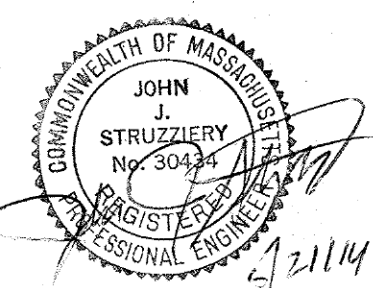
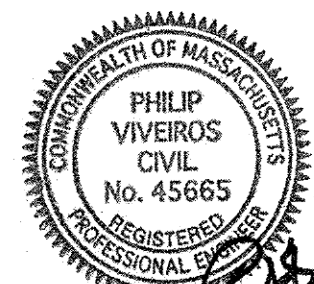
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PREPARED FOR:

CITY OF CAMBRIDGE
DEPARTMENT OF PUBLIC WORKS



HDR ENGINEERING, INC.
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GENERAL LEGEND

EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED

ABBREVIATIONS

ABD	ABANDON	GRAN	GRANITE	SWEL	SOLID WHITE EDGE LINE
ADJ	ADJUST	HYD	FIRE HYDRANT	SWLL	SOLID WHITE LANE LINE
BC	BOTTOM OF CURB	I=30.00	INVERT ELEVATION	TC	TOP OF CURB
BIT	BITUMINOUS CONCRETE	LP	LIGHT POLE	TEL	TELEPHONE
BO.	BY OTHERS	MB	MAILBOX	TH=60.00	TOP OF HOOD ELEVATION
BT	BOTTOM PIPE ELEVATION	MHD	MASSACHUSETTS HIGHWAY DEPARTMENT	TP=50.00	TOP OF PIPE ELAVATION
CB	CATCH BASIN	NOM	NOMINAL	TYP	TYPICAL
CEM	CEMENT	NPV	NO PIPES VISIBLE	VC	VITRIFIED CLAY
CI	CAST IRON	OC	ON CENTER	VGL	VERTICAL GRANITE CURB
CLF	CHAIN LINK FENCE	PAV	PAVEMENT	YL	YIELD LINE
CNO	COULD NOT OPEN (MANHOLE OR CATCH BASIN)	PED	PEDESTRIAN	W	WATER
CONC	CONCRETE	PLT	PLANTER	WIF	WROUGHT IRON FENCE
CP	CATENARY POLE	PM	PARKING METER	WDF	WOOD FENCE
CSTN	COBBLESTONE	PSI	POUNDS PER SQUARE INCH		
CW	CROSSWALK	PVC	POLYVINYLCHORIDE		
DHL	DRILLHOLE	R=50.00	RIM ELEVATION		
DIA	DIAMETER	R&D	REMOVE AND DISPOSE		
DICB	DRAIN INLET CATCH BASIN	R&R	REMOVE AND RESET		
DIP	DUCTILE IRON PIPE	R&S	REMOVE AND SALVAGE		
DMH	DRAIN MANHOLE	REC	RECORD (NOT FOUND IN FIELD)		
DYCL	DOUBLE YELLOW CENTERLINE	RET	RETAIN		
EXIST	EXISTING	REM	REMOVE		
FOD	FULL OF DEBRIS (MANHOLE OR CATCH BASIN)	SL	STOP LINE		
FOHW	FULL OF WATER (MANHOLE OR CATCH BASIN)	STL	STEEL		
FP	FLANGE POST	SW	SIDEWALK		
GALV	GALVANIZED	SWEL	SOLID WHITE EDGE LINE		

GENERAL NOTES

- EXISTING TOPOGRAPHIC AND SITE UTILITY INFORMATION IS BASED ON THE FOLLOWING SOURCES:
 - THE GROUND FIELD SURVEY WAS CONDUCTED BY WSP SELLS ON MAIN STREET FROM MARCH 3, 2011 TO MARCH 18, 2011, AND ON AMES STREET FROM MAY 6, 2011 TO MAY 9, 2011.
 - THE HORIZONTAL DATUM SHOWN HEREON REFERENCES THE MASSACHUSETTS STATE PLANE MAINLAND ZONE, NORTH AMERICAN DATUM OF 1983 (NAD-83) AS SHOWN ON A MASSDOT PLAN AND PROFILE OF BROADWAY (KENDALL SQUARE) DATED OCT. 2010, BASED ON A GROUND SURVEY PREFORMED BY CHAPELL ENGINEERING IN NOV. 2008.
 - THE VERTICAL DATUM SHOWN HEREON REFERENCES THE CAMBRIDGE CITY DATUM AS SHOWN ON A MASSDOT PLAN AND PROFILE OF BROADWAY (KENDALL SQUARE) DATED OCT. 2010, BASED ON A GROUND SURVEY PERFORMED BY CHAPELL ENGINEERING IN NOV. 2008.
- CONTRACTOR SHALL FIELD VERIFY EXISTING SITE CONDITIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCING WORK.
- ALL UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL EXISTING UTILITIES, AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCING WORK.
- RIGHT-OF-WAY AND PROPERTY LINES SHOULD BE CONSIDERED APPROXIMATE IN LOCATION.
- THE CONTRACTOR SHALL NOTIFY, IN WRITING, ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES PRIOR TO EXCAVATION WORK AND CALL "DIG-SAFE" AT 1-800-322-4844, PRIOR TO COMMENCING WORK.
- ALL FEES AND PERMITS SHALL BE PAID FOR BY THE CONTRACTOR.
- THE CONTRACTOR SHALL SECURE THE WORK AREA AT THE END OF EACH WORK DAY.
- CONTRACTOR SHALL RESTORE TO THEIR ORIGINAL CONDITION ANY AREAS ADJACENT TO AND OUTSIDE THE LIMIT OF WORK WHICH ARE DISTURBED DURING CONSTRUCTION, AT THE CONTRACTOR'S OWN EXPENSE.
- UTILITY SERVICES SHALL BE MAINTAINED AT ALL TIMES.
- CONTRACTOR SHALL SAWCUT ALL EDGES OF PAVING WHERE PAVEMENT IS TO BE REMOVED AND WHERE A NEW PAVEMENT IS TO ABUT EXISTING PAVEMENT.
- CONTRACTOR SHALL PROVIDE EXPANSION JOINTS IN CONCRETE WALKS WHERE WALKS ABUT BUILDING WALLS, AND WHERE NEW WALKS ABUT EXISTING WALKS.
- CONTRACTOR SHALL PROVIDE UNIFORM SLOPE BETWEEN SPOT GRADES AND CONTOURS.
- CONTRACTOR SHALL ADJUST ALL EXISTING CITY OWNED UTILITY CASTINGS WITHIN LIMIT OF WORK TO LINE AND GRADE, UNLESS OTHERWISE NOTED. CONTRACTOR SHALL COORDINATE THE ADJUSTMENT OF ALL OTHER PRIVATELY OWNED UTILITIES AND SHALL PROVIDE AT MINIMUM A ONE WEEK NOTICE OF WORK COMMENCING IN THE AREAS REQUIRING ADJUSTMENT.
- CONTRACTOR SHALL PROVIDE A STAKED LAYOUT ON SITE FOR ENGINEER'S REVIEW PRIOR TO COMMENCING WORK.
- LABELED DIMENSIONS SUPERSEDE SCALED DIMENSIONS FOR ALL LAYOUT WORK.
- AT ALL LOCATIONS, STATION AND OFFSETS ARE GIVEN TO REVEAL SIDE OF CURB OR EDGE OF PAVEMENT AS APPROPRIATE. IN THE CASE OF FLUSH CURB, STATION AND OFFSETS ARE GIVEN TO THE "UP STATION" EDGE OF CURB.
- ALL LINES ARE PARALLEL OR PERPENDICULAR UNLESS OTHERWISE INDICATED.
- THE LIMIT OF WORK SHALL BE AT THE PROPERTY LINES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- "DON'T DUMP" PLACARDS SHALL BE INSTALLED AT ALL EXISTING AND PROPOSED CATCH BASINS WHICH ARE ADJACENT TO SIDEWALKS RECONSTRUCTED UNDER THIS CONTRACT. PLACARDS WILL BE FURNISHED BY THE CITY AT NO COST TO THE CONTRACTOR.
- EXISTING STRAIGHT MAHOGANY CURB SHALL BE REMOVED AND STACKED AT A LOCATION DETERMINED BY THE CITY OF CAMBRIDGE. EXISTING CURVED MAHOGANY CURB SHALL BE REMOVED AND DISPOSED. EXISTING "GREY" CURB WITHIN PROJECT LIMITS MAY BE REMOVED AND RESET AT THE DISCRETION OF THE ENGINEER.



CONFORMED

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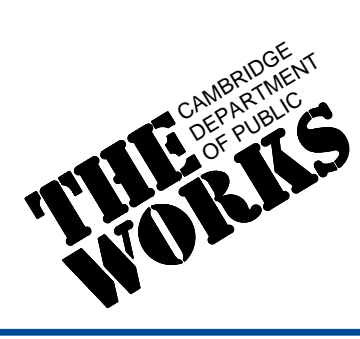
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Scale	AS NOTED			
Date	MAY 2014			
Job No.				
Designed by	JEC			
Drawn by	JEC			
Checked by	RDK	No.	Description	Date
Approved by	GMF	REVISIONS		

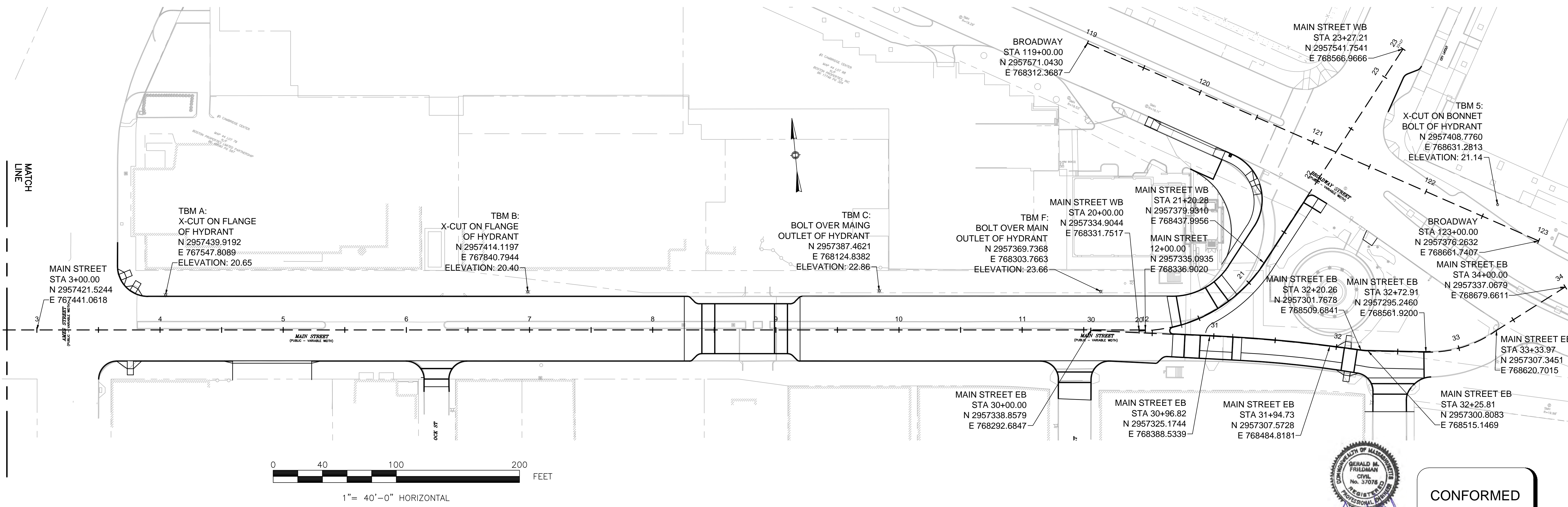
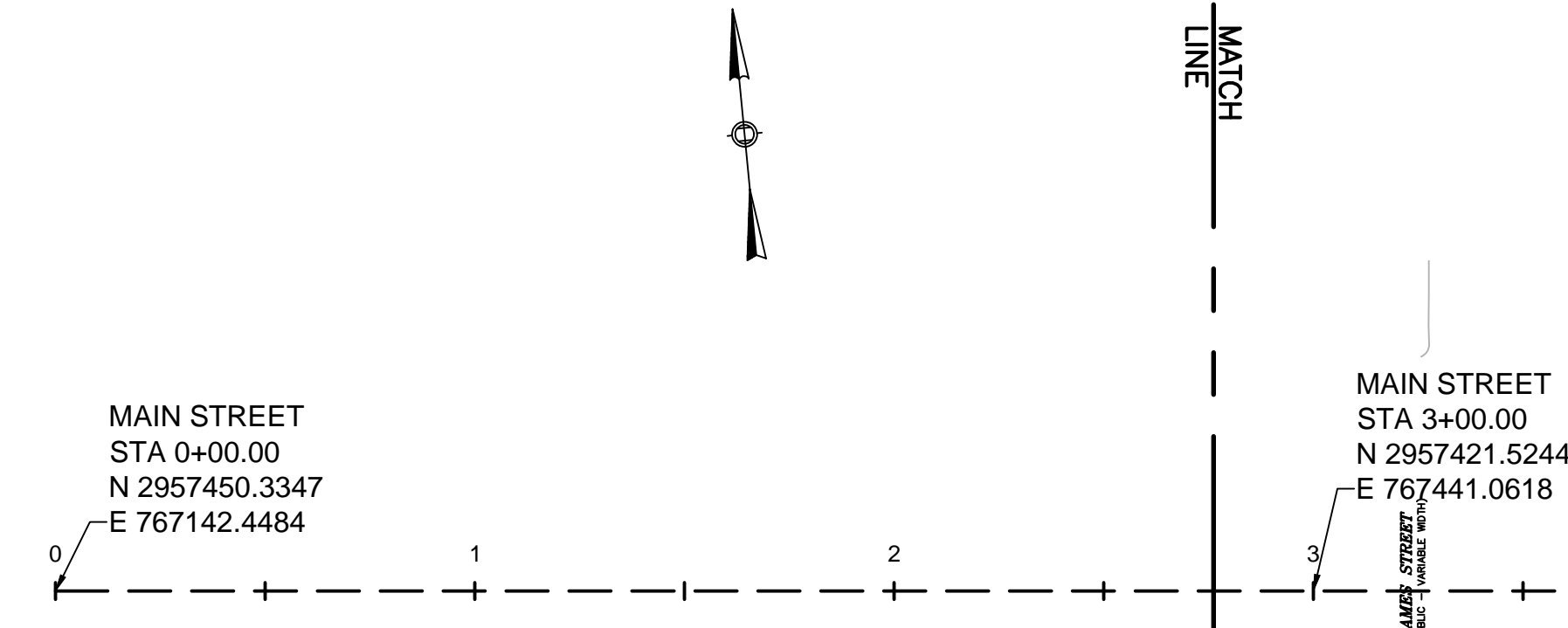


Client	CITY OF CAMBRIDGE, MA
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing	LEGEND, ABBREVIATIONS, & GENERAL NOTES

Sheet	G-2
File No.	

ALIGNMENT TABLE			
BEGINNING ALIGNMENT	AZIMUTH	LENGTH	ENDING ALIGNMENT
MAIN STREET STA 0+00 N 2957450.3347 E 767142.4484	S84°-29'-20.93"E	1200.00'	MAIN STREET STA 12+00 N 2957335.0935 E 768336.9020
BROADWAY STA 119+00 N 2957571.0430 E 768312.3687	S60°-51'-35.00"E	400.00'	BROADWAY STA 123+00 N 2957376.2632 E 768661.7407
MAIN STREET WB STA 20+00 N 2957334.9044 E 768331.7517	R=121.00'	120.28'	MAIN STREET WB STA 21+20.28 N 2957379.9310 E 768437.9956
	S38°-33'-15.88"W	206.93'	MAIN STREET WB STA 23+27.21 N 2957541.7541 E 768566.9666
MAIN STREET EB STA 30+00 N 2957338.8579 E 768292.6847	S81°-52'-31.18"E	96.82'	MAIN STREET EB STA 30+96.82 N 2957325.1744 E 768388.5339
	R=1241.68'	97.91'	MAIN STREET EB STA 31+94.73 N 2957307.5728 E 768484.8181

ALIGNMENT TABLE			
BEGINNING ALIGNMENT	AZIMUTH	LENGTH	ENDING ALIGNMENT
	N76°-51'-34.26"W	25.54'	MAIN STREET EB STA 32+20.26 N 2957301.7678 E 768509.6841
	R=50.00'	5.55'	MAIN STREET EB STA 32+25.81 N 2957300.8083 E 768661.7407
	N83°-13'-05.28"W	47.10'	MAIN STREET EB STA 32+72.91 N 2957295.2460 E 768561.9200
	R=95.00'	61.06'	MAIN STREET EB STA 33+33.97 N 2957307.3451 E 768620.7015
	S63°-14'-46.70"W	66.03'	MAIN STREET EB STA 34+00.00 N 2957337.0679 E 768679.6611



CONFORMED

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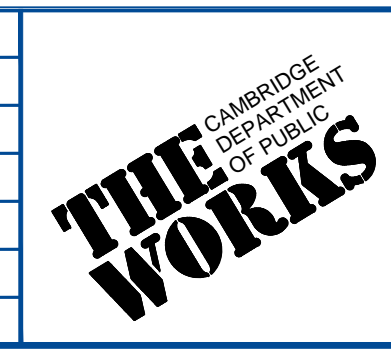
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Checked by	RDK	No.	Description
Approved by	GMF		REVISIONS



Client	CITY OF CAMBRIDGE, MA
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing	CONSTRUCTION BASELINE PLAN

Sheet	G-3
File No.	

PAVEMENT NOTES

PROPOSED FULL DEPTH HMA CONSTRUCTION:

SURFACE: 2" HMA MODIFIED TOP COURSE MATERIAL
2" HMA BINDER COURSE MATERIAL
BASE: 4" HMA BASE COURSE MATERIAL

SUBBASE: 4" DENSE GRADED CRUSHED STONE FOR SUB-BASE OVER 8" GRAVEL BORROW, TYPE B OVER COMPACTED SUBGRADE

NOTE: DEPTH OF GRAVEL BORROW MAY BE LESS THAN 8" AT MBTA TUNNEL DUE TO TUNNEL ROOF ELEVATION.

PROPOSED CONCRETE PAVEMENT:

SURFACE: 10" REINFORCED CONCRETE**
SUBBASE: 8" GRAVEL BORROW, TYPE B*

PROPOSED CEMENT CONCRETE SIDEWALKS:

SURFACE: 4" CEMENT CONCRETE, 4000 PSI, POLYPROPYLENE MICROFIBER REINFORCED
SUBBASE: 8" GRAVEL BORROW, TYPE B*

PROPOSED CEMENT CONCRETE SIDEWALK AT DRIVEWAYS, CURB RAMPS AND INTERSECTIONS

SURFACE: 6" CEMENT CONCRETE, 4000 PSI, POLYPROPYLENE MICROFIBER REINFORCED
SUBBASE: 8" GRAVEL BORROW, TYPE B*

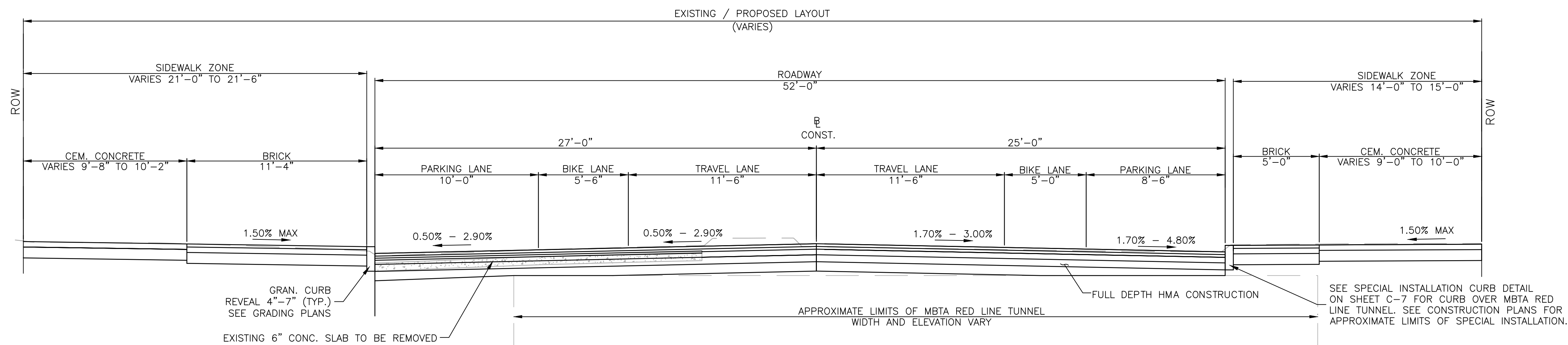
PROPOSED BRICK SIDEWALKS:

SURFACE: 2-1/4" WIRE CUT BRICK; JOINTS SWEEP WITH SAND-CEMENT MIX
SETTING BED: 3/4" SAND-ASPHALT BED, TREATED WITH NEOPRENE MODIFIED ASPHALT TACK COAT
BASE: 4" CONCRETE BASE COURSE, 4000 PSI, POLYPROPYLENE MICROFIBER REINFORCED***
SUBBASE: 8" GRAVEL BORROW, TYPE B*

* EXISTING GRAVEL DETERMINED TO BE SUITABLE SHALL REMAIN

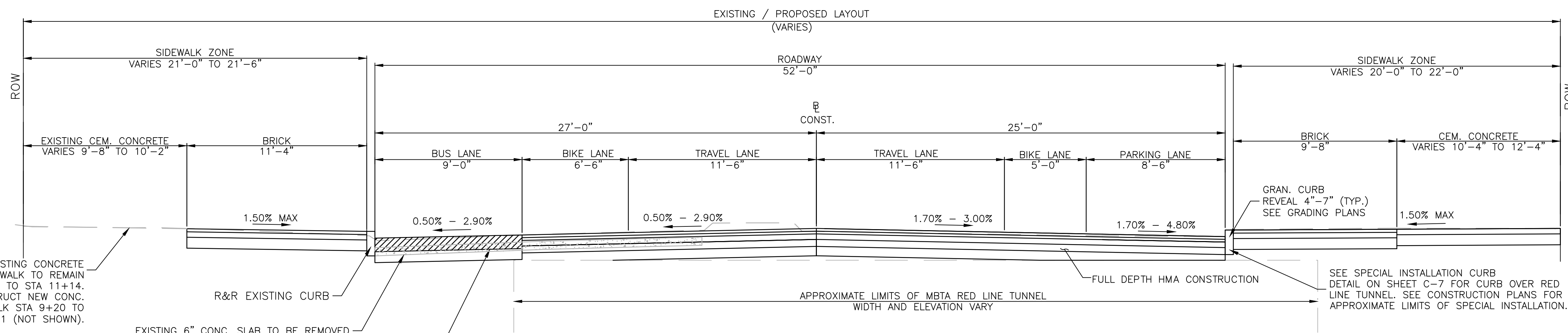
** SEE SHEET C-3 FOR CONCRETE PAVEMENT DETAILS

*** 6" AT DRIVEWAYS AND INTERSECTION AREAS



TYPICAL SECTION - MAIN STREET

STA. 3+90 to STA. 8+28
SCALE: NTS



TYPICAL SECTION - MAIN STREET

STA. 9+20 to STA. 11+14
SCALE: NTS

*** NOTE: USE EXTREME CAUTION WHEN EXCAVATING NEAR MBTA TUNNEL TO AVOID DAMAGE TO TUNNEL STRUCTURE, WATERPROOFING OR PROTECTION COURSE. REPORT SUSPECTED EXPOSURE OF TUNNEL STRUCTURE TO ENGINEER IMMEDIATELY.



CONFORMED

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Date	MAY 2014			
Job No.				
Designed by	JEC			
Drawn by	JEC			
Checked by	RDK	No.	Description	Date
Approved by	GMF		REVISIONS	



Client	CITY OF CAMBRIDGE, MA
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing	TYPICAL SECTIONS - 1

Sheet	C-1
File No.	

PAVEMENT NOTES

PROPOSED FULL DEPTH HMA CONSTRUCTION:

- SURFACE: 2" HMA MODIFIED TOP COURSE MATERIAL
2" HMA BINDER COURSE MATERIAL
- BASE: 4" HMA BASE COURSE MATERIAL
- SUBBASE: 4" DENSE GRADED CRUSHED STONE FOR SUB-BASE OVER 8" GRAVEL BORROW, TYPE B OVER COMPACTED SUBGRADE

PROPOSED PAVEMENT MILLING AND HMA OVERLAY:

- MILLING: PAVEMENT MILLING VARIABLE DEPTH (2"-4") TO MEET PROPOSED GRADING. MULTIPLE PASSES WITH THE PAVEMENT MILLING TO REMOVE EXISTING PAVEMENT AS SHOWN ON THE PLANS AND TO PROVIDE A STABLE SURFACE FOR PAVING OVERLAY SHALL BE INCIDENTAL TO PAVEMENT MILLING COST PER SQUARE YARD.
- SURFACE: 2" HMA MODIFIED TOP COURSE MATERIAL OVER VARIABLE DEPTH HMA LEVELING COURSE AS REQUIRED.
- TACK COAT: EMULSIFIED ASPHALT TACK COAT GRADE RS-1 PLACED AT A RESIDUAL RATE OF 0.07 GALLONS PER SQUARE YARD OVER MILLED SURFACES; 0.05 GALLONS PER SQUARE YARD OVER SMOOTH PAVEMENT

PROPOSED FULL DEPTH UNIT PAVER CONSTRUCTION:

- SURFACE: RED OR GREY (AS INDICATED) PRECAST CONCRETE "OPTILOCK" PAVER
3/4" BEDDING SAND MATERIAL
- BASE: 6" HMA BASE COURSE
- SUBBASE: 12" GRAVEL BORROW

PROPOSED CEMENT CONCRETE SIDEWALKS:

- SURFACE: 4" CEMENT CONCRETE, 4000 PSI, POLYPROPYLENE MICROFIBER REINFORCED
- SUBBASE: 8" GRAVEL BORROW, TYPE B*
- * EXISTING GRAVEL DETERMINED TO BE SUITABLE SHALL REMAIN

PROPOSED CEMENT CONCRETE SIDEWALK AT DRIVEWAYS, CURB RAMPS AND INTERSECTIONS

- SURFACE: 6" CEMENT CONCRETE, 4000 PSI, POLYPROPYLENE MICROFIBER REINFORCED
- SUBBASE: 8" GRAVEL BORROW, TYPE B*
- * EXISTING GRAVEL DETERMINED TO BE SUITABLE SHALL REMAIN

PROPOSED BRICK SIDEWALKS:

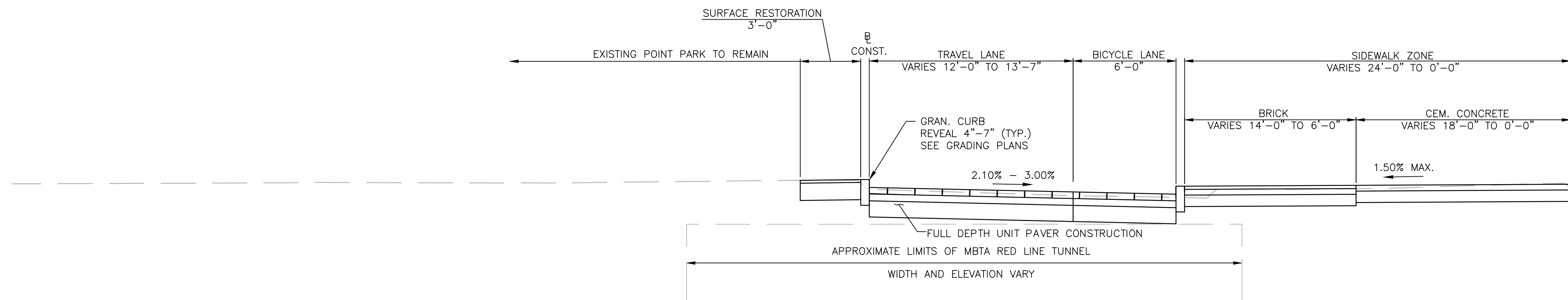
- SURFACE: 2-1/4" WIRE CUT BRICK; JOINTS SWEEPED WITH SAND-CEMENT MIX
- SETTING BED: 3/4" SAND-ASPHALT BED, TREATED WITH NEOPRENE MODIFIED ASPHALT TACK COAT
- BASE: 4" CONCRETE BASE COURSE, 4000 PSI, POLYPROPYLENE MICROFIBER REINFORCED**
- SUBBASE: 8" GRAVEL BORROW, TYPE B*
- * EXISTING GRAVEL DETERMINED TO BE SUITABLE SHALL REMAIN
- ** 6" AT DRIVEWAYS AND INTERSECTION AREAS

POINT PARK SURFACE RESTORATION

- RESTORE DISTURBED AREA WITH 4" LOAM AND SEED OR 4" HMA WALK SURFACE AS APPROPRIATE

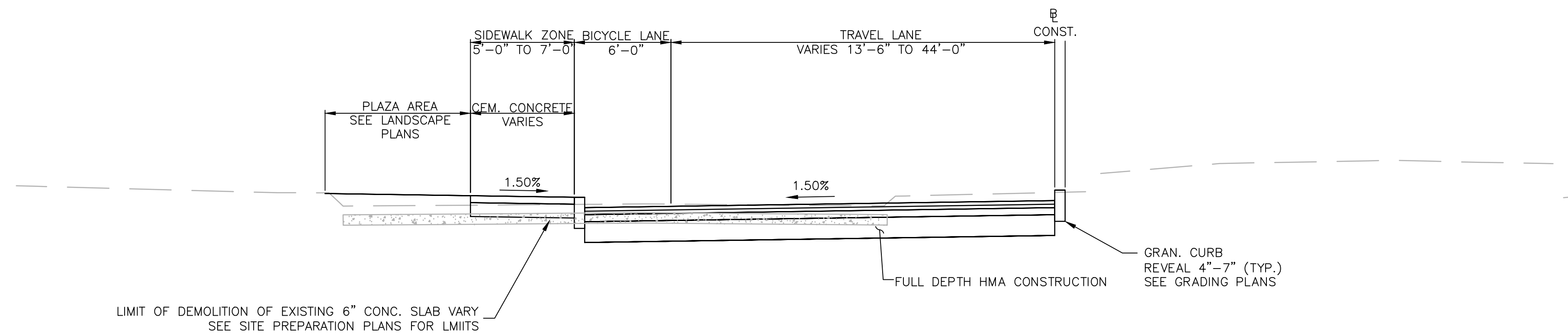


CONFORMED



TYPICAL SECTION - MAIN STREET EASTBOUND
STA. 31+23 to STA. 32+76
SCALE: NTS

*** NOTE: USE EXTREME CAUTION WHEN EXCAVATING NEAR MBTA TUNNEL TO AVOID DAMAGE TO TUNNEL STRUCTURE, WATERPROOFING OR PROTECTION COURSE. REPORT SUSPECTED EXPOSURE OF TUNNEL STRUCTURE TO ENGINEER IMMEDIATELY.



TYPICAL SECTION - THIRD STREET CONNECTOR
STA. 20+86 to STA. 21+88
SCALE: NTS

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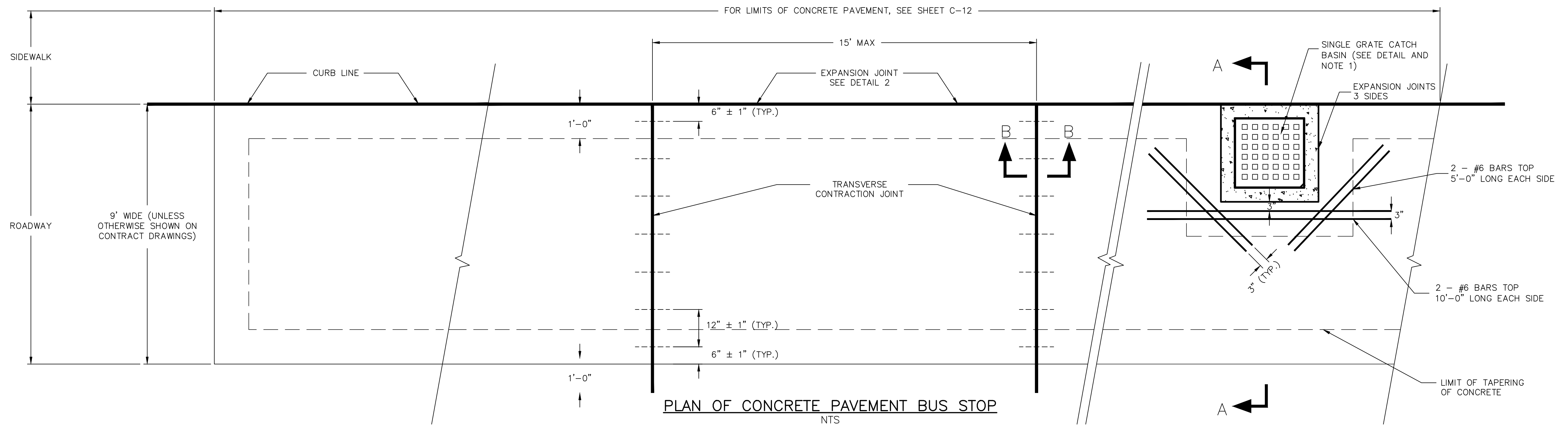
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Scale	AS NOTED			
Date	MAY 2014			
Job No.				
Designed by	JEC			
Drawn by	JEC			
Checked by	RDK	No.	Description	Date
Approved by	GMF	REVISIONS		



Client	CITY OF CAMBRIDGE, MA
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing	TYPICAL SECTIONS -2

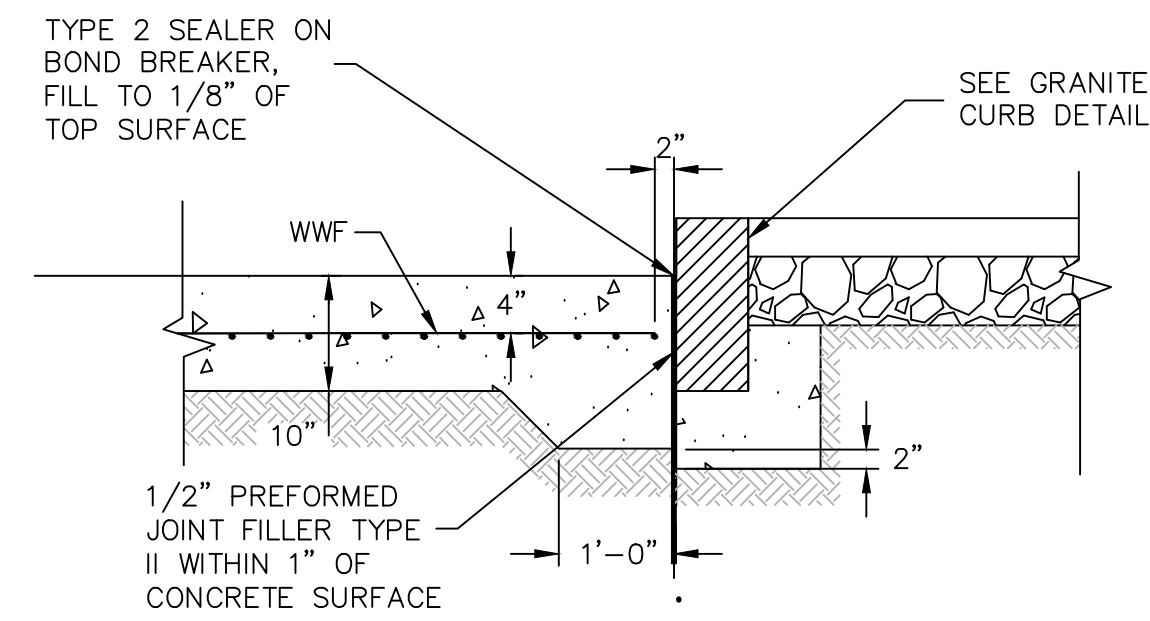
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File No.	



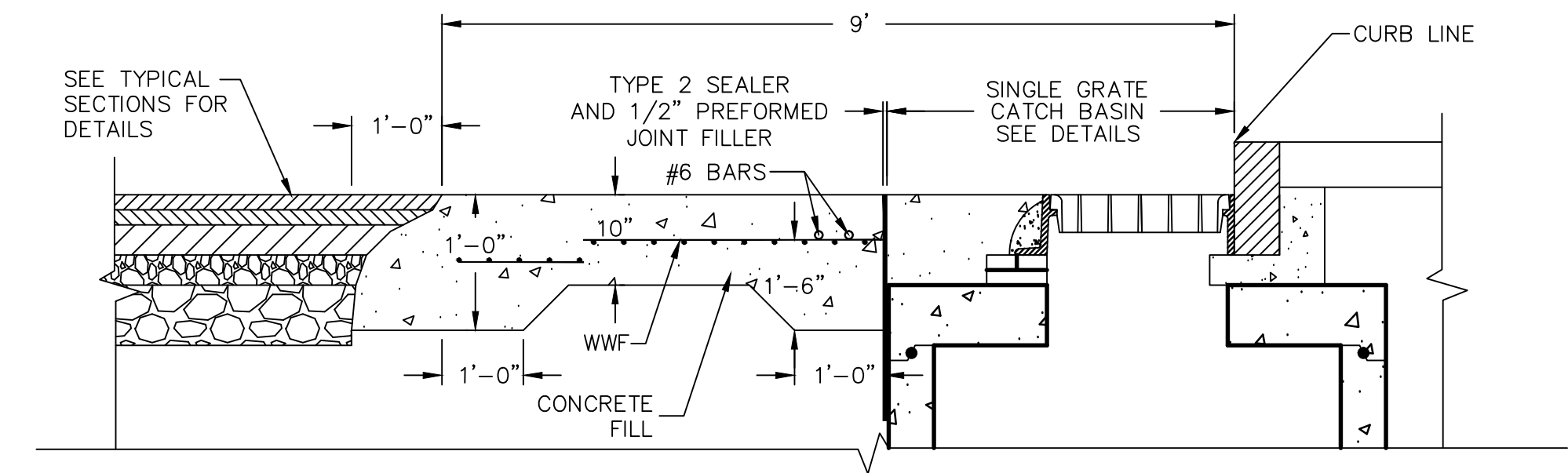
PLAN OF CONCRETE PAVEMENT BUS STOP
NTS

NOTES

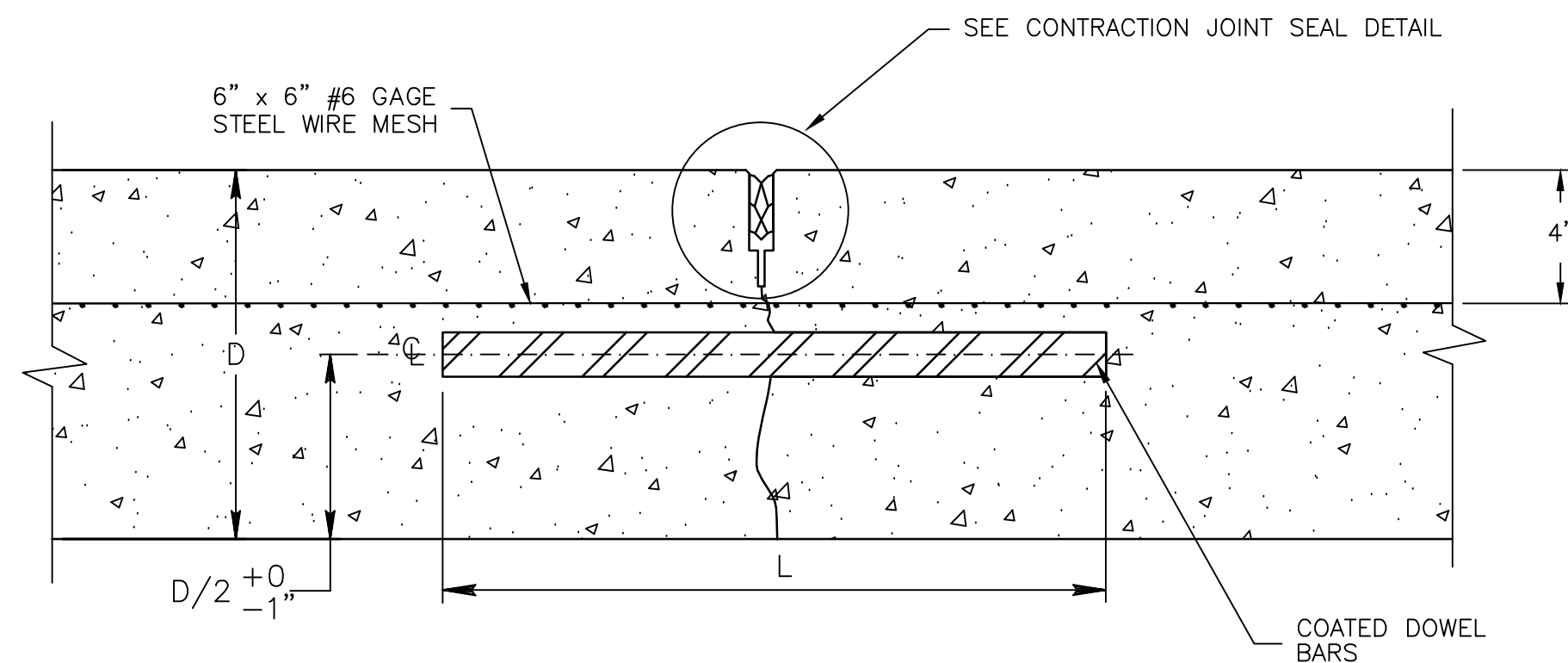
1. DRAINAGE STRUCTURES AND MANHOLES SHALL BE TOTALLY WITHIN OR TOTALLY OUTSIDE THE CONCRETE PAVEMENT.
2. LAPS IN WELDED WIRE FABRIC SHALL BE A MINIMUM OF 12 INCHES.
3. USE MINIMUM 1-1/4"x18" LONG DOWEL BARS FOR PAVEMENT DEPTHS 10" OR LESS AND MINIMUM 1-1/2"x18" LONG DOWEL BARS FOR PAVEMENT DEPTHS GREATER THAN 10". APPROVED ALTERNATE DOWEL BARS HAVING EQUIVALENT PROPERTIES TO CONVENTIONAL ROUND DOWEL BARS MAY BE USED. COATED DOWEL BARS TO BE EITHER GRADE 40 OR GRADE 60.
4. MAKE THE TOP OF THE JOINT SEALING MATERIAL FROM 1/8" TO 1/4" BELOW THE SURFACE OF THE PAVEMENT. USE HEAT RESISTANT JOINT BACKING MATERIAL FOR HOT POURED JOINTS.
5. EPOXY COAT TIE BARS AS SPECIFIED IN ASTM-D3963. STRAIGHT TIE BARS TO BE EITHER GRADE 40 OR GRADE 60. BENT TIE BARS TO BE GRADE 40 ONLY.



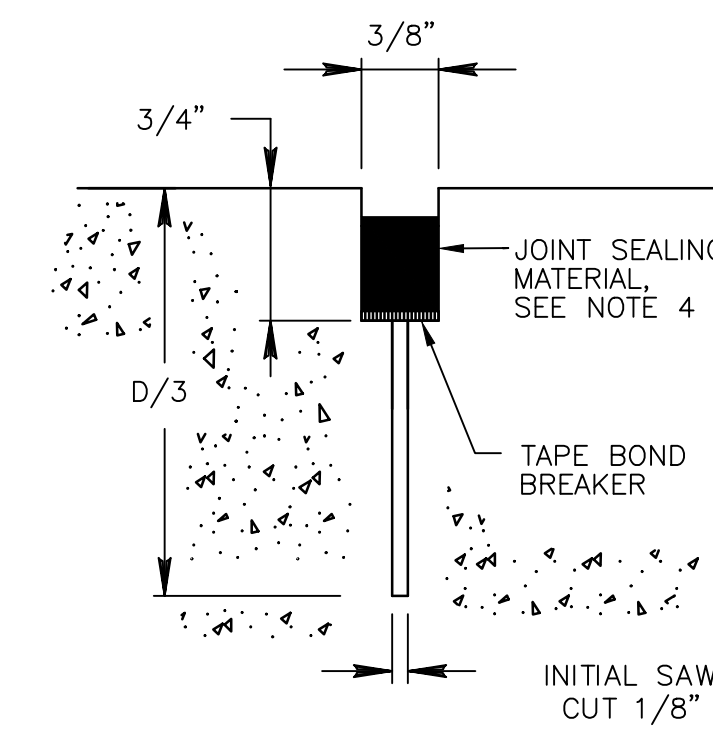
DETAIL 2 - EXPANSION JOINT AT GRANITE CURB
NTS



SECTION A-A
NTS



SECTION B-B
TRANSVERSE CONTRACTION JOINT
NTS



CONTRACTION JOINT SEAL DETAIL



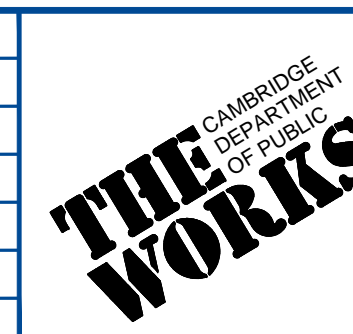
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BOSTON, MASSACHUSETTS 02111-2626
(617) 357-7700



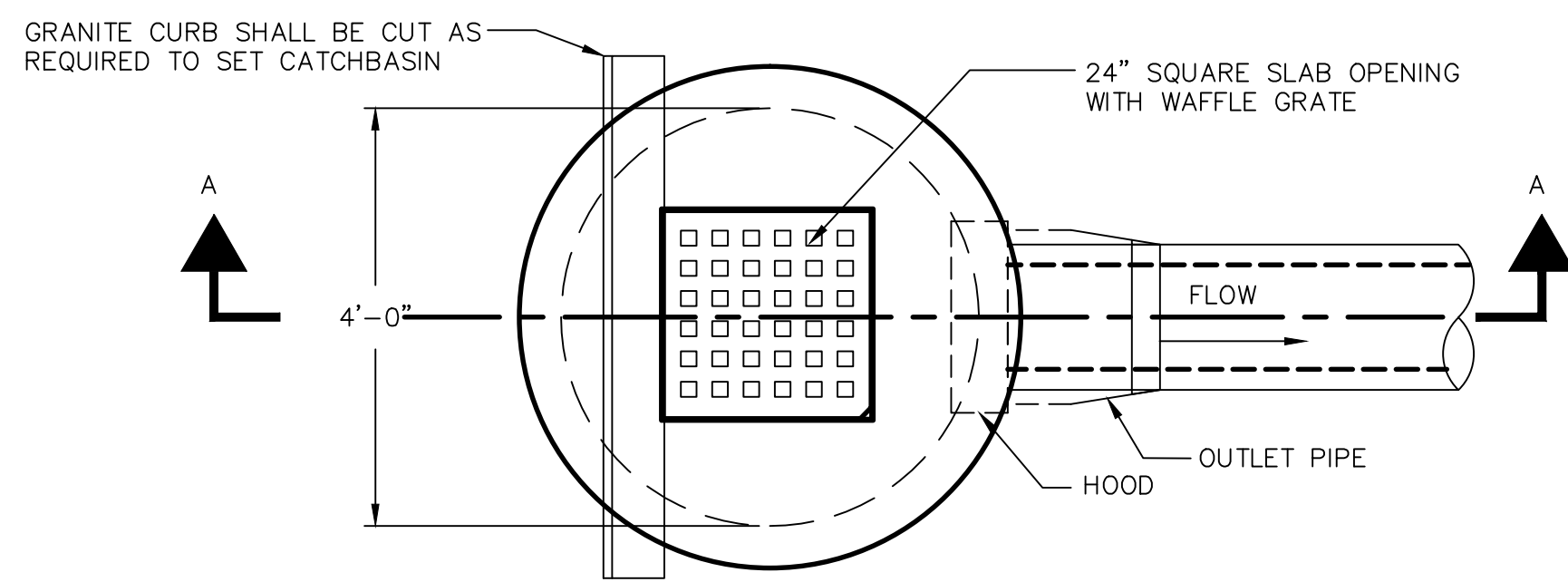
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Date	MAY 2014			
Job No.				
Designed by	JEC			
Drawn by	JEC			
Checked by	RDK	No.	Description	Date
Approved by	GMF		REVISIONS	



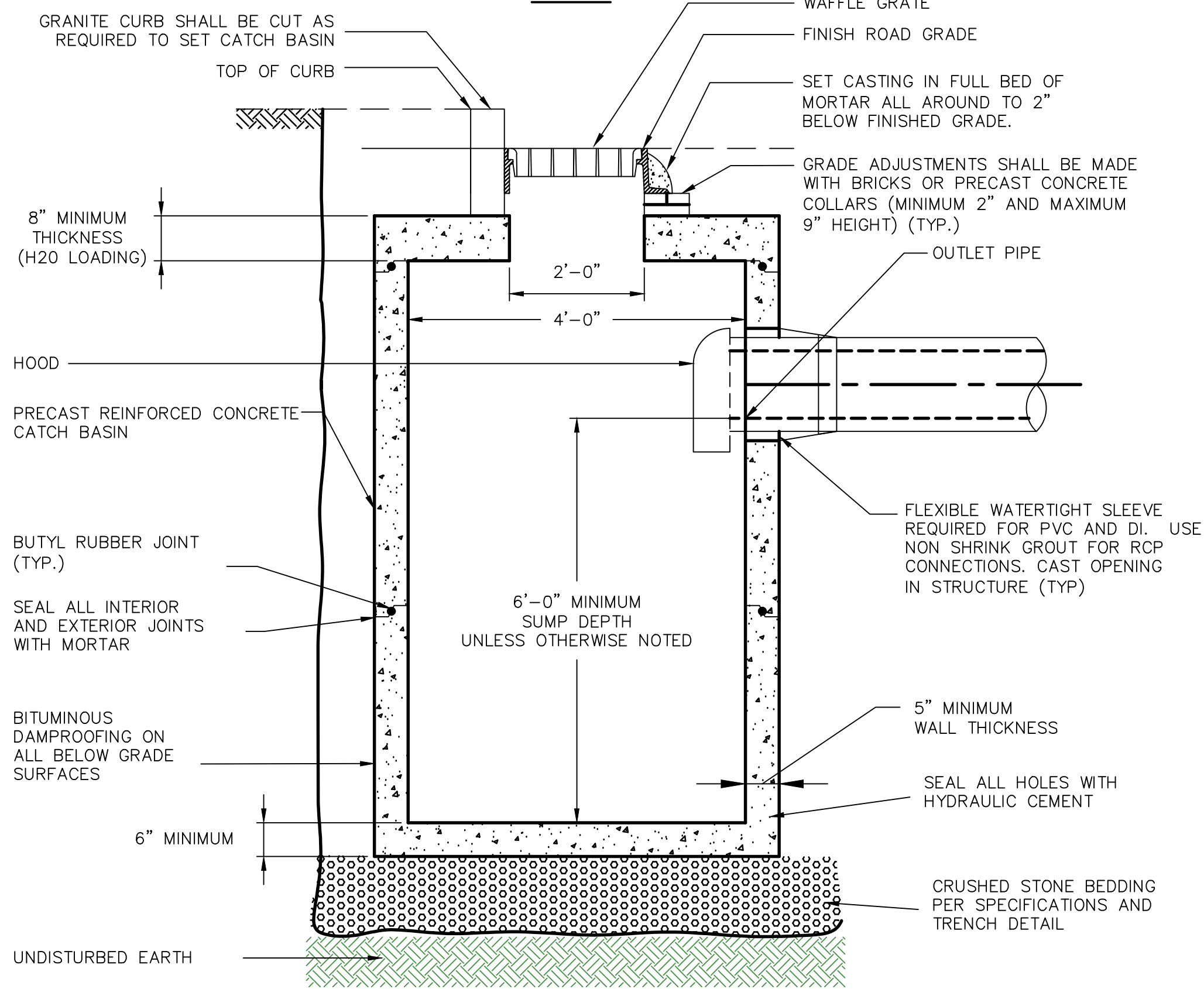
Client	CITY OF CAMBRIDGE, MA
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing	CIVIL DETAILS - 1

Sheet	C-3
File No.	

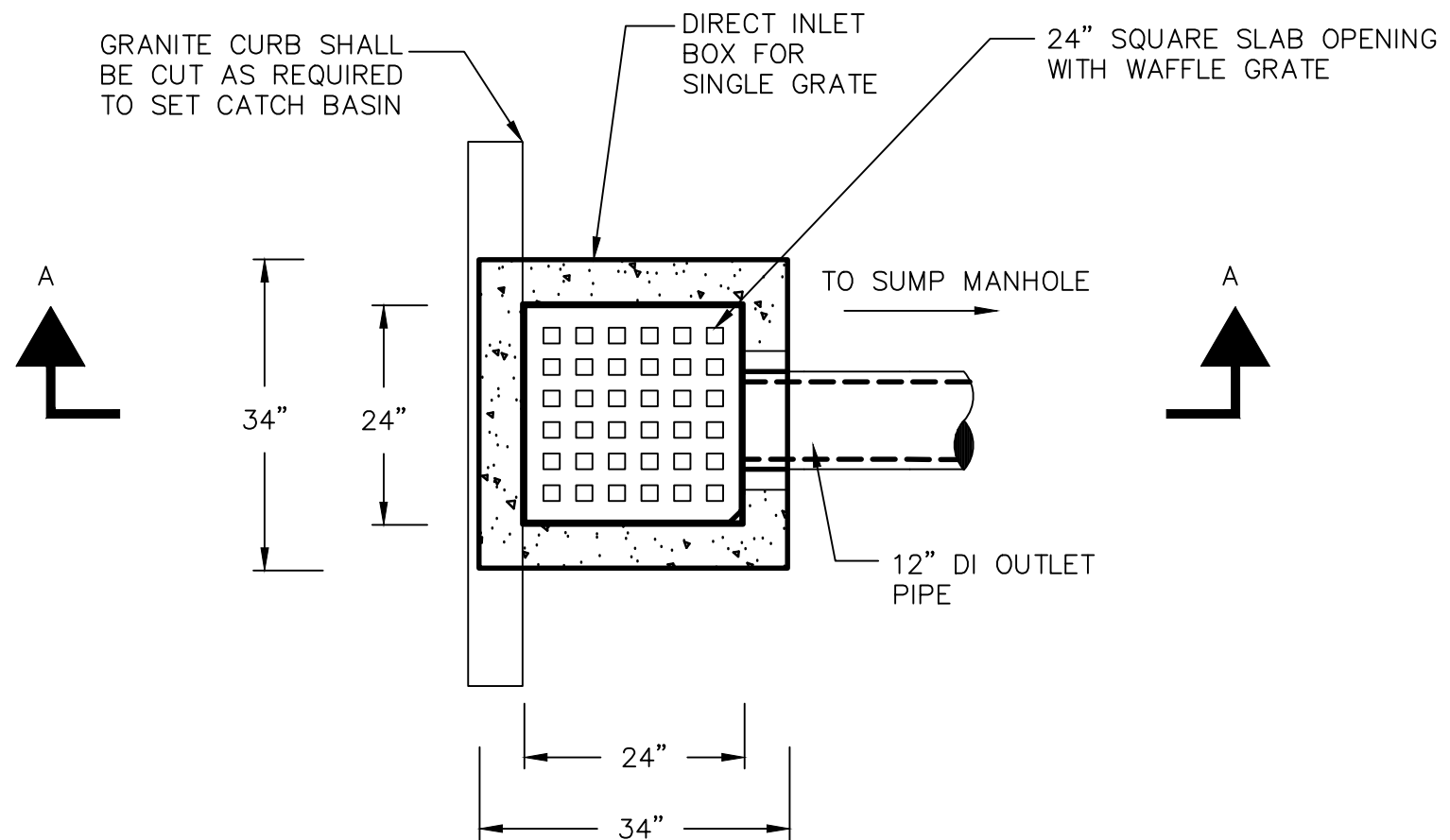
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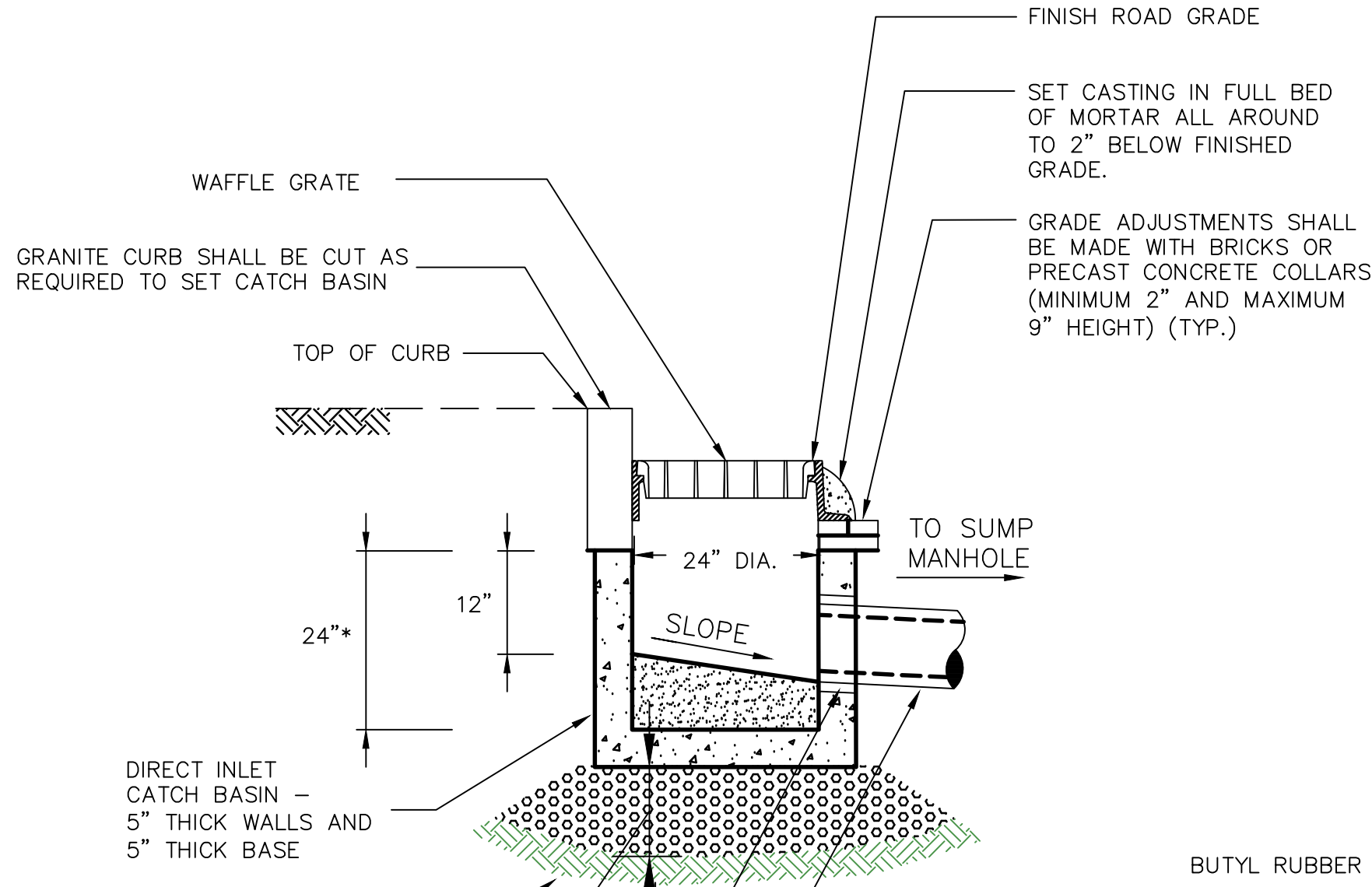
PLAN



SECTION A-A
SINGLE GRATE CATCH BASIN
NTS

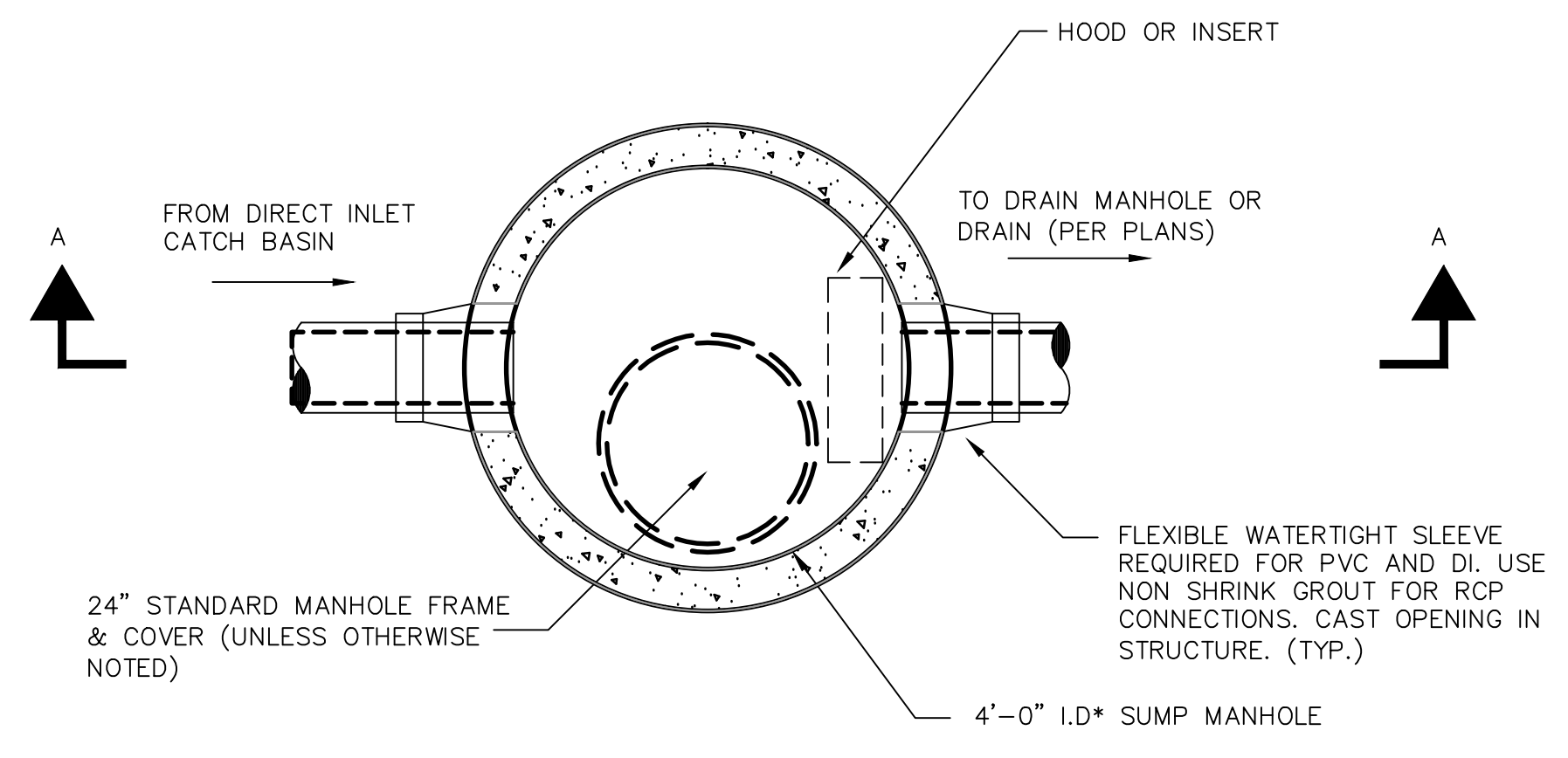


PLAN

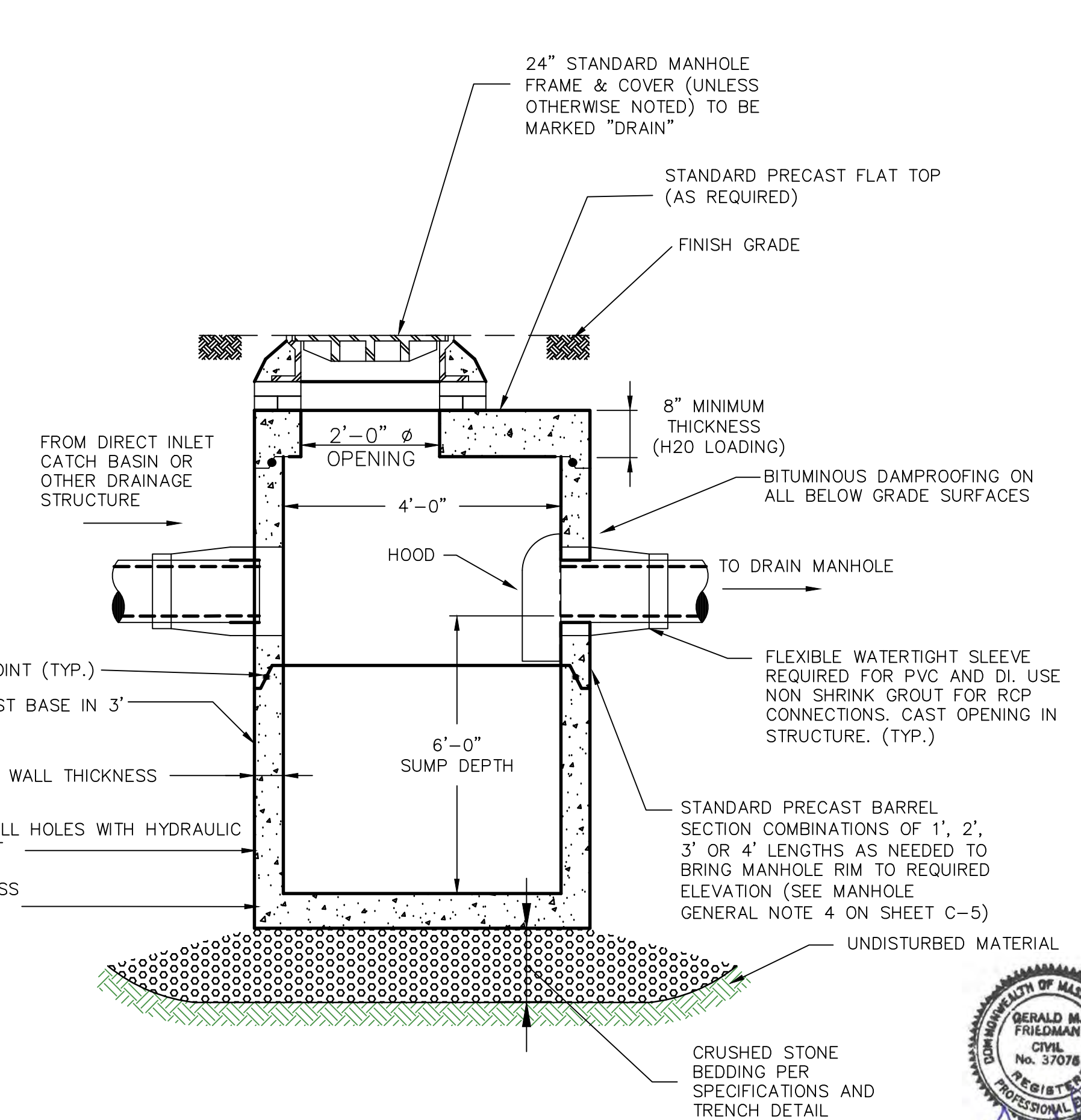


SECTION A-A

DIRECT INLET CATCH BASIN
NTS



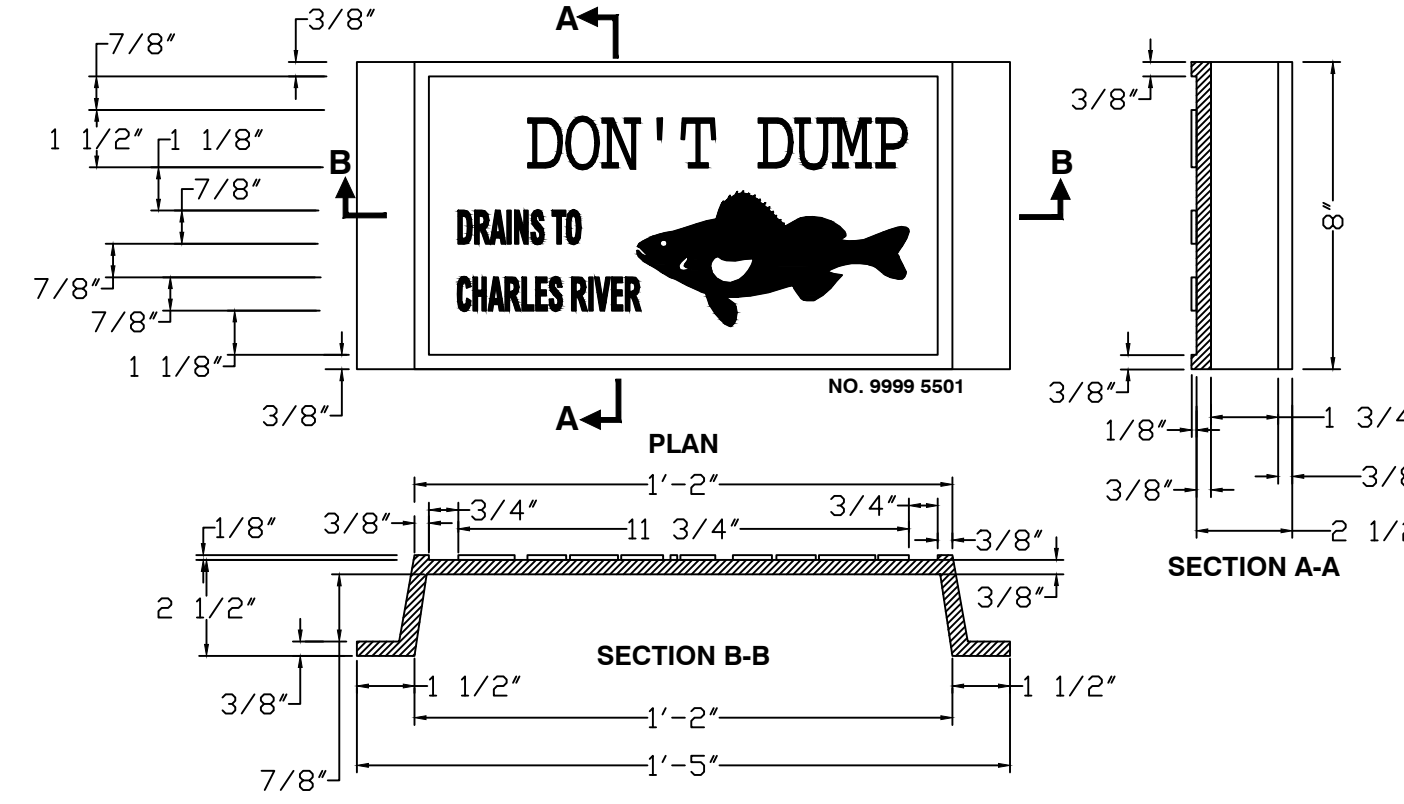
PLAN



SECTION A-A

DRAIN MANHOLE DETAIL - 6 FOOT SUMP
NTS

- GENERAL NOTES FOR CATCH BASINS:**
- FACE OF PIPE SHALL NOT PROJECT MORE THAN 4-INCHES FROM FACE OF WALL ALONG CENTERLINE OF PIPE.
 - FOR DESCRIPTION OF MATERIALS AND CONSTRUCTION METHOD, SEE SPECIFICATIONS.
 - DESIGN PRECAST SECTIONS WITH FRAME AND GRATE FOR AASHTO H2O LOADING.
 - GRATE OPENING CAN BE CENTERED OR OFFSET PERPENDICULAR TO THE CURB.
 - FOR CATCH BASINS INSTALLED ABUTTING GRANITE CURBS, USE 3-FLANGED FRAMES.
 - "DON'T DUMP" SIDEWALK MARKERS FURNISHED BY THE CITY SHALL BE INSTALLED ADJACENT TO ALL CATCH BASINS AND INLETS IN THE PROJECT AREA.



"DON'T DUMP" CATCH BASIN SIDEWALK MARKER*
NTS

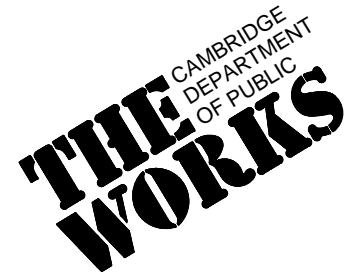
*FURNISHED BY CITY



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Checked by	RDK	No.	Description	Date
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Client	CITY OF CAMBRIDGE, MA
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing	CIVIL DETAILS - 2

Sheet	C-4
File No.	

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24" STANDARD MANHOLE FRAME & COVER (UNLESS NOTED OTHERWISE) TO BE MARKED "DRAIN" OR "SEWER" AS APPLICABLE

SET CASTING IN FULL BED OF MORTAR ALL AROUND TO 2" BELOW FINISHED GRADE.

BITUMASTIC DAMP PROOFING ON ALL BELOW GRADE SURFACES

BUTYL RUBBER JOINT (TYP.)

SEAL ALL HOLES WITH HYDRAULIC CEMENT

SEE TABLE 1

BRICK TABLE (SEE MANHOLE GENERAL NOTE 1)

FOR BOTTOM SLAB THICKNESS SEE TABLE 1

GRADE ADJUSTMENTS SHALL BE MADE WITH BRICKS OR PRECAST CONCRETE COLLARS (MINIMUM 2" AND MAXIMUM 9" HEIGHT) (TYP.)

STANDARD PRECAST ECCENTRIC OR CONCENTRIC CONE SECTION, OR FLAT TOP (AS REQUIRED)

SEAL ALL INTERIOR AND EXTERIOR JOINTS WITH HYDRAULIC CEMENT

STANDARD PRECAST BARREL SECTION COMBINATIONS OF 1', 2', 3' OR 4' LENGTHS AS NEEDED TO BRING MANHOLE RIM TO REQUIRED ELEVATION (SEE MANHOLE GENERAL NOTE 4)

STANDARD PRECAST BASE IN 3' LENGTHS (MIN.)

4000 PSI CONCRETE

FLEXIBLE WATERTIGHT SLEEVE REQUIRED FOR PVC AND DI. USE NON SHRINK GROUT FOR RCP CONNECTIONS. CAST OPENING IN STRUCTURE OR CORE DRILL (TYP.)

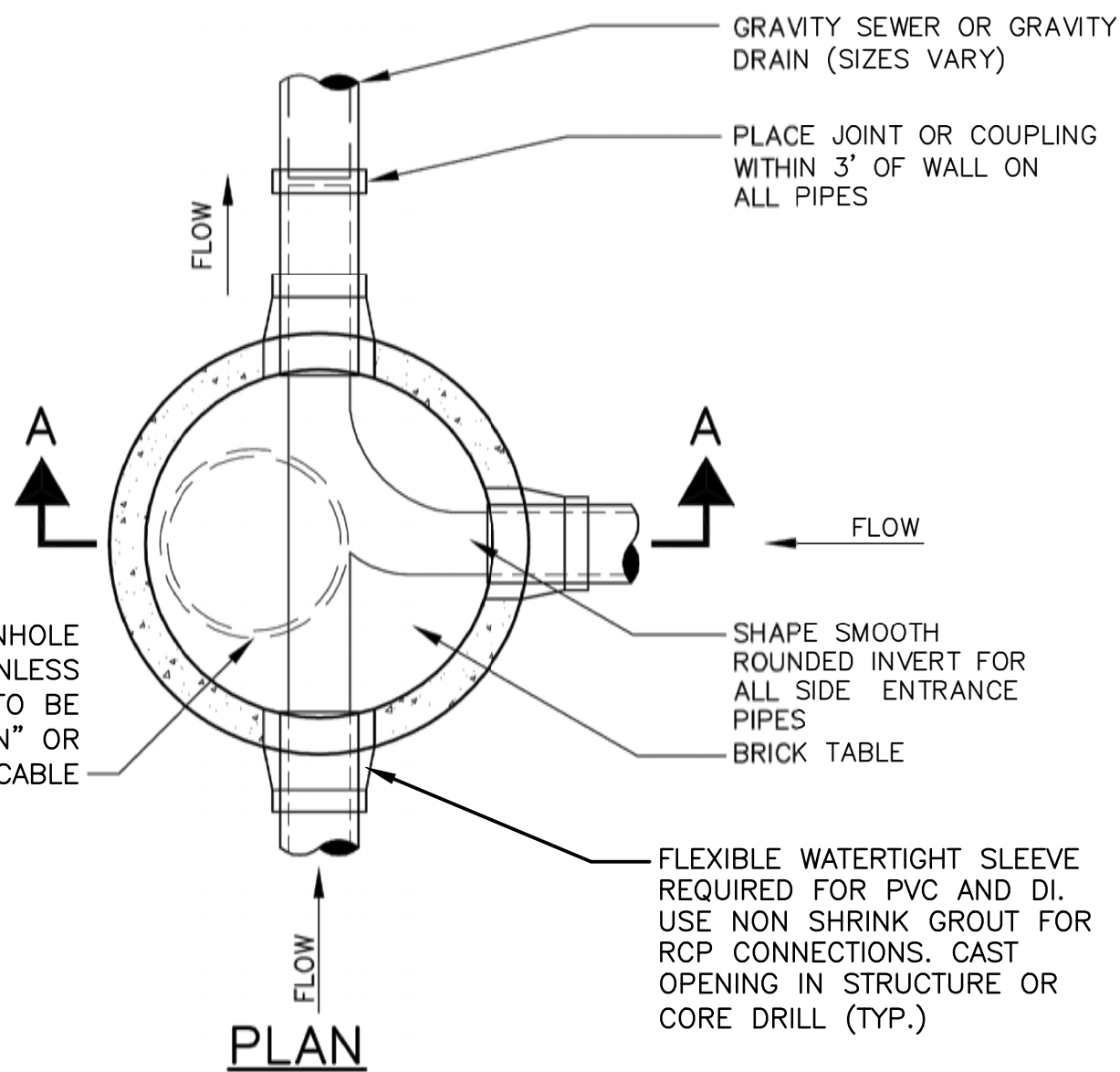
CRUSHED STONE BEDDING PER SPECIFICATIONS

FOR FILTER FABRIC USE REQUIREMENTS SEE TRENCH DETAIL (THIS SHEET)

SECTION A-A

DRAIN MANHOLE DETAIL

NTS



PLAN

NTS

24" STANDARD MANHOLE FRAME & COVER (UNLESS NOTED OTHERWISE) TO BE MARKED "DRAIN"

SET CASTING IN FULL BED OF MORTAR ALL AROUND TO 2" BELOW FINISHED GRADE.

BITUMASTIC DAMPPROOFING ON ALL BELOW GRADE SURFACES

SEAL ALL HOLES WITH HYDRAULIC CEMENT

BUTYL RUBBER JOINT (TYP.)

SEE TABLE 1

STANDARD PRECAST BASE IN 3' LENGTHS (MIN)

FOR BOTTOM SLAB THICKNESS SEE TABLE 1

FOR FILTER FABRIC USE REQUIREMENTS SEE TRENCH DETAIL (THIS SHEET)

GRADE ADJUSTMENTS SHALL BE MADE WITH BRICKS OR PRECAST CONCRETE COLLARS (MINIMUM 2" AND MAXIMUM 9" HEIGHT) (TYP.)

FINISH GRADE
STANDARD PRECAST ECCENTRIC OR CONCENTRIC CONE SECTION OR FLAT TOP (AS REQUIRED)

SEAL ALL INTERIOR AND EXTERIOR JOINTS WITH HYDRAULIC CEMENT

STANDARD PRECAST BARREL SECTION COMBINATIONS OF 1', 2', 3' OR 4' LENGTHS AS NEEDED TO BRING MANHOLE RIM TO REQUIRED ELEVATION (SEE MANHOLE GENERAL NOTE 4)

4'-0" SUMP DEPTH

FLEXIBLE WATERTIGHT SLEEVE REQUIRED FOR PVC AND DI. USE NON SHRINK GROUT FOR RCP CONNECTIONS. CAST OPENING IN STRUCTURE OR CORE DRILL (TYP.)

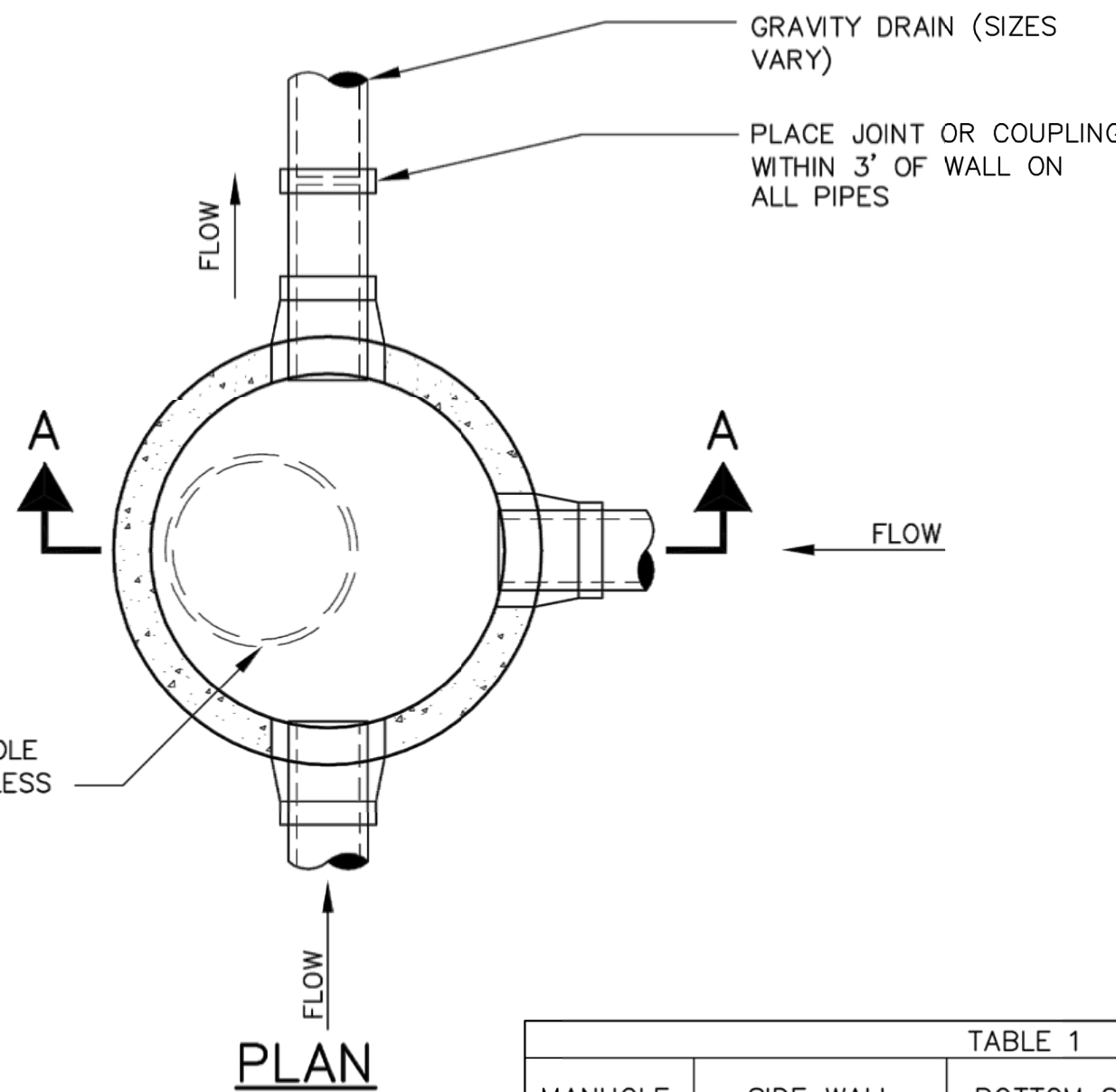
CRUSHED STONE BEDDING PER SPECIFICATIONS

UNDISTURBED MATERIAL

SECTION A-A

DRAIN MANHOLE DETAIL - 4 FOOT SUMP

NTS

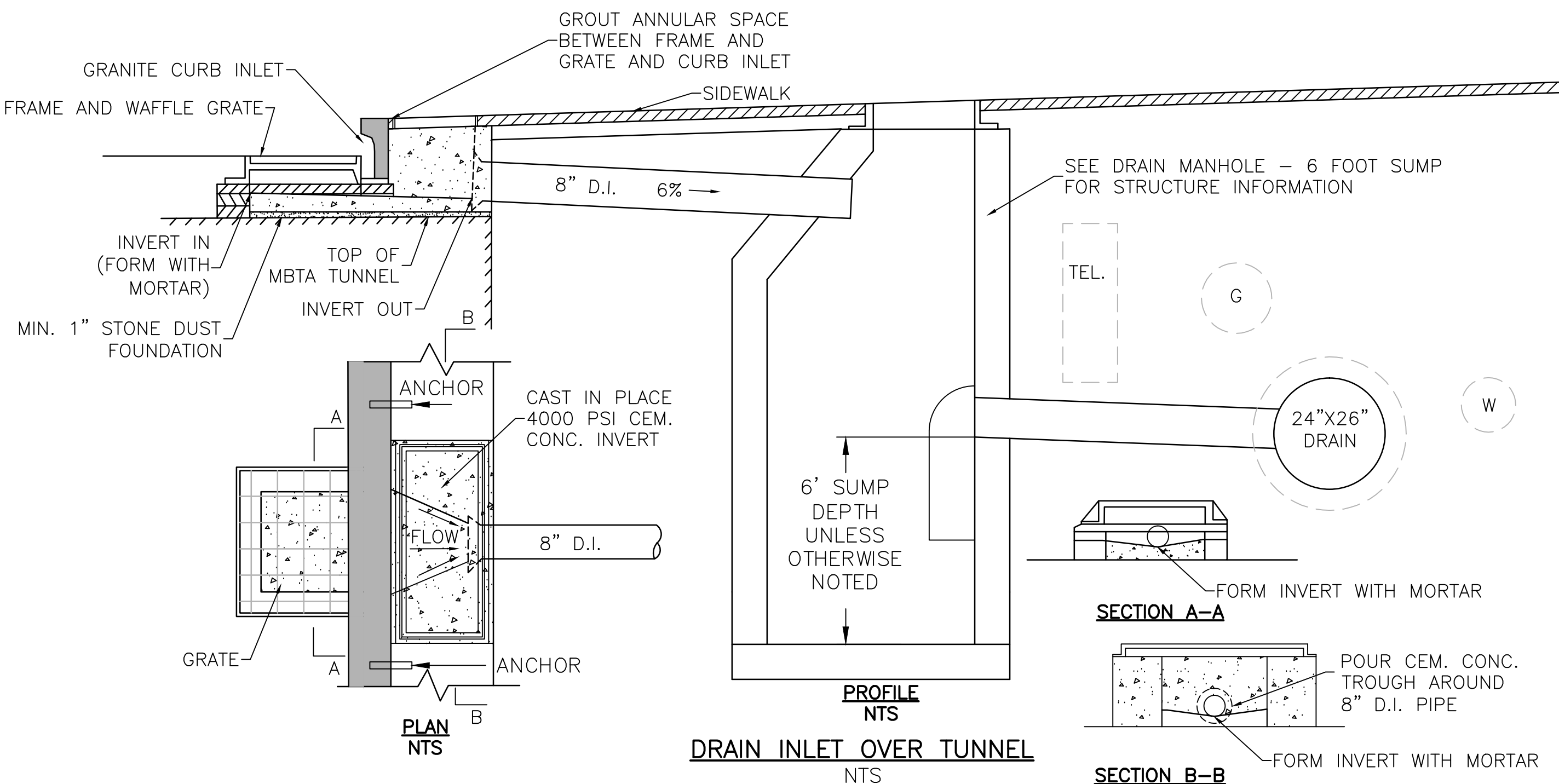


PLAN

NTS

TABLE 1				
MANHOLE DIAMETER	SIDE WALL MIN. THICKNESS	BOTTOM SLAB MIN. THICKNESS	MAX PIPE DIAMETER * RCP	MAX PIPE DIAMETER * DI/PVC
4'	5"	6"	24"	30"
5'	6"	8"	36"	42"
6'	6"	8"	48"	54"
8'	8"	8"	66"	72"
10'	10"	10"	72"	84"

* MAY VARY DEPENDING ON SIZE AND LOCATION OF ADDITIONAL PENETRATIONS OR RELATIONSHIP OF PENETRATIONS IN MANHOLE



TRENCH DETAIL FOR SEWER, DRAIN AND WATER PIPE

NTS

DRAIN INLET OVER TUNNEL

NTS

SECTION A-A

SECTION B-B

TRENCH PAY LIMIT TABLE FOR MANHOLES

WALL THICKNESS	MAX TRENCH WIDTH
LESS THAN 6"	I.D. + 5'-0"
6" TO 12"	I.D. + 6'-0"
13" TO 18"	I.D. + 7'-0"
19" & GREATER	O.D. + 6'-0"

I.D. = INSIDE DIMENSION
O.D. = OUTSIDE DIMENSION

FOR TRENCHES GREATER THAN 5' DEEP ADD 3' FOR TEMPORARY SUPPORT OF EXCAVATION

MANHOLE GENERAL NOTES:

- INNER EDGE OF CONC. TABLE TO BE AT ELEV OF CROWN OF PIPE. TABLE TO SLOPE AT 8.3% TO INSIDE OF MANHOLE BASE.
- SEWER OR DRAIN MANHOLE DIAMETER SHALL BE 4', 5', 6' OR 8' AS SHOWN ON PLAN/PROFILE VIEWS.
- DESIGN PRECAST AND CAST IN PLACE SECTIONS WITH FRAME AND COVER FOR AASHTO H20 LOADINGS.
- MANHOLES LARGER THAN 4' IN DIAMETER AT THE BASE SHALL BE REDUCED IN DIAMETER TO 4' AT THE NEXT RISER SECTION UNLESS NOTED OTHERWISE ON PLANS.

MANHOLE GENERAL NOTES AND DIMENSIONS

- NOTES:
- REFER TO APPROPRIATE DETAILS AND SPECIFICATIONS.
 - REFER TO "TRENCH PAY LIMIT TABLE FOR PIPES" FOR PAYMENT OF ALL ITEMS IN WHICH PAY TRENCH WIDTH IS A VARIABLE FOR CALCULATIONS OF QUANTITIES EXCEPT FOR TRENCH PAVEMENT
 - REFER TO TRENCH PAVEMENT DETAIL FOR PAVEMENT PAYMENT WIDTHS

TRENCH PAY LIMIT TABLE FOR PIPES

PIPE SIZE (DIA.)	MAX TRENCH WIDTH
LESS THAN 2"	2'-0"
2" TO 6"	3'-0"
8" TO 22"	4'-0"
24" & GREATER	I.D. + 2'-0"

I.D. = INSIDE DIMENSION

FOR TRENCHES GREATER THAN 5' DEEP ADD MAXIMUM 3' FOR TEMPORARY SUPPORT OF EXCAVATION

FILTER FABRIC USE

	SOIL TYPE	
	SILT OR CLAY	GRANULAR SOIL
ABOVE GROUND WATER	FILTER FABRIC NOT REQUIRED	FILTER FABRIC NOT REQUIRED
BELOW GROUND WATER	FILTER FABRIC REQUIRED	FILTER FABRIC NOT REQUIRED

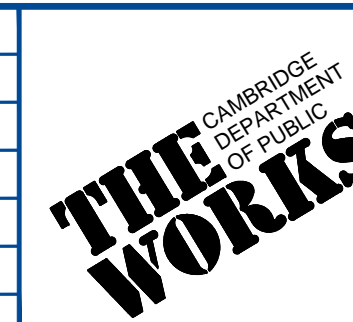
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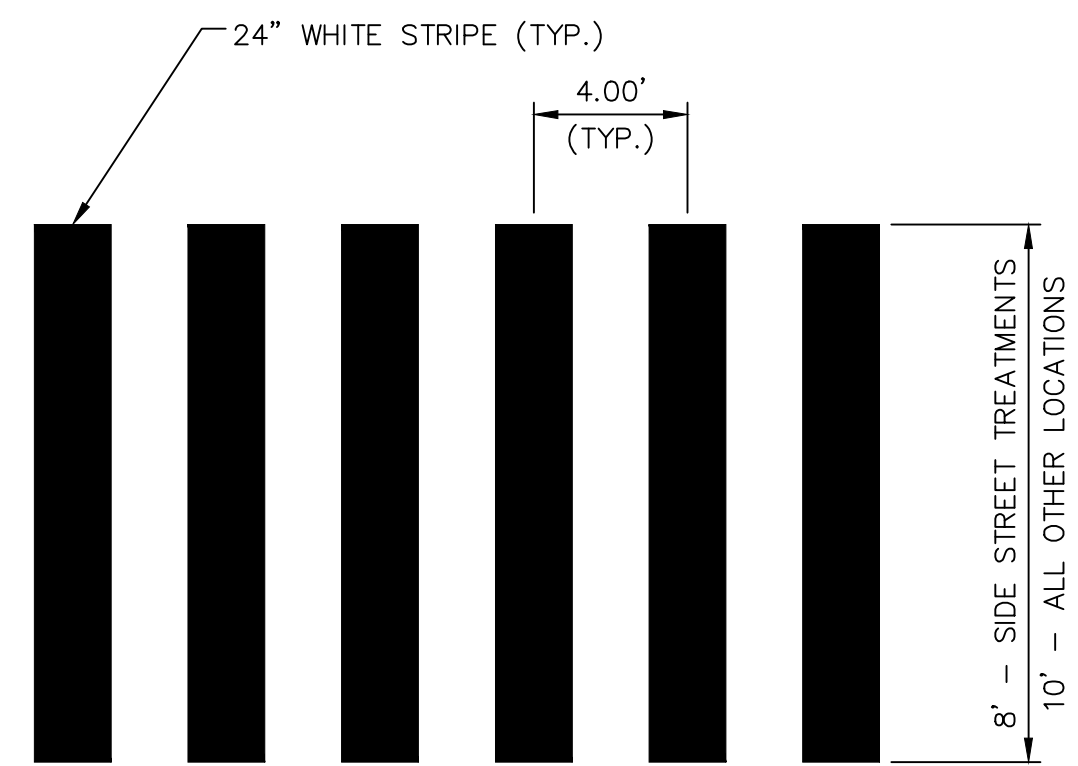


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Date	MAY 2014
Job No.	
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Checked by	RDK
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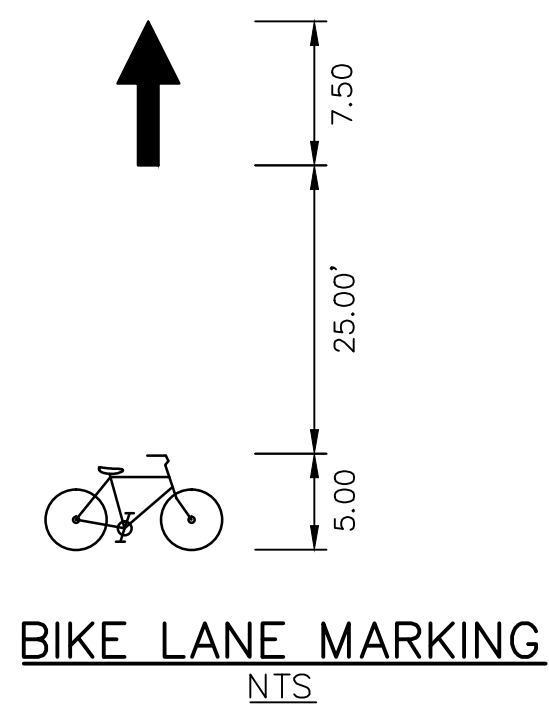


Client	CITY OF CAMBRIDGE, MA
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing	CIVIL DETAILS - 3

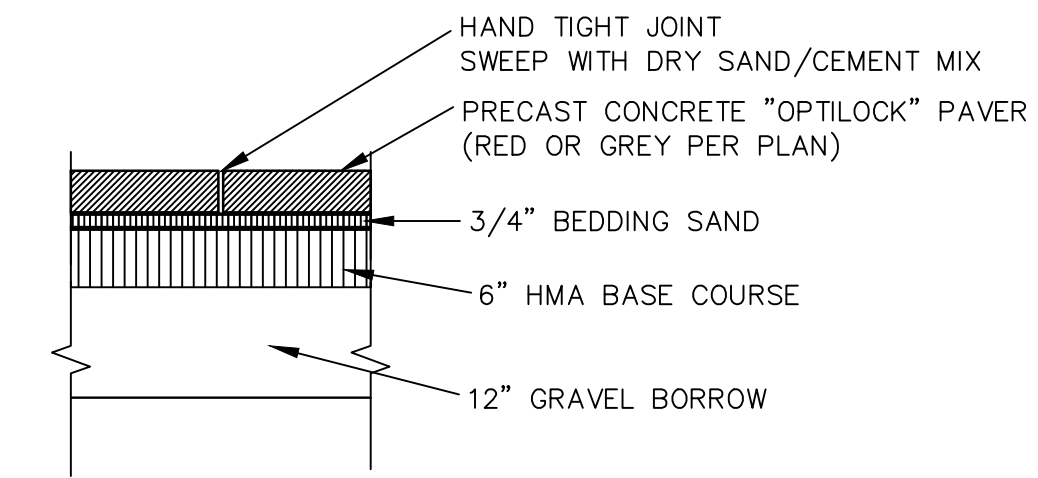
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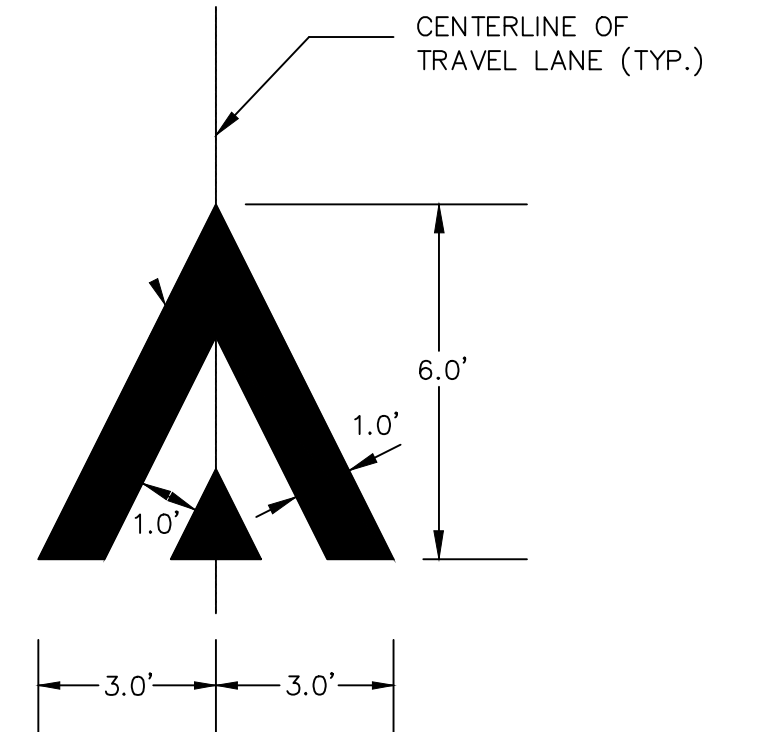
CROSSWALK MARKING
NTS



BIKE LANE MARKING
NTS

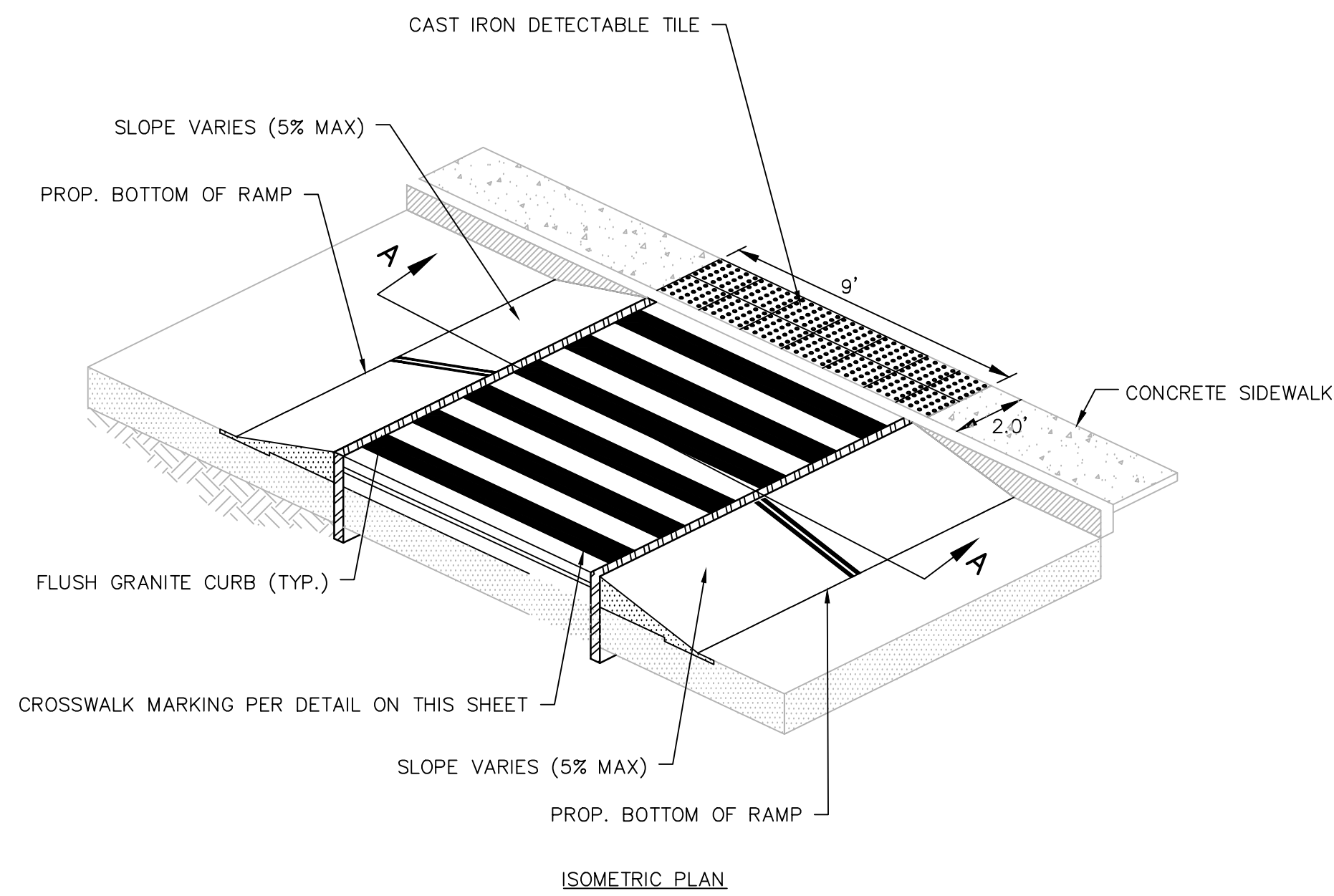


"FIELD" PAVER SETTING DETAIL
NTS

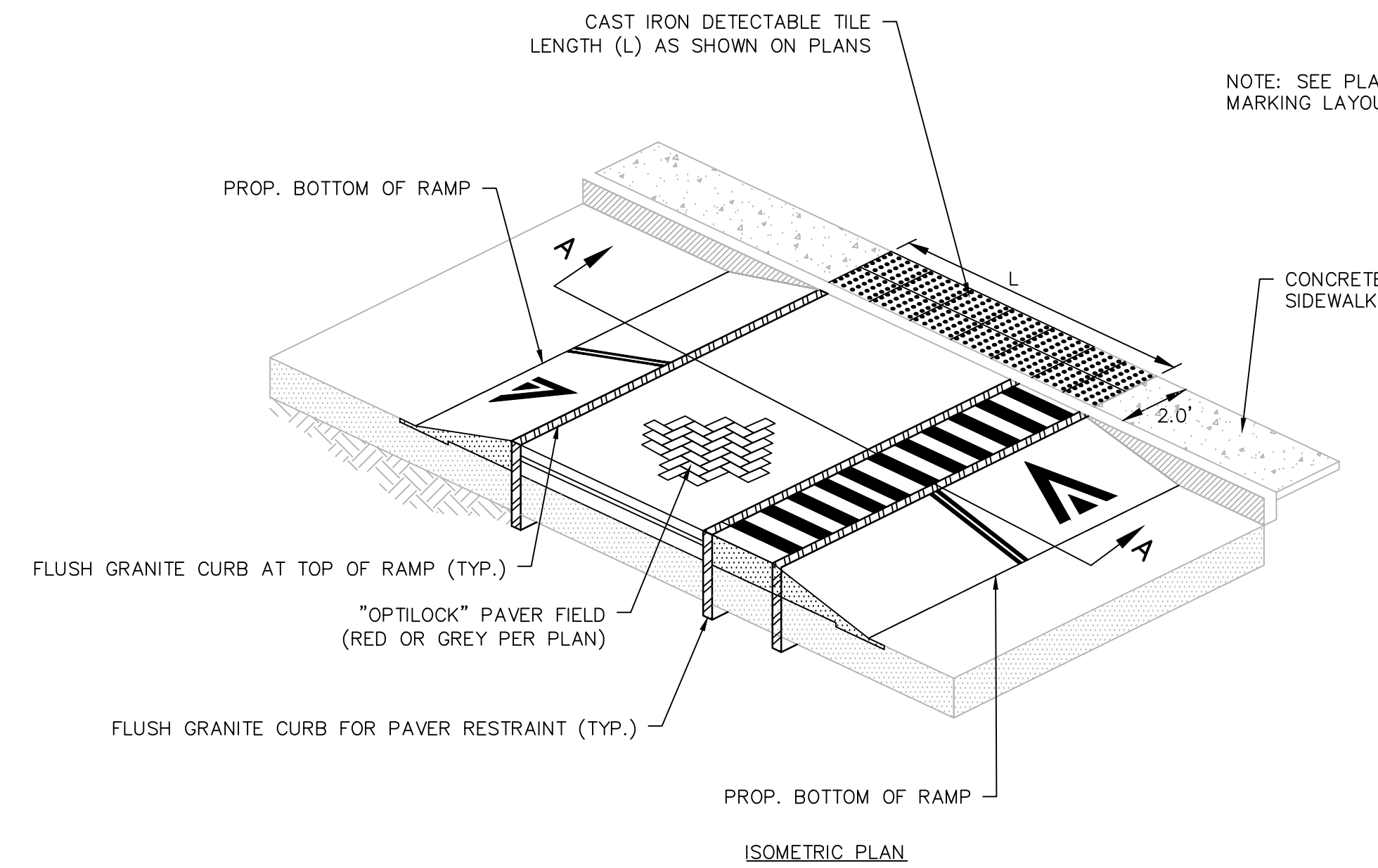


RAMP MARKING DETAIL
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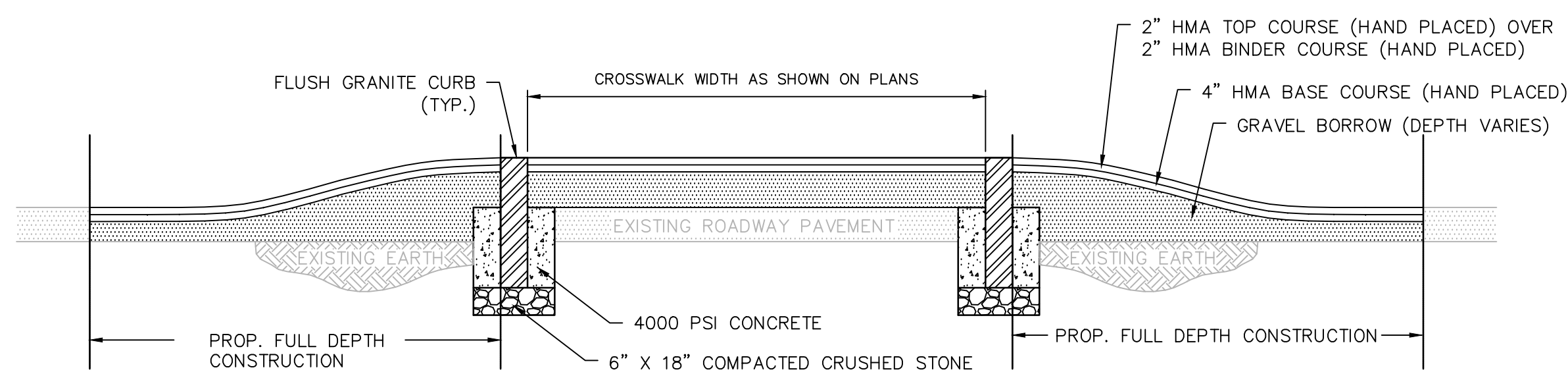
NOTE: SEE PLANS FOR SPECIFIC CROSSWALK AND MARKING LAYOUT.



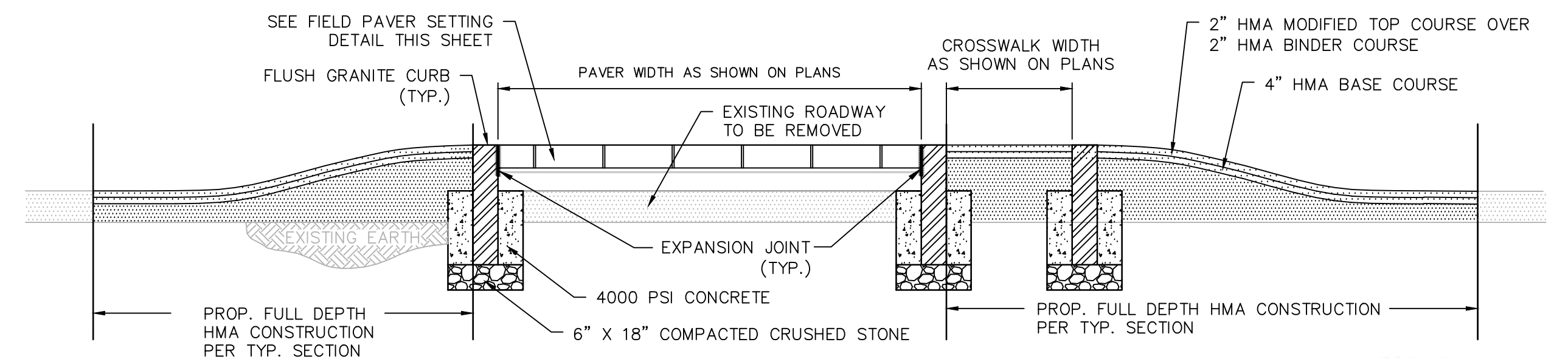
ISOMETRIC PLAN



ISOMETRIC PLAN



SECTION A-A
RAISED SIDE STREET TREATMENT
NTS



SECTION A-A

RAISED INTERSECTION WITH CROSSWALK DETAILS
(ONE CROSSWALK SHOWN - TWO CROSSWALKS SIMILAR)
NTS



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kmdg
KLOPFER MARTIN DESIGN GROUP

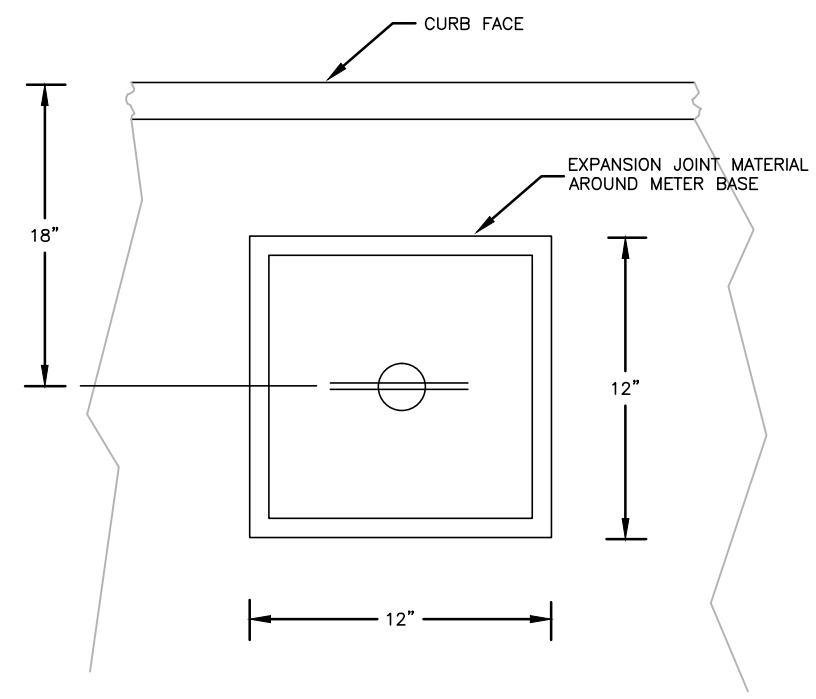
KLEINFELDER
Bright People. Right Solutions.

Scale	AS NOTED			
Date	MAY 2014			
Job No.				
Designed by	JEC			
Drawn by	JEC			
Checked by	RDK	No.	Description	Date
Approved by	GMF		REVISIONS	

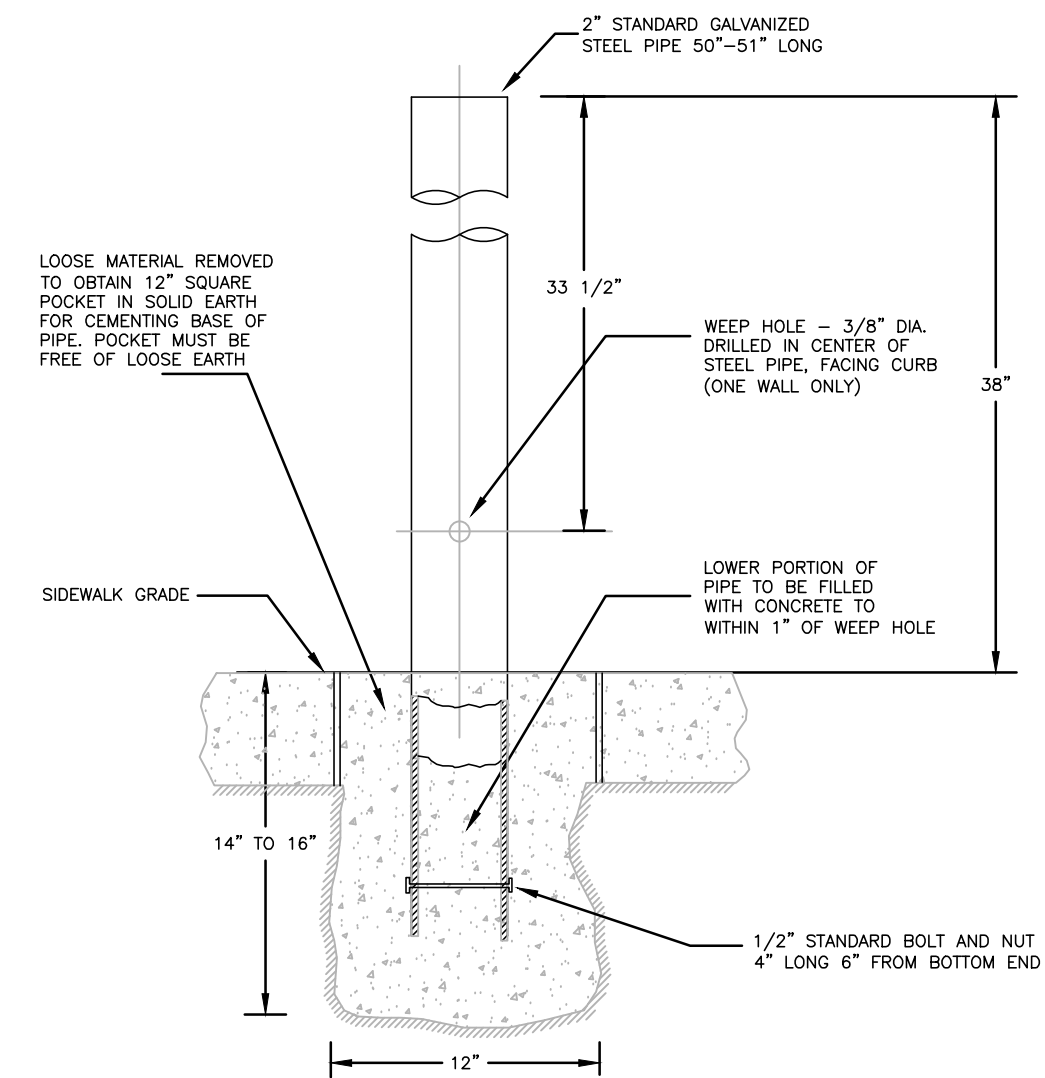


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Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing	CIVIL DETAILS - 4

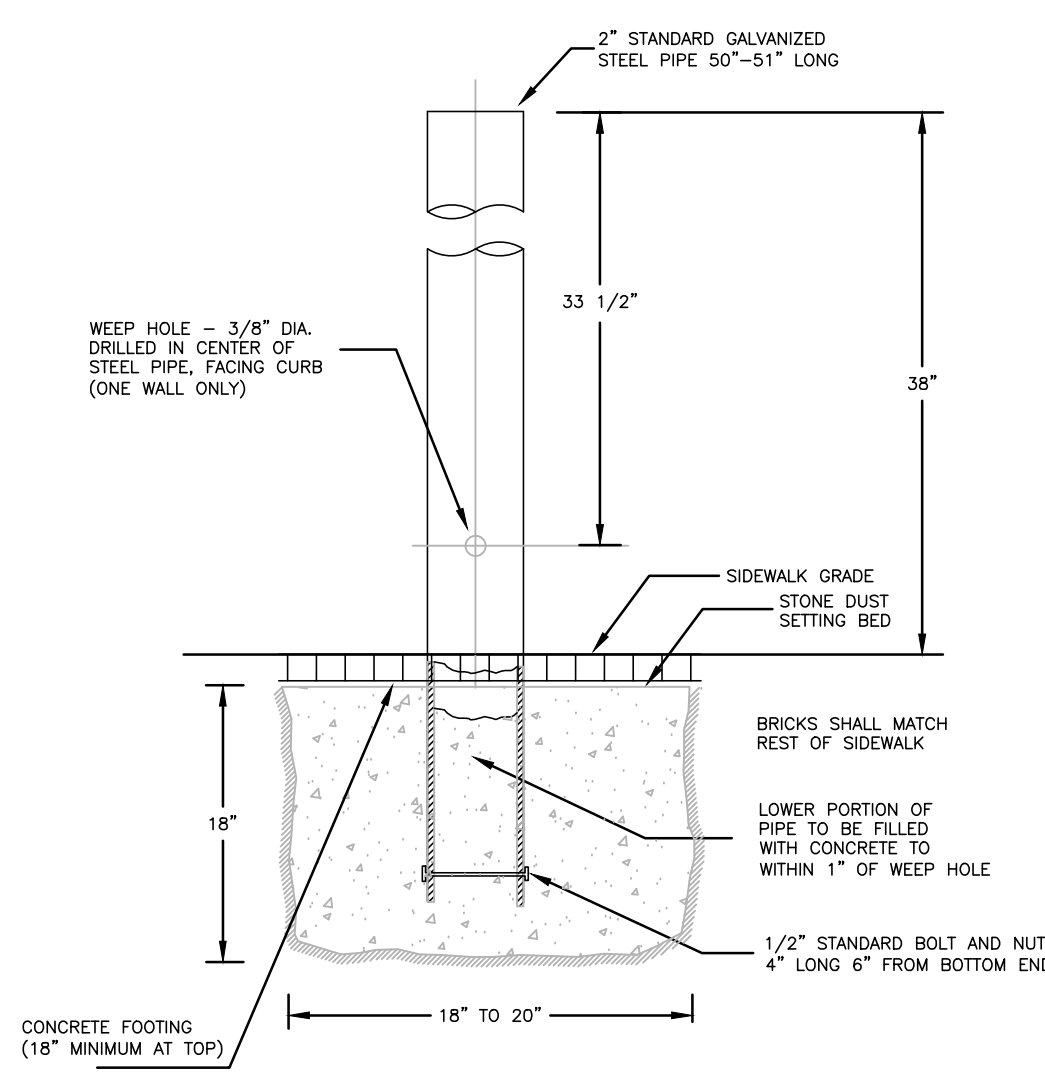
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PLAN - PARKING METER POST

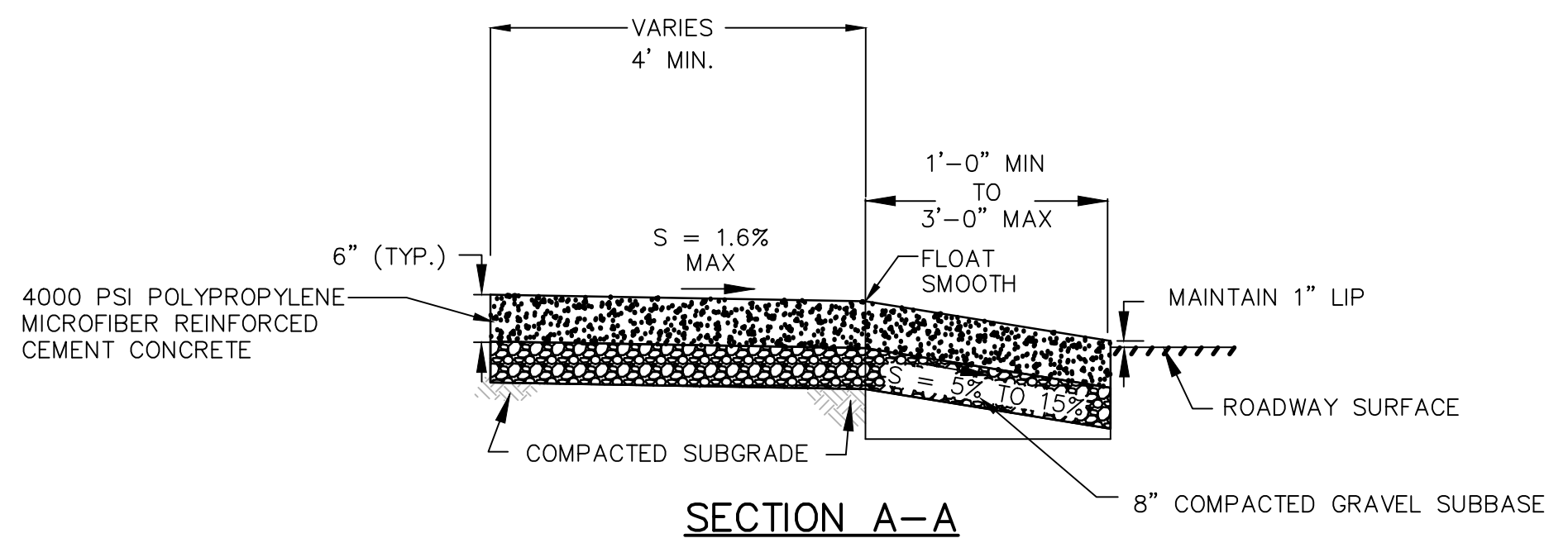


SECTION - PARKING METER POST, CONCRETE SIDEWALK

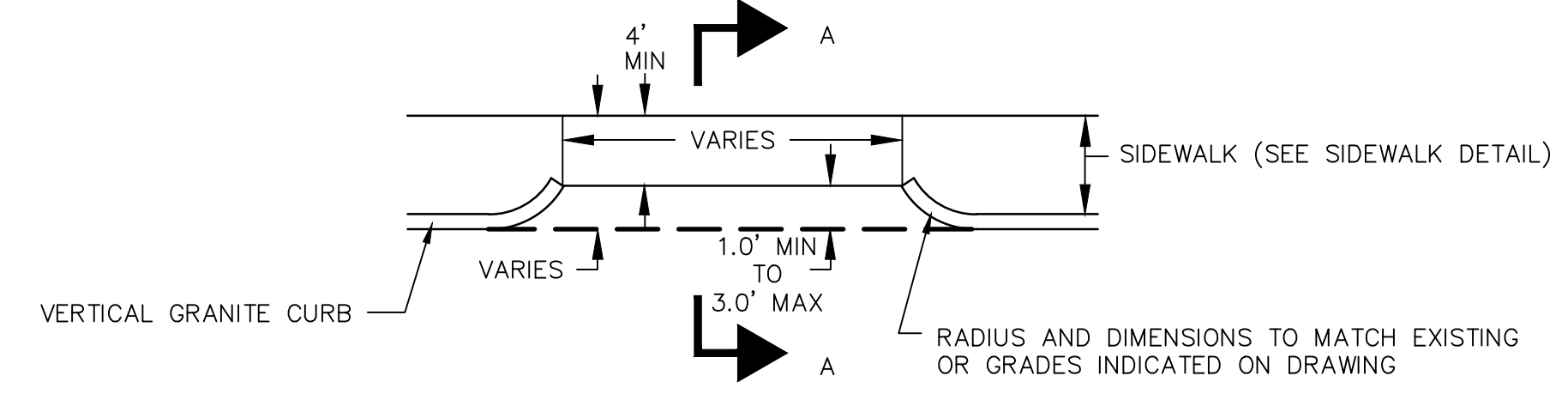


SECTION - PARKING METER POST, BRICK SIDEWALK

PARKING METER POST
NTS

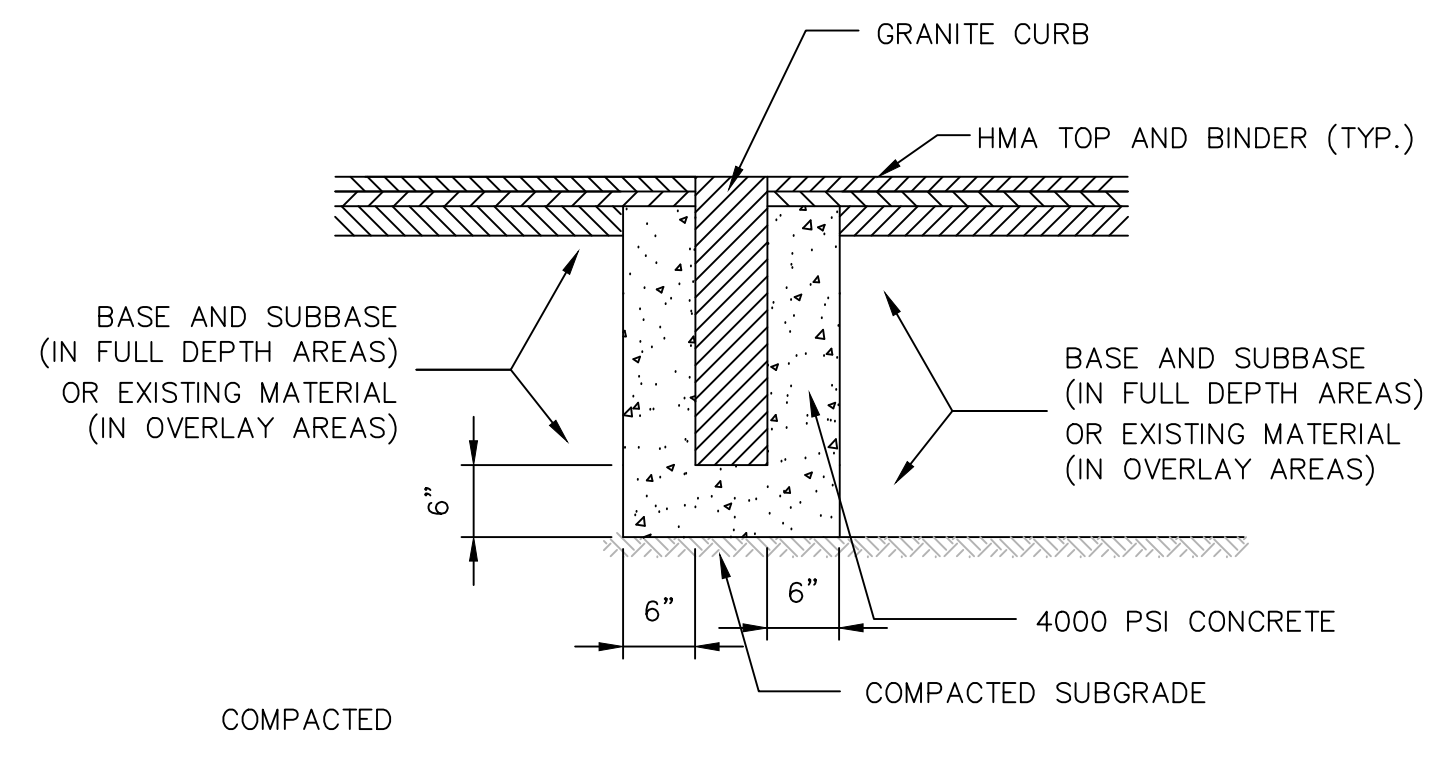


SECTION A-A



PLAN

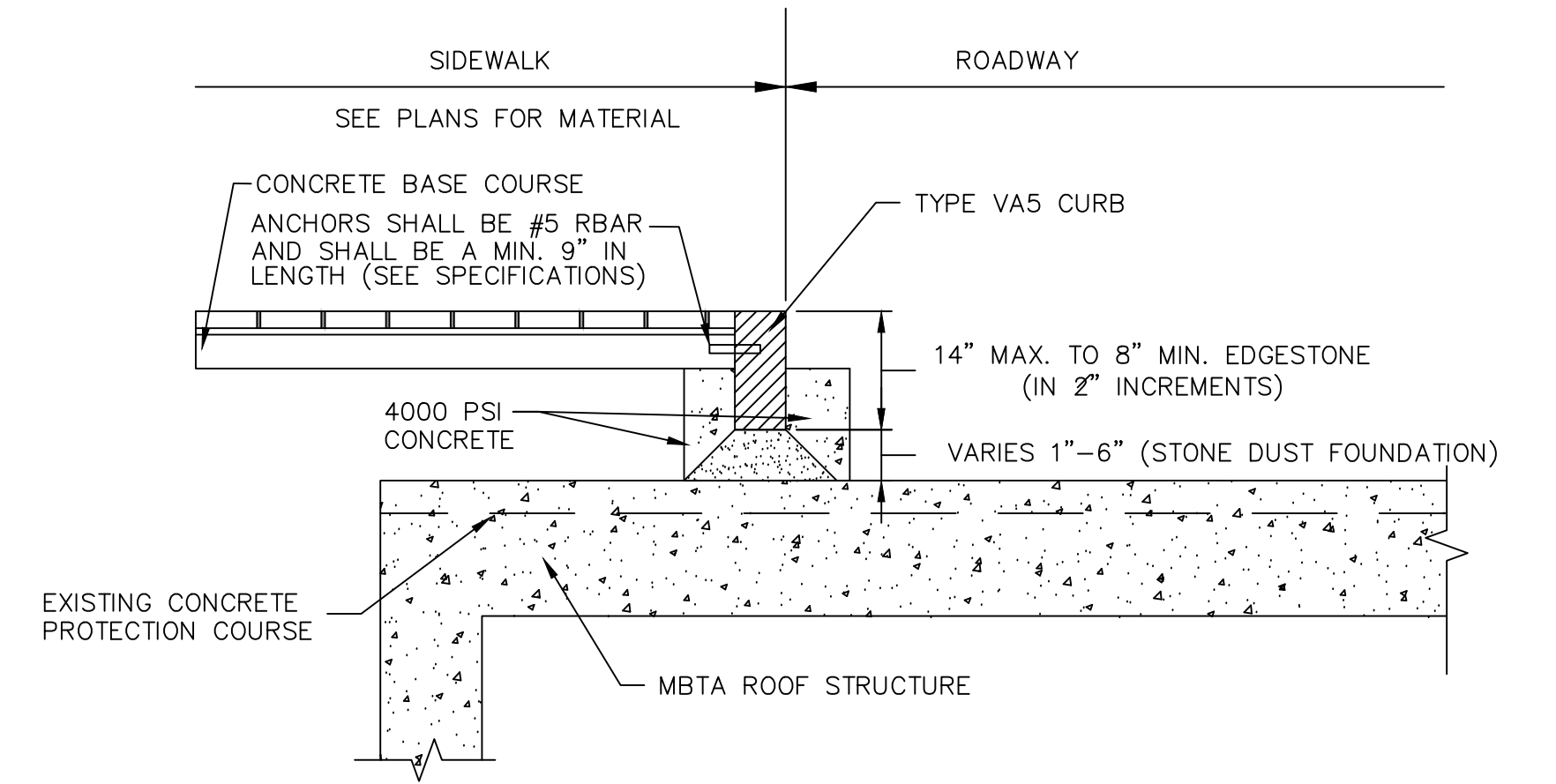
CONCRETE DRIVEWAY APRON
NTS



NOTE:

1. EXISTING MATERIAL SHALL BE USED IF DEEMED SUITABLE BY THE ENGINEER.

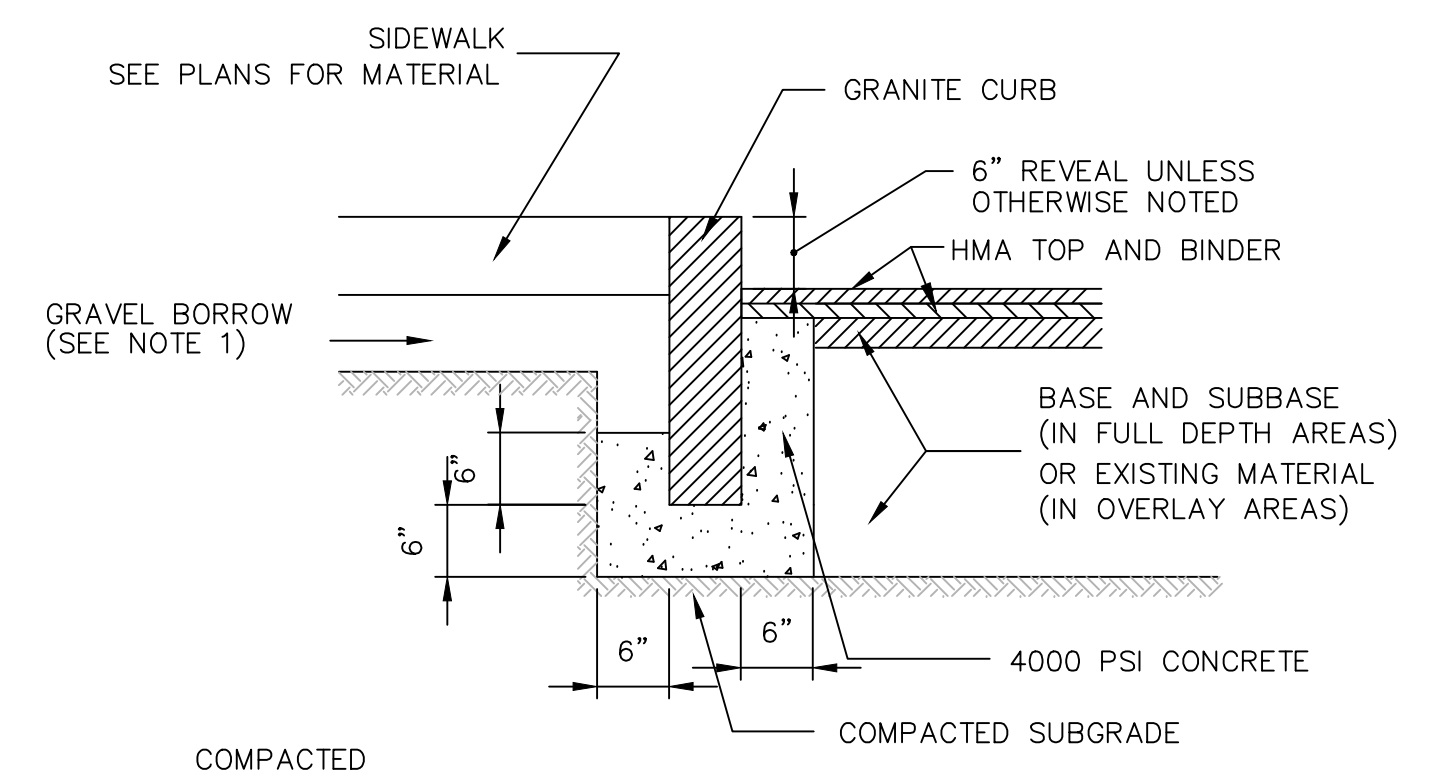
FLUSH GRANITE CURB INSTALLATION
NTS



NOTES:

1. THE HEIGHT OF ALL CURB TO BE INSTALLED OVER THE MBTA ROOF STRUCTURE IN MAIN STREET MUST BE DETERMINED BY THE CONTRACTOR BEFORE FABRICATION. ALL CURB TO BE INSTALLED SHALL BE THE MAXIMUM HEIGHT POSSIBLE, FURNISHED IN 2" INCREMENTS, I.E. 14", 12", 10" OR 8".
2. ANCHORAGE TO THE ADJACENT SIDEWALK OR DRIVEWAY SLAB WILL BE REQUIRED FOR ALL CURB LESS THAN 14" HIGH.

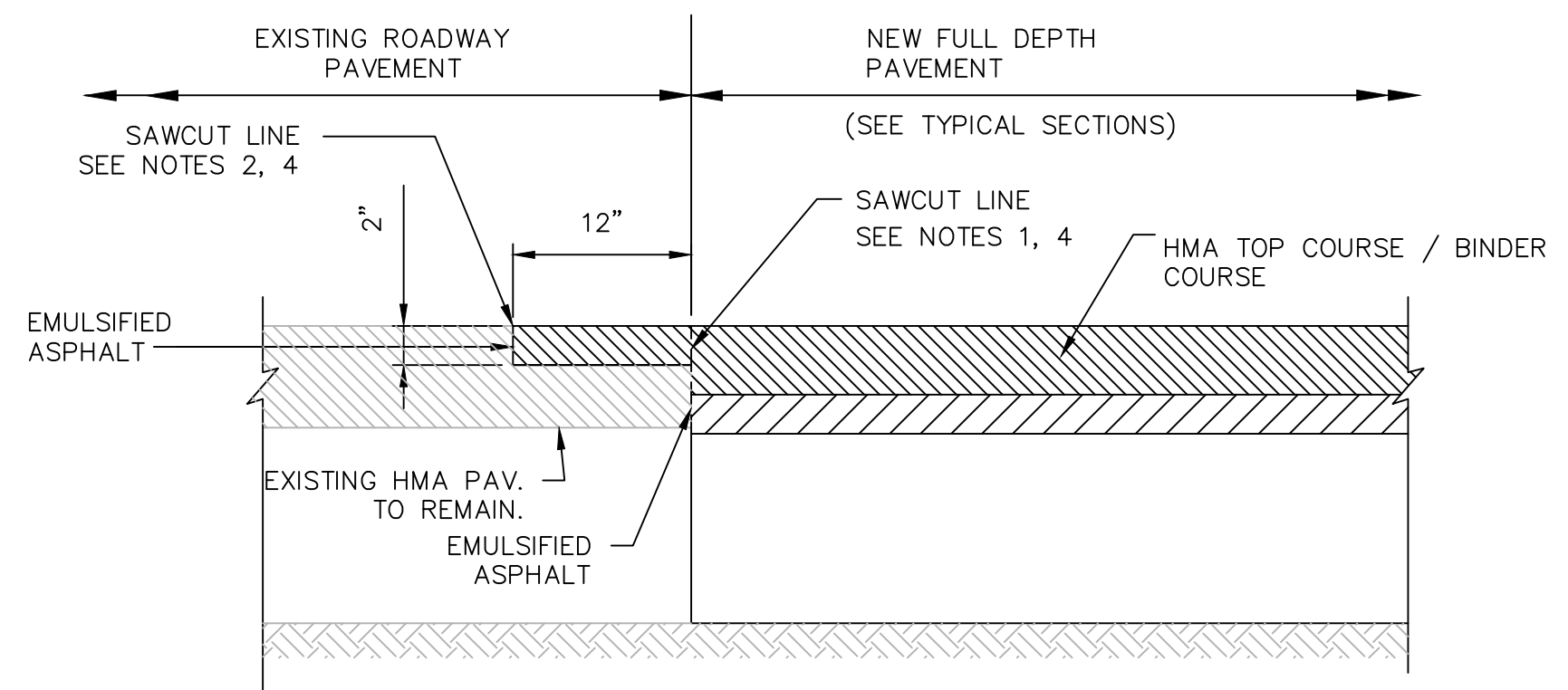
SPECIAL INSTALLATION CURB DETAILS
NTS



NOTE:

1. EXISTING MATERIAL SHALL BE USED IF DEEMED SUITABLE BY THE ENGINEER.

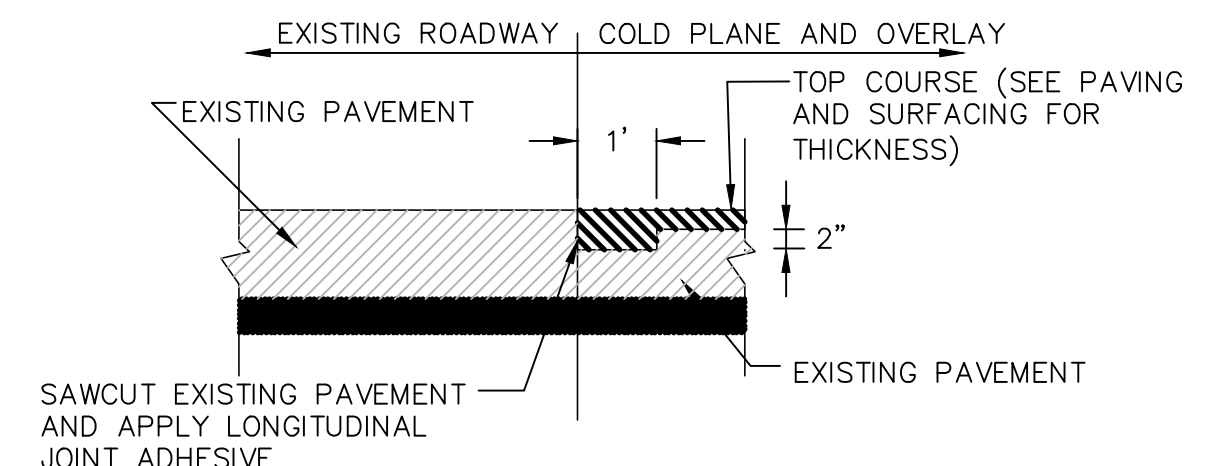
GRANITE CURB INSTALLATION
NTS



NOTES:

1. SAWCUT EXISTING PAVEMENT IN A NEAT, STRAIGHT, VERTICAL LINE FOR THE FULL DEPTH OF NEW PAVEMENT.
2. SAWCUT AND REMOVE BY MILLING THE EXISTING PAVEMENT 12" FROM THE EDGE OF THE PREVIOUS SAWCUT LINE TO A DEPTH OF 2".
3. APPLY EMULSIFIED ASPHALT ON ALL VERTICAL SURFACES PRIOR TO PLACING BITUMINOUS CONCRETE.
4. ALL PAVEMENT MATCHING AREAS SHALL RECEIVE INFRARED PAVEMENT TREATMENT, SEE SPECIFICATIONS

MATCH EXISTING PAVEMENT - FULL DEPTH
NTS



NOTES:

1. CLEAN ALL COLD PLANED SURFACES BEFORE APPLYING JOINT ADHESIVE AND FINAL PAVEMENT

MATCH EXISTING PAVEMENT - OVERLAY
NTS



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kmdg
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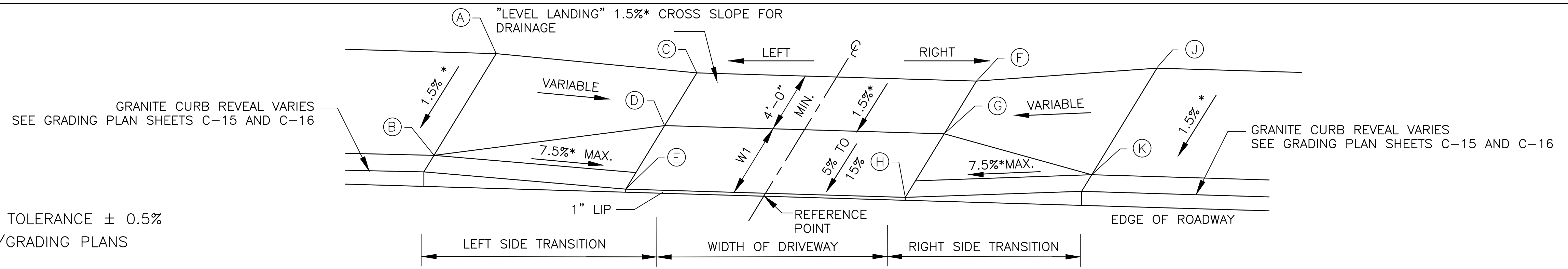
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Date	MAY 2014			
Job No.				
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Drawn by	JEC			
Checked by	RDK	No.	Description	Date
Approved by	GMF		REVISIONS	



Client	CITY OF CAMBRIDGE, MA	Sheet	C-7
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE	File No.	
Drawing	CIVIL DETAILS - 5		

DRIVEWAY DATA

NOT TO SCALE

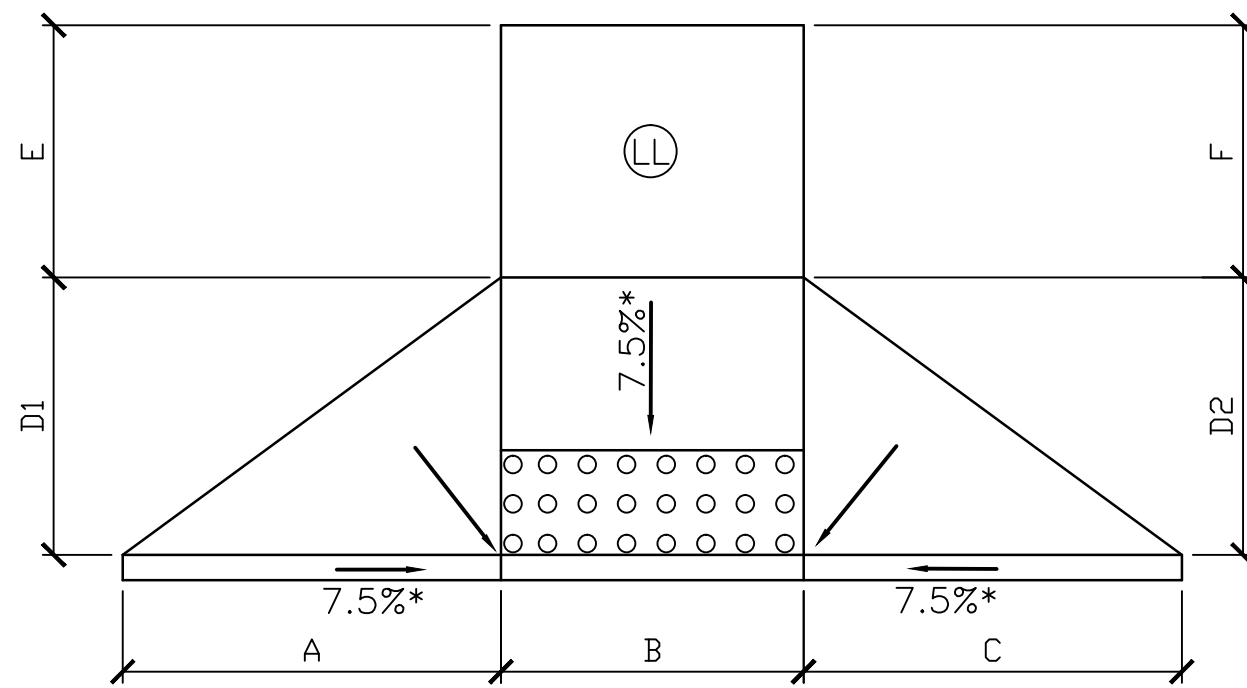


NOTES:

- * CONSTRUCTION TOLERANCE ± 0.5%
- SEE CURB TIE/GRADING PLANS

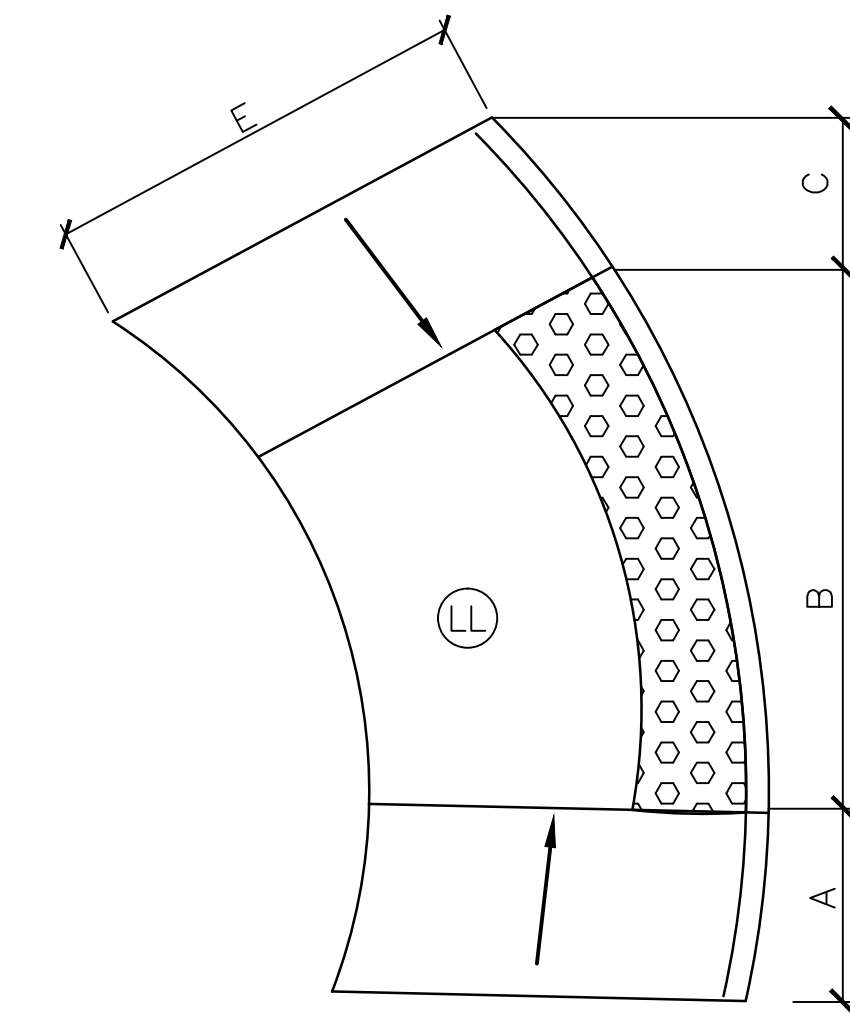
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	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(J)	(K)
①	4+92.17	24.46 R	2.00'	13.29'	64.25'	-0.45% - 0.46%	6.5'	6.5'	19.89	19.73	19.87	19.75	19.53	19.80	19.68	19.42	19.85	19.70

PEDESTRIAN RAMP GEOMETRIC DATA



TYPE 2

RAMP NO.	TYPE	TRANS L		RAMP W		TRANS L		RAMP L		LANDING L	
		A	B	C	D1	D2	E	F			
1	2	4.50	5.00	4.35	4.50	4.50	5.00	5.00			
2	2	4.50	5.00	6.00	4.00	4.00	5.00	5.00			
3	2	6.50	5.00	8.50	6.00	6.00	5.00	5.00			
4	2	6.00	5.00	6.50	3.50	3.50	5.00	5.00			
5	2	6.50	5.00	0.00	5.00	5.00	5.00	5.00			
6	6	8.00	8.50	0.00	NA	NA	8.00	NA			
7	2	8.00	5.00	7.67	3.00	3.00	4.00	4.00			



TYPE 6

NOTES:

1. SEE ALIGNMENT AND CURB TIE PLANS FOR LOCATION OF RAMPS AND DRIVEWAYS.
2. SEE DETAIL GRADING PLAN FOR RAMP ELEVATIONS.
3. FINAL RAMP ELEVATIONS SHALL GRADE TO DRAIN AND LAYOUT SHALL BE APPROVED BY ENGINEER PRIOR TO PLACEMENT.
4. ALL PEDESTRIAN RAMP GRADES SHALL CONFORM TO THE LATEST EDITION OF "MASSDOT HIGHWAY DESIGN AND CONSTRUCTION GUIDELINES FOR WHEELCHAIR RAMP & PEDESTRIAN ACCESS".
5. TRUNCATED DOME DETECTION PANEL TYPICAL FOR ALL RAMP TYPES.

LEGEND:

- * = TOLERANCE FOR CONSTRUCTION ±0.5%
- (LL) = LEVEL LANDING - 1.5%* MAX SLOPE FOR DRAINAGE



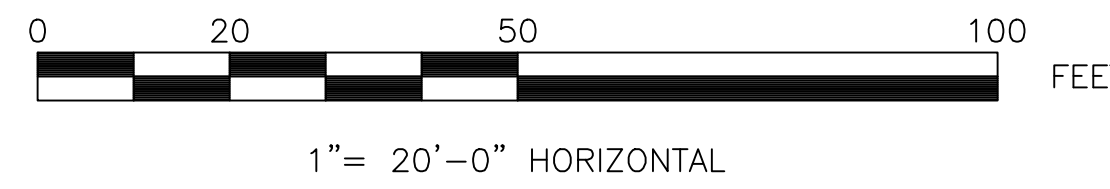
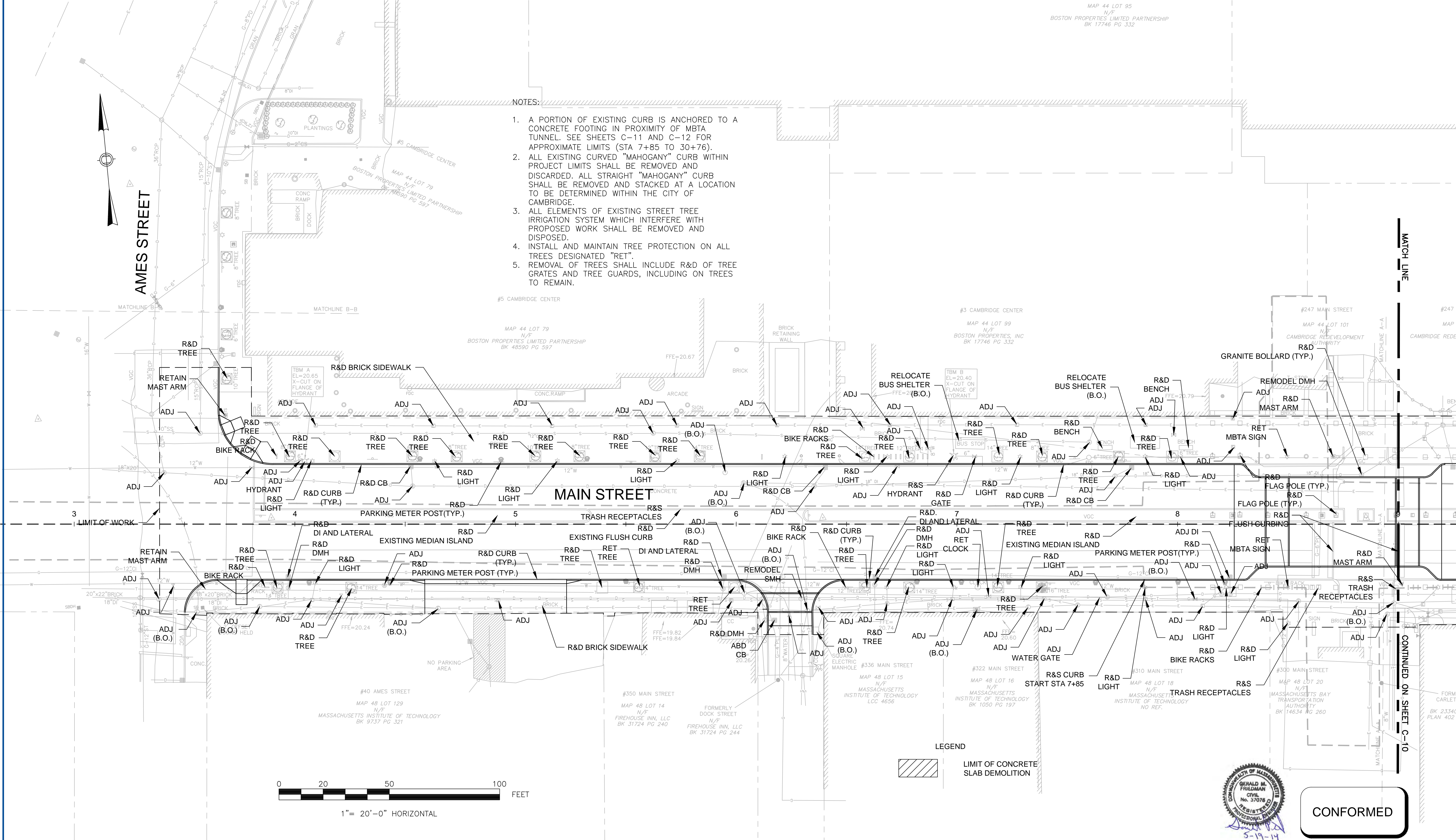
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 HDR ENGINEERING, INC. 695 ATLANTIC AVENUE, 2FL BOSTON, MASSACHUSETTS 02111-2626 (617) 357-7700	 TRANSPORTATION ENGINEERS & PLANNERS	 KLOPFER MARTIN DESIGN GROUP	 Bright People. Right Solutions.	Scale NOT TO SCALE Date MAY 2014 Job No. Designed by JEC Drawn by JEC Checked by RDK No. Description Date Approved by GMF REVISIONS	 CAMBRIDGE DEPARTMENT OF PUBLIC WORKS	Client CITY OF CAMBRIDGE, MA Project RECONSTRUCTION OF MAIN STREET KENDALL SQUARE Drawing CIVIL DETAILS - 6	Sheet C-8 File No.
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NOTES:

1. A PORTION OF EXISTING CURB IS ANCHORED TO A CONCRETE FOOTING IN PROXIMITY OF MBTA TUNNEL. SEE SHEETS C-11 AND C-12 FOR APPROXIMATE LIMITS (STA 7+85 TO 30+76).
2. ALL EXISTING CURVED "MAHOGANY" CURB WITHIN PROJECT LIMITS SHALL BE REMOVED AND DISCARDED. ALL STRAIGHT "MAHOGANY" CURB SHALL BE REMOVED AND STACKED AT A LOCATION TO BE DETERMINED WITHIN THE CITY OF CAMBRIDGE.
3. ALL ELEMENTS OF EXISTING STREET TREE IRRIGATION SYSTEM WHICH INTERFERE WITH PROPOSED WORK SHALL BE REMOVED AND DISPOSED.
4. INSTALL AND MAINTAIN TREE PROTECTION ON ALL TREES DESIGNATED "RET".
5. REMOVAL OF TREES SHALL INCLUDE R&D OF TREE GRATES AND TREE GUARDS, INCLUDING ON TREES TO REMAIN.



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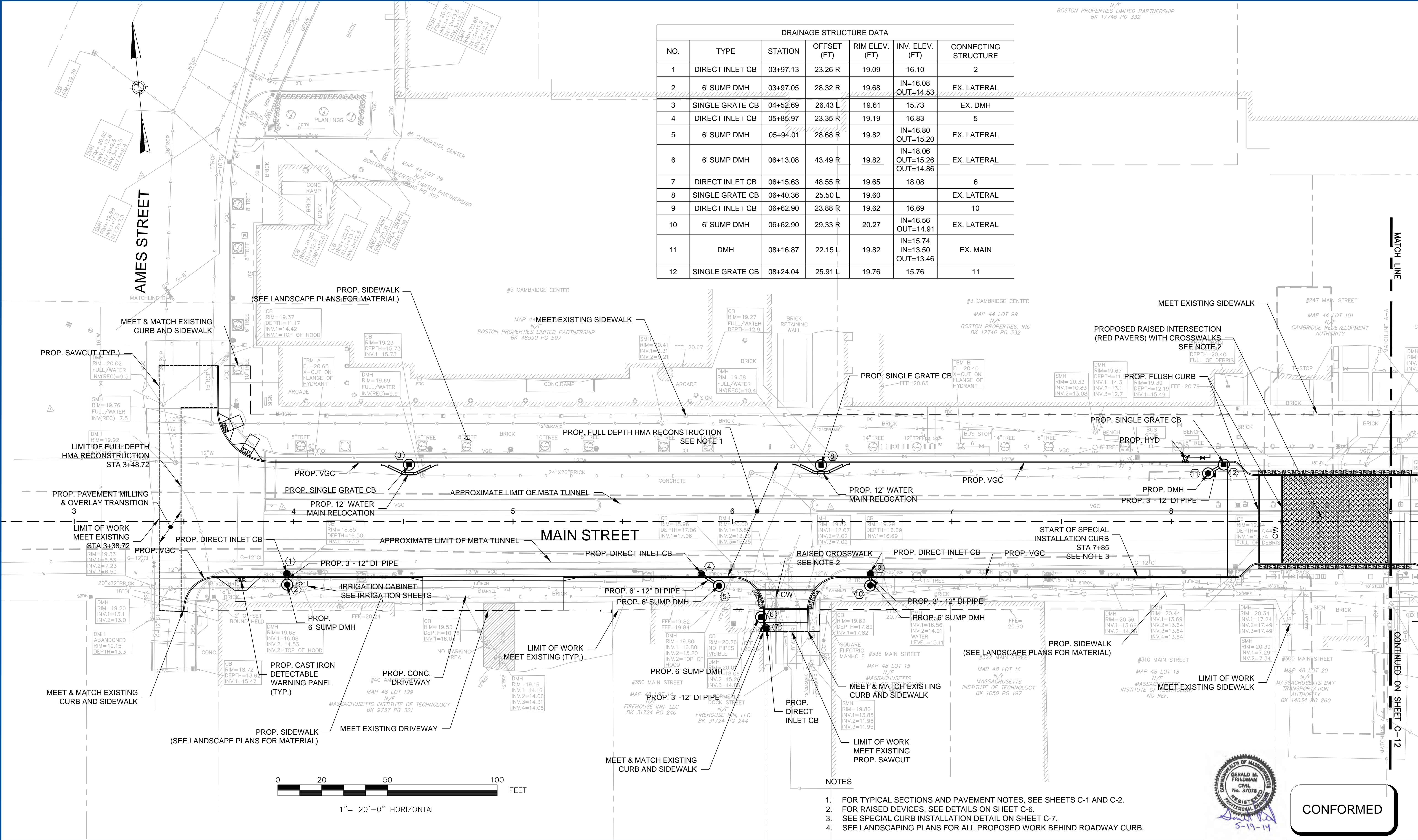
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Date	MAY 2014			
Job No.				
Designed by	JEC			
Drawn by	JEC			
Checked by	RDK	No.	Description	Date
Approved by	GMF		REVISIONS	



Client	CITY OF CAMBRIDGE, MA	Sheet	C-9
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE	File No.	
Drawing	SITE PREPARATION PLAN - 1		

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DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	OFFSET (FT)	RIM ELEV. (FT)	INV. ELEV. (FT)	CONNECTING STRUCTURE
1	DIRECT INLET CB	03+97.13	23.26 R	19.09	16.10	2
2	6' SUMP DMH	03+97.05	28.32 R	19.68	IN=16.08 OUT=14.53	EX. LATERAL
3	SINGLE GRATE CB	04+52.69	26.43 L	19.61	15.73	EX. DMH
4	DIRECT INLET CB	05+85.97	23.35 R	19.19	16.83	5
5	6' SUMP DMH	05+94.01	28.68 R	19.82	IN=16.80 OUT=15.20	EX. LATERAL
6	6' SUMP DMH	06+13.08	43.49 R	19.82	IN=18.06 OUT=15.26 OUT=14.86	EX. LATERAL
7	DIRECT INLET CB	06+15.63	48.55 R	19.65	18.08	6
8	SINGLE GRATE CB	06+40.36	25.50 L	19.60		EX. LATERAL
9	DIRECT INLET CB	06+62.90	23.88 R	19.62	16.69	10
10	6' SUMP DMH	06+62.90	29.33 R	20.27	IN=16.56 OUT=14.91	EX. LATERAL
11	DMH	08+16.87	22.15 L	19.82	IN=15.74 IN=13.50 OUT=13.46	EX. MAIN
12	SINGLE GRATE CB	08+24.04	25.91 L	19.76	15.76	11



- NOTES
- FOR TYPICAL SECTIONS AND PAVEMENT NOTES, SEE SHEETS C-1 AND C-2.
 - FOR RAISED DEVICES, SEE DETAILS ON SHEET C-6.
 - SEE SPECIAL CURB INSTALLATION DETAIL ON SHEET C-7.
 - SEE LANDSCAPING PLANS FOR ALL PROPOSED WORK BEHIND ROADWAY CURB.



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Scale	AS NOTED				
Date	MAY 2014				
Job No.					
Designed by	JEC				
Drawn by	JEC				
Checked by	RDK	No.	Description	Date	
Approved by	GMF		REVISIONS		



Client
CITY OF CAMBRIDGE, MA

Project
**RECONSTRUCTION OF MAIN STREET
KENDALL SQUARE**

Drawing
CONSTRUCTION PLAN - 1

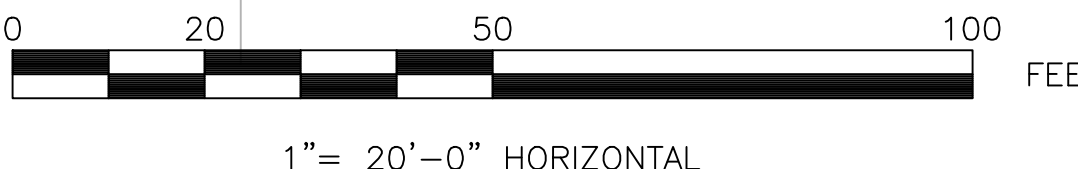
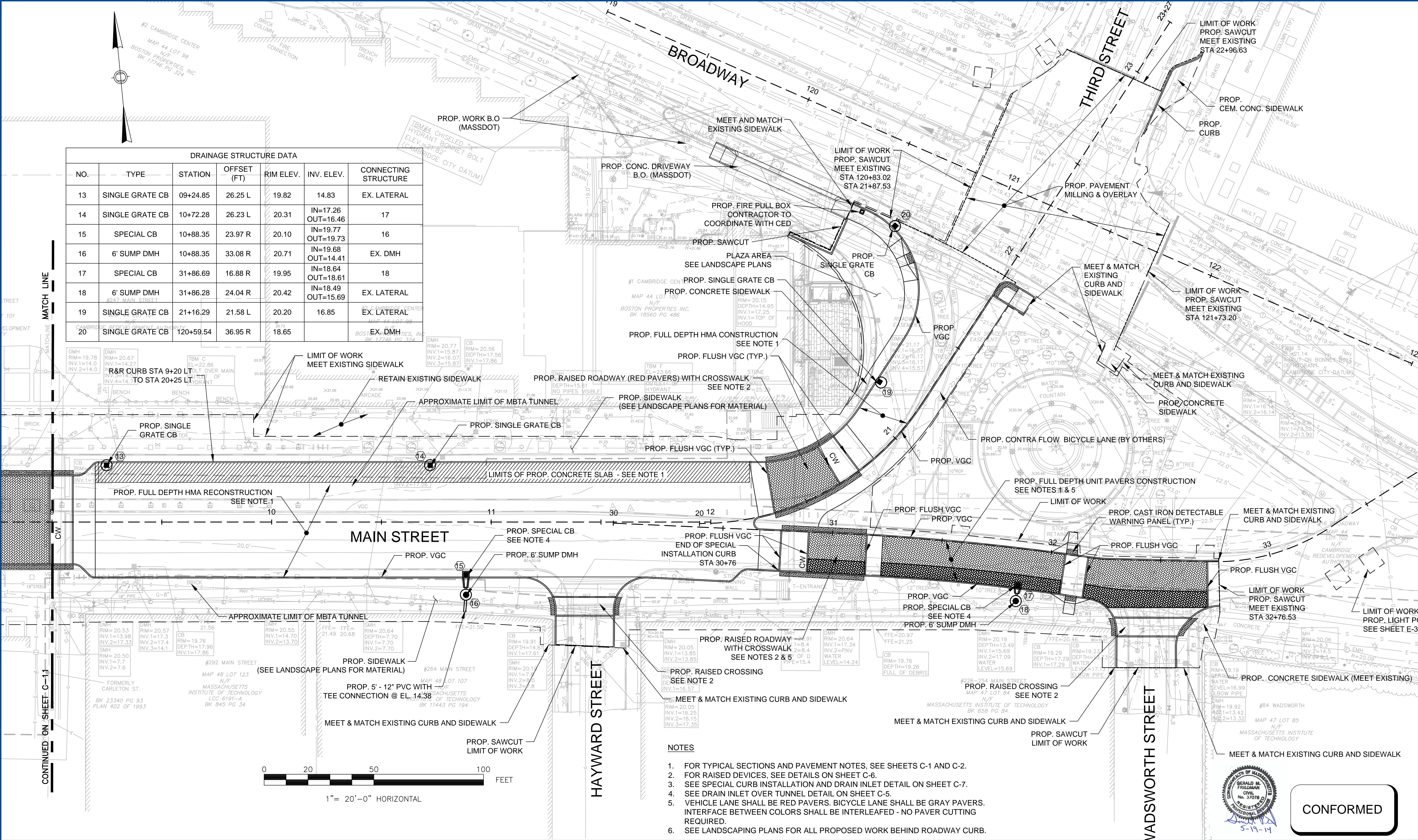
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C-11

File No.

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PLOT DATE=5/19/2014 12:34:41 PM USER=MA TIFFANY FILENAME=C:\pwworking\hdt\103107\Construction Plans.dwg

DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	OFFSET (FT)	RIM ELEV.	INV. ELEV.	CONNECTING STRUCTURE
13	SINGLE GRATE CB	09+24.85	26.25 L	19.82	14.83	EX. LATERAL
14	SINGLE GRATE CB	10+72.28	26.23 L	20.31	IN=17.26 OUT=16.46	17
15	SPECIAL CB	10+88.35	23.97 R	20.10	IN=19.77 OUT=19.73	16
16	6' SUMP DMH	10+88.35	33.08 R	20.71	IN=19.68 OUT=14.41	EX. DMH
17	SPECIAL CB	31+86.69	16.88 R	19.95	IN=18.64 OUT=18.61	18
18	6' SUMP DMH	31+86.28	24.04 R	20.42	IN=18.49 OUT=15.69	EX. LATERAL
19	SINGLE GRATE CB	21+16.29	21.58 L	20.20	16.85	EX. LATERAL
20	SINGLE GRATE CB	120+59.54	36.95 R	18.65		EX. DMH



- NOTES**
- FOR TYPICAL SECTIONS AND PAVEMENT NOTES, SEE SHEETS C-1 AND C-2.
 - FOR RAISED DEVICES, SEE DETAILS ON SHEET C-6.
 - SEE SPECIAL CURB INSTALLATION AND DRAIN INLET DETAIL ON SHEET C-7.
 - SEE DRAIN INLET OVER TUNNEL DETAIL ON SHEET C-5.
 - VEHICLE LANE SHALL BE RED PAVERS. BICYCLE LANE SHALL BE GRAY PAVERS. INTERFACE BETWEEN COLORS SHALL BE INTERLEAFED - NO PAVER CUTTING REQUIRED.
 - SEE LANDSCAPING PLANS FOR ALL PROPOSED WORK BEHIND ROADWAY CURB.



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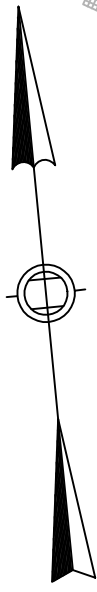
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Scale	AS NOTED	Date	MAY 2014	Job No.	Designed by	JEC	Drawn by	JEC	Checked by	RDK	Approved by	GMF	No.	Description	Date
REVISIONS															

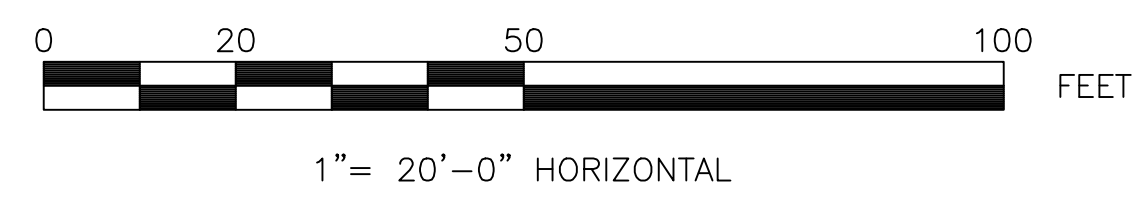
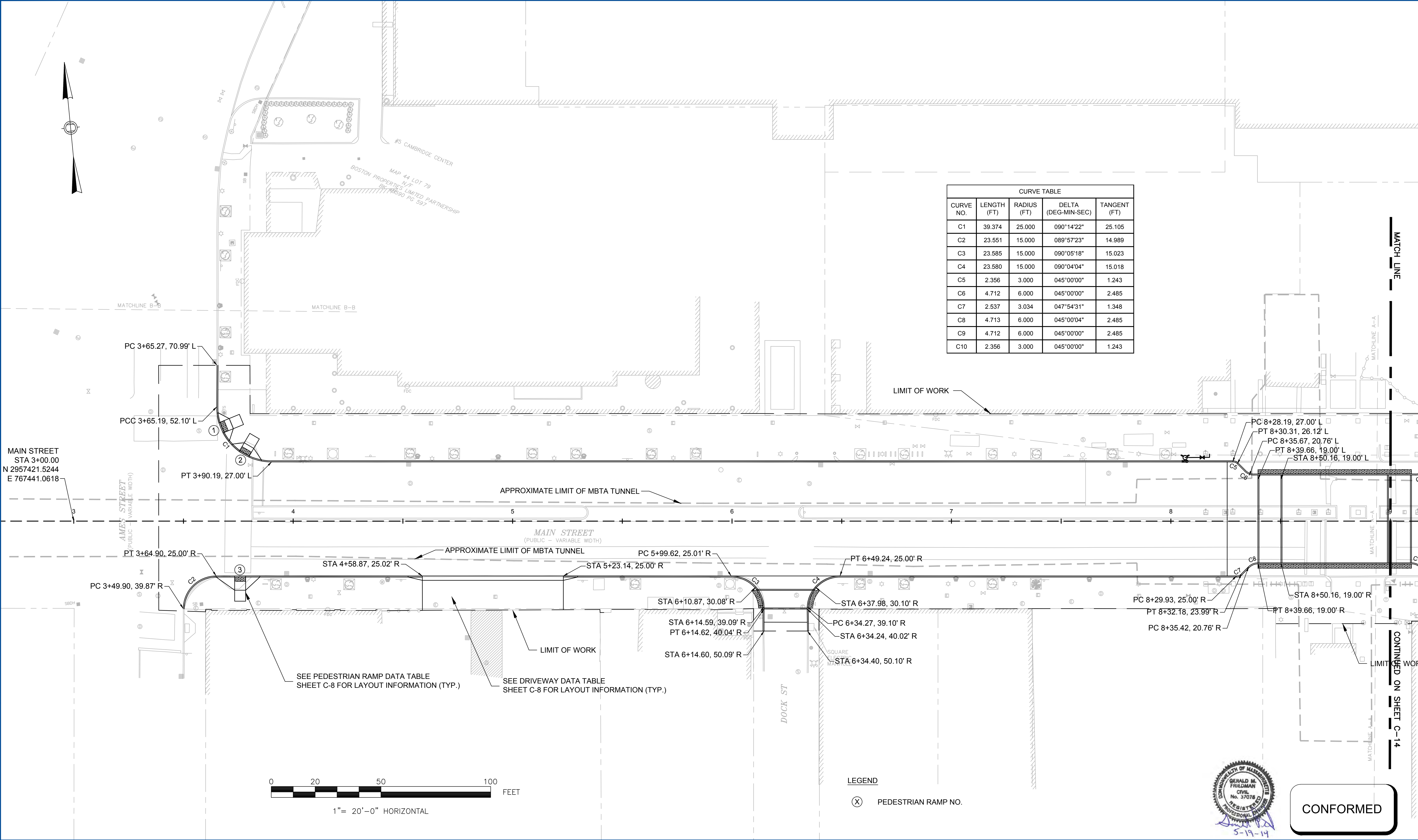


Client: CITY OF CAMBRIDGE, MA
Project: RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing: CONSTRUCTION PLAN - 2

Sheet: C-12
File No.



CURVE TABLE				
CURVE NO.	LENGTH (FT)	RADIUS (FT)	DELTA (DEG-MIN-SEC)	TANGENT (FT)
C1	39.374	25.000	090°14'22"	25.105
C2	23.551	15.000	089°57'23"	14.989
C3	23.585	15.000	090°05'18"	15.023
C4	23.580	15.000	090°04'04"	15.018
C5	2.356	3.000	045°00'00"	1.243
C6	4.712	6.000	045°00'00"	2.485
C7	2.537	3.034	047°54'31"	1.348
C8	4.713	6.000	045°00'04"	2.485
C9	4.712	6.000	045°00'00"	2.485
C10	2.356	3.000	045°00'00"	1.243



LEGEND
 (X) PEDESTRIAN RAMP NO.



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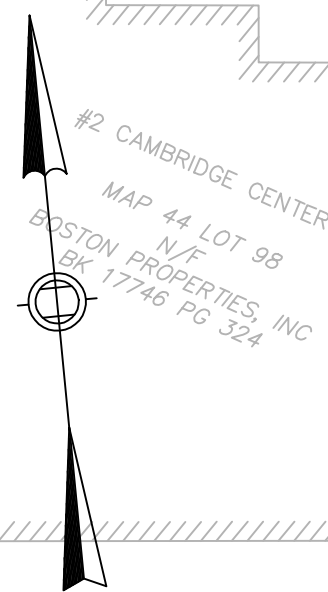
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Scale	AS NOTED		
Date	MAY 2014		
Job No.			
Designed by	JEC		
Drawn by	JEC		
Checked by	RDK	No.	Description
Approved by	GMF		REVISIONS

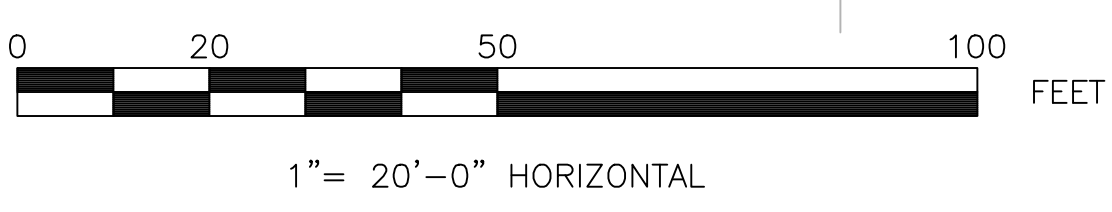
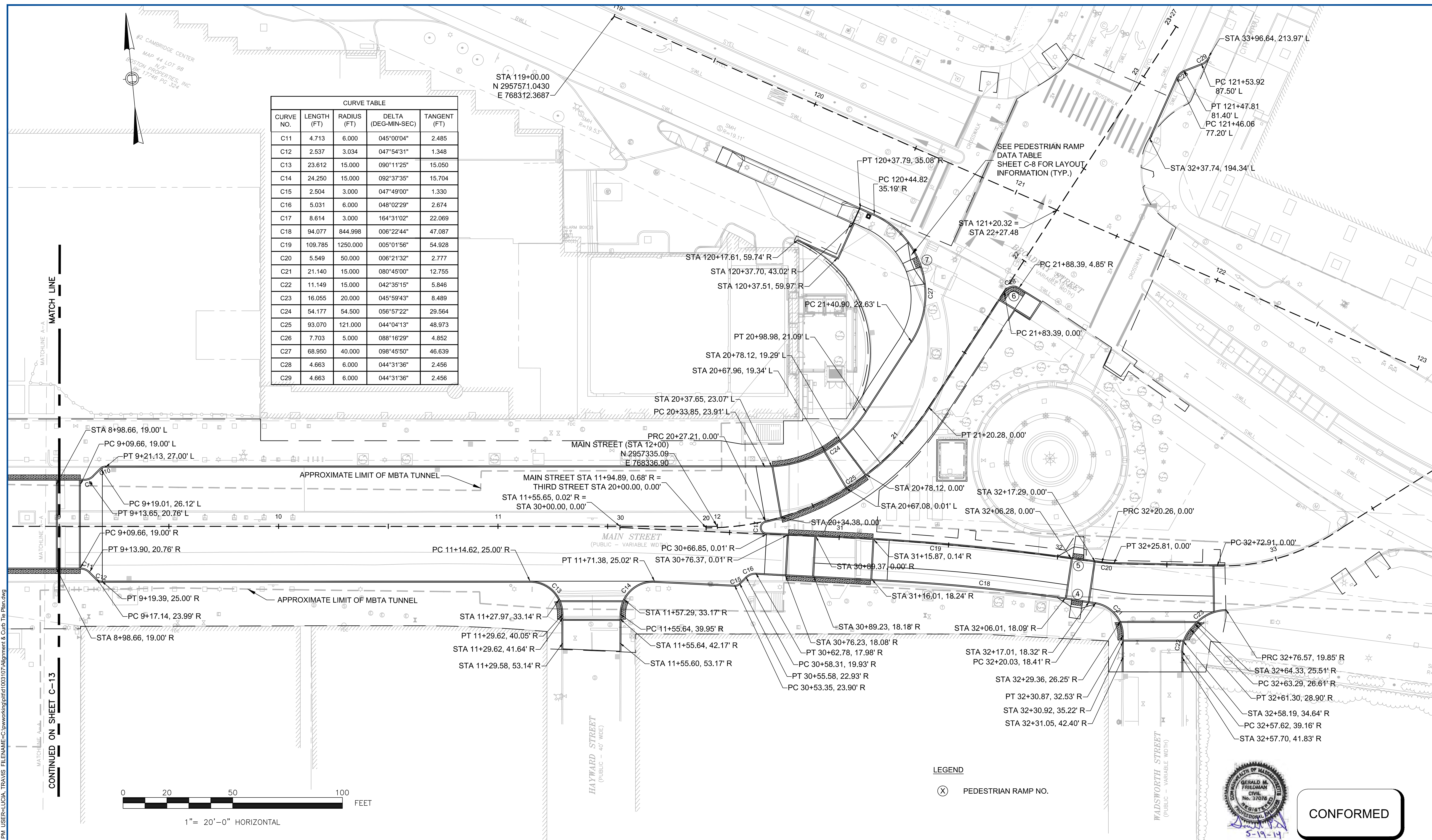


Client	CITY OF CAMBRIDGE, MA
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing	ALIGNMENT AND CURB TIE PLAN - 1

Sheet	C-13
File No.	



CURVE TABLE				
CURVE NO.	LENGTH (FT)	RADIUS (FT)	DELTA (DEG-MIN-SEC)	TANGENT (FT)
C11	4.713	6.000	045°00'04"	2.485
C12	2.537	3.034	047°54'31"	1.348
C13	23.612	15.000	090°11'25"	15.050
C14	24.250	15.000	092°37'35"	15.704
C15	2.504	3.000	047°49'00"	1.330
C16	5.031	6.000	048°02'29"	2.674
C17	8.614	3.000	164°31'02"	22.069
C18	94.077	844.998	006°22'44"	47.087
C19	109.785	1250.000	005°01'56"	54.928
C20	5.549	50.000	006°21'32"	2.777
C21	21.140	15.000	080°45'00"	12.755
C22	11.149	15.000	042°35'15"	5.846
C23	16.055	20.000	045°59'43"	8.489
C24	54.177	54.500	056°57'22"	29.564
C25	93.070	121.000	044°04'13"	48.973
C26	7.703	5.000	088°16'29"	4.852
C27	68.950	40.000	098°45'50"	46.639
C28	4.663	6.000	044°31'36"	2.456
C29	4.663	6.000	044°31'36"	2.456



LEGEND
 (X) PEDESTRIAN RAMP NO.

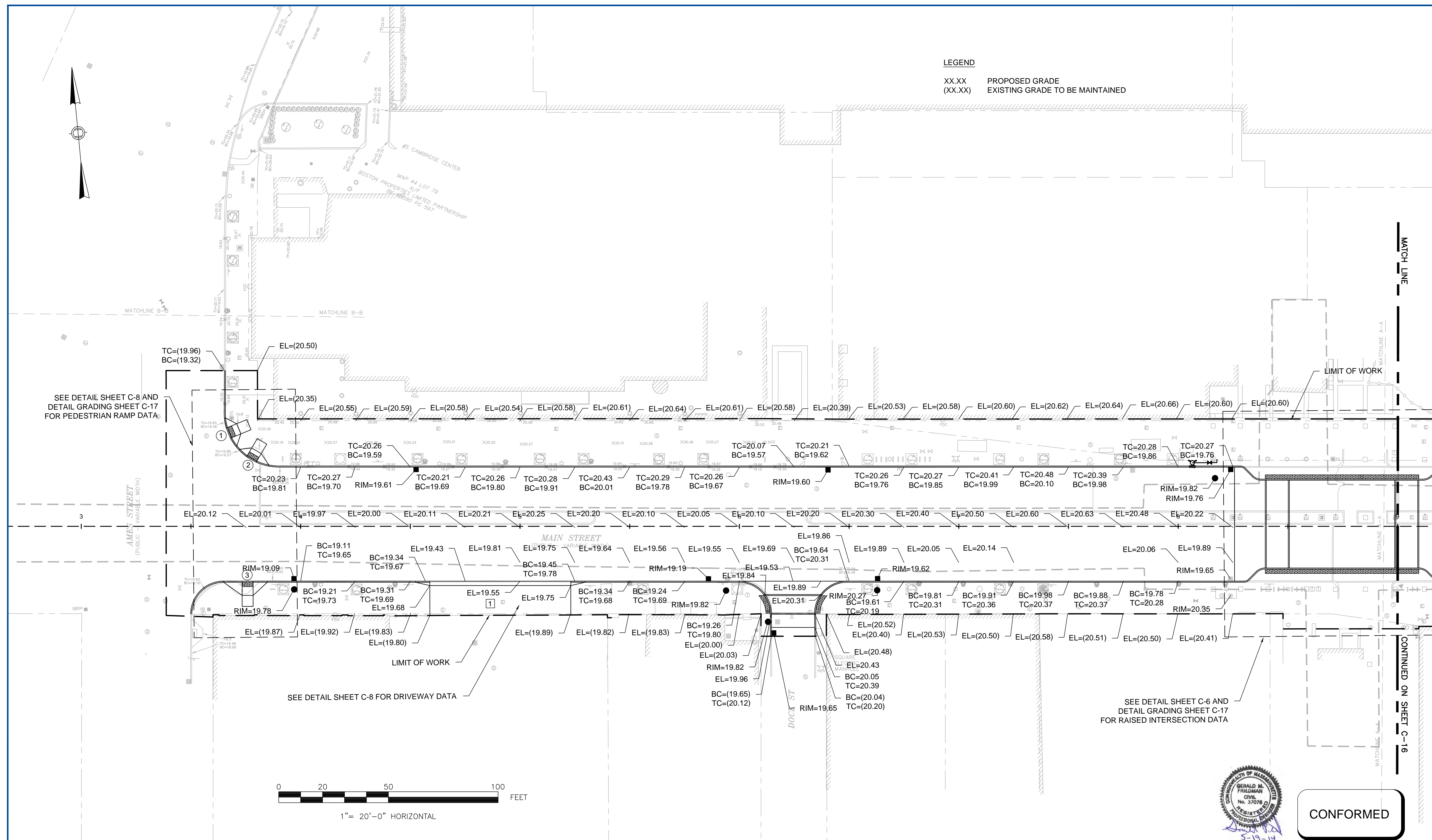


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 HDR ENGINEERING, INC. 695 ATLANTIC AVENUE, 2FL BOSTON, MASSACHUSETTS 02111-2626 (617) 357-7700	 TRANSPORTATION ENGINEERS & PLANNERS	 KLOPFER MARTIN DESIGN GROUP	 Bright People. Right Solutions.	Scale	AS NOTED			 CAMBRIDGE DEPARTMENT OF PUBLIC WORKS	Client	CITY OF CAMBRIDGE, MA		Sheet	C-14
				Date	MAY 2014				Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE		File No.	
				Job No.					Drawing	ALIGNMENT AND CURB TIE PLAN - 2			
				Designed by	JEC								
				Drawn by	JEC								
				Checked by	RDK	No.	Description	Date					
				Approved by	GMF		REVISIONS						

LEGEND

XX.XX PROPOSED GRADE
 (XX.XX) EXISTING GRADE TO BE MAINTAINED



SEE DETAIL SHEET C-8 AND
 DETAIL GRADING SHEET C-17
 FOR PEDESTRIAN RAMP DATA

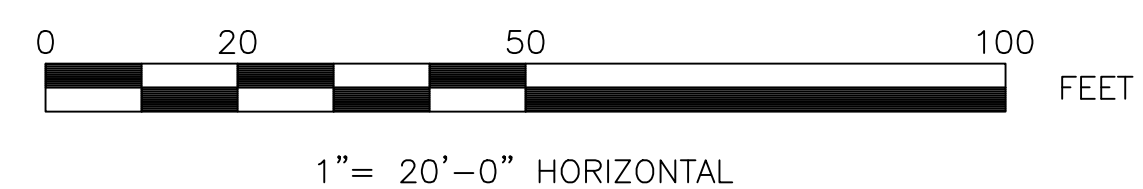
AMES STREET
 (PUBLIC VARIABLE WIDTH)

MAIN STREET
 (PUBLIC VARIABLE WIDTH)

DOCK ST

SEE DETAIL SHEET C-8 FOR DRIVEWAY DATA

SEE DETAIL SHEET C-6 AND
 DETAIL GRADING SHEET C-17
 FOR RAISED INTERSECTION DATA



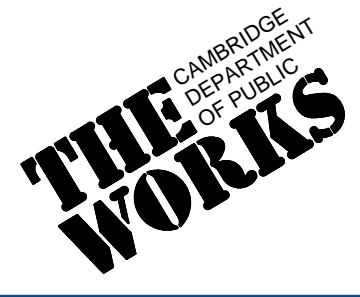
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Date	MAY 2014			
Job No.				
Designed by	JEC			
Drawn by	JEC			
Checked by	RDK	No.	Description	Date
Approved by	GMF		REVISIONS	

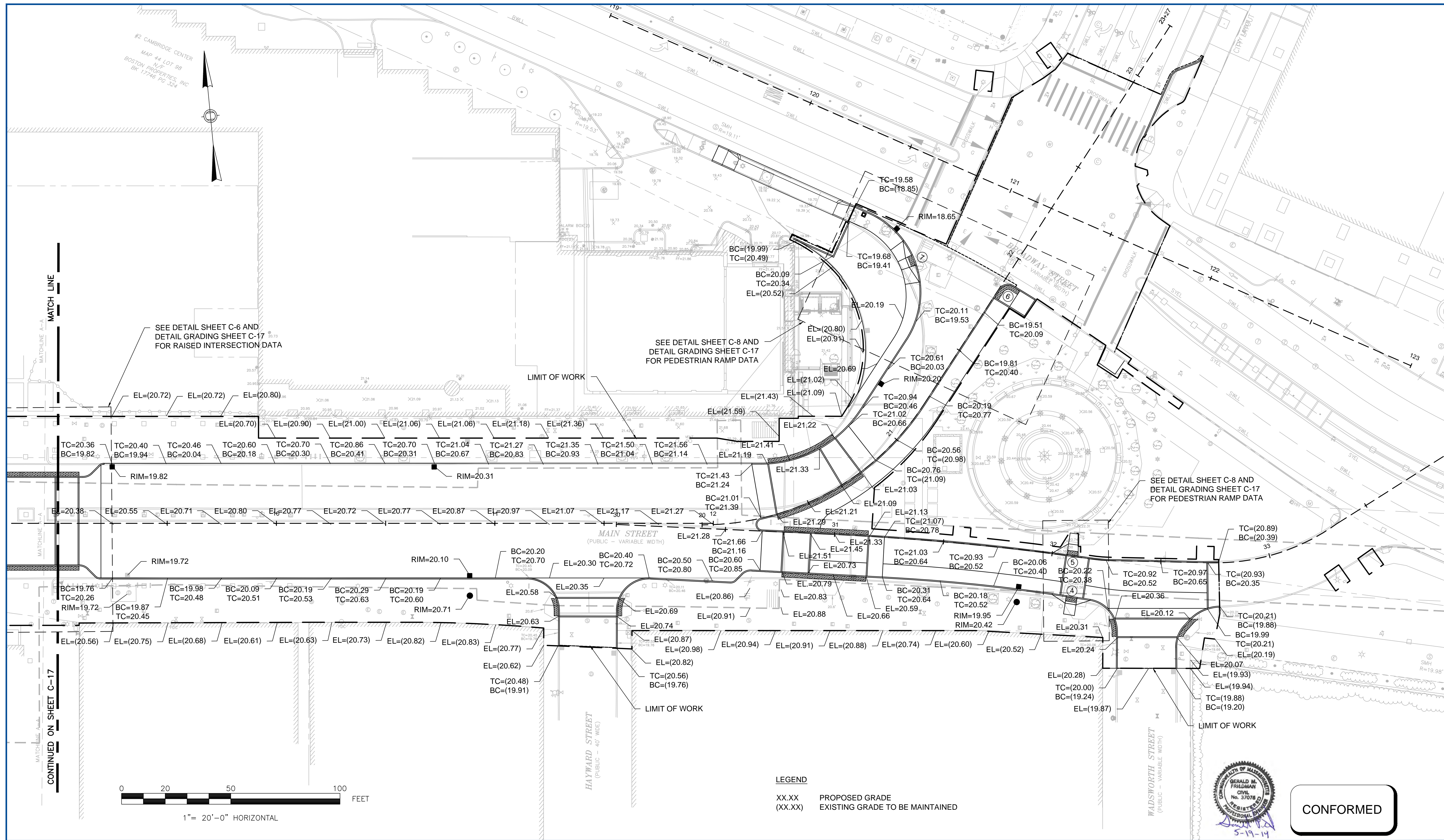


Client	CITY OF CAMBRIDGE, MA
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing	GRADING PLAN - 1

Sheet	C-15
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LEGEND
 XX.XX PROPOSED GRADE
 (XX.XX) EXISTING GRADE TO BE MAINTAINED



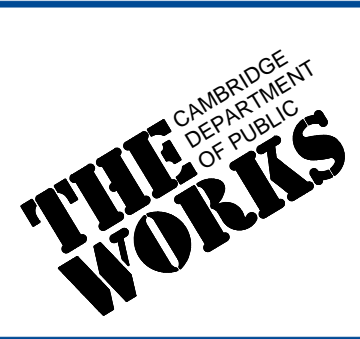
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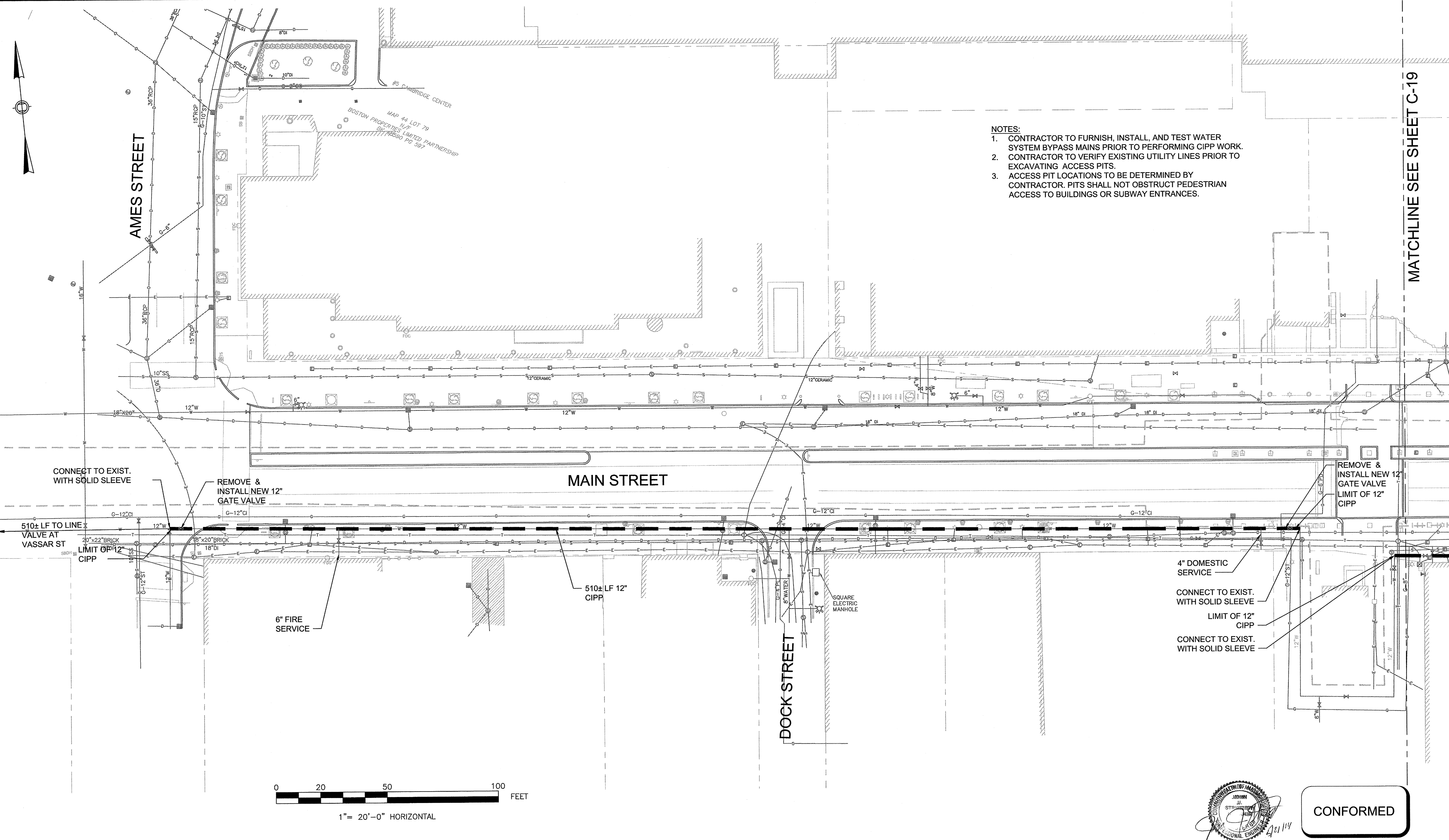
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Date	MAY 2014		
Job No.			
Designed by	JEC		
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Checked by	RDK	No.	Description
Approved by	GMF		Date



Client	CITY OF CAMBRIDGE, MA
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing	GRADING PLAN - 2

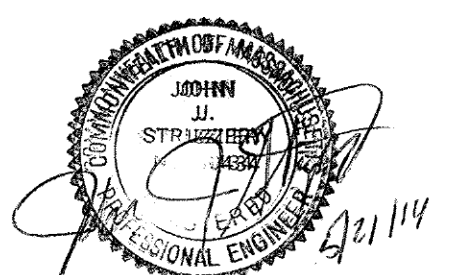
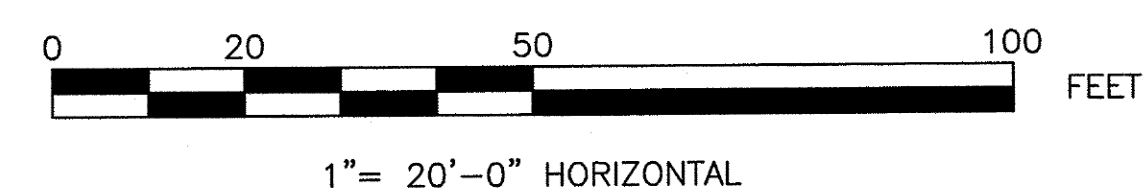
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- NOTES:**
1. CONTRACTOR TO FURNISH, INSTALL, AND TEST WATER SYSTEM BYPASS MAINS PRIOR TO PERFORMING CIPP WORK.
 2. CONTRACTOR TO VERIFY EXISTING UTILITY LINES PRIOR TO EXCAVATING ACCESS PITS.
 3. ACCESS PIT LOCATIONS TO BE DETERMINED BY CONTRACTOR. PITS SHALL NOT OBSTRUCT PEDESTRIAN ACCESS TO BUILDINGS OR SUBWAY ENTRANCES.

MATCHLINE SEE SHEET C-19



CONFORMED

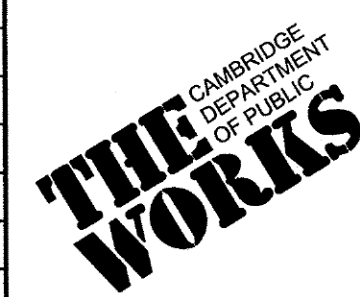
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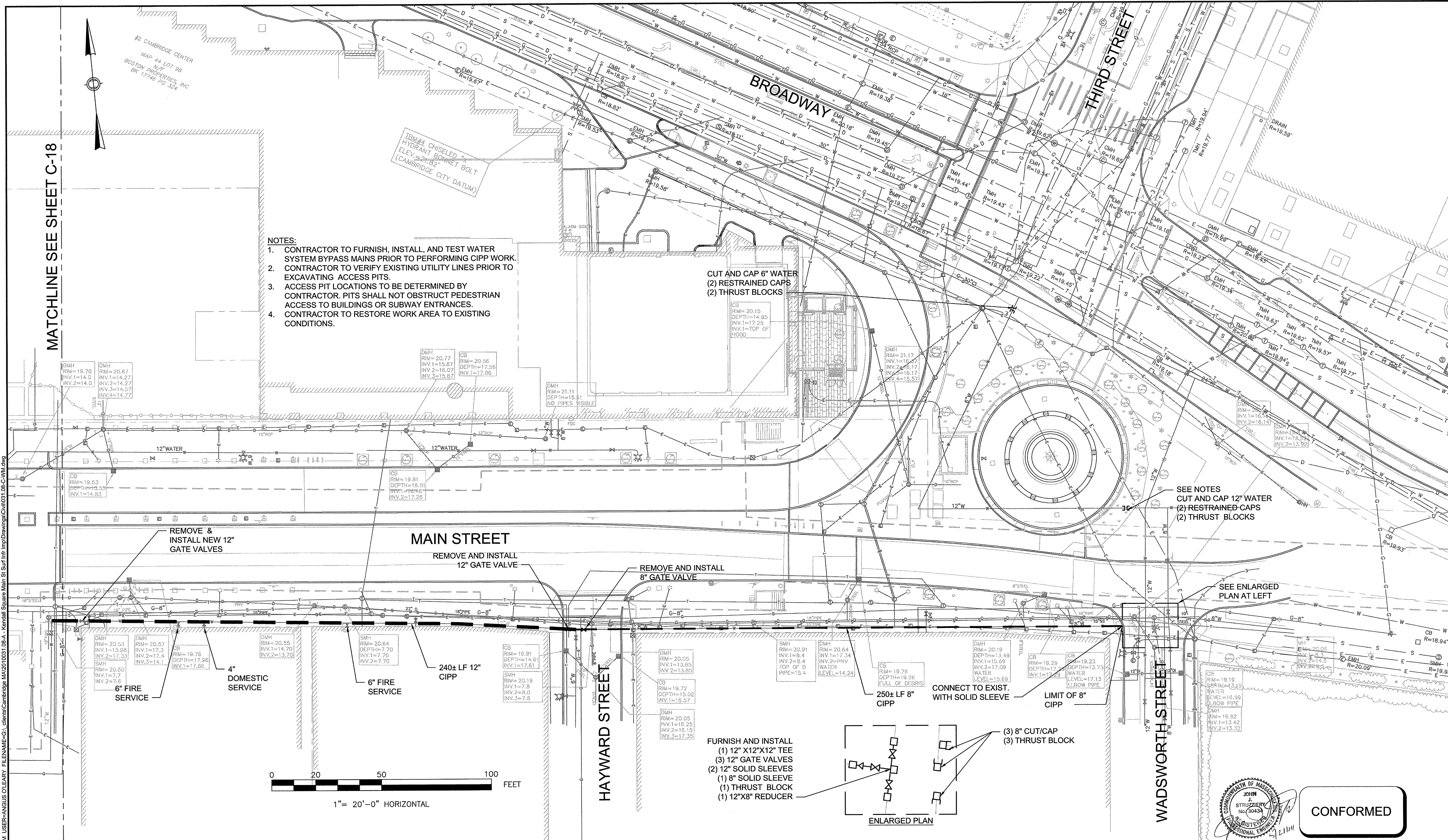
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Scale	AS NOTED		
Date	MAY 2014		
Job No.	2010031.08-A		
Designed by	TSTINSON		
Drawn by	GOLEARY		
Checked by	TSTINSON	No.	Description
Approved by	JSTRUZZIERY		REVISIONS



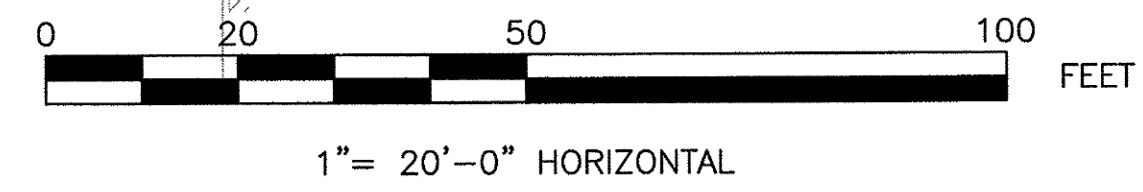
Client	CITY OF CAMBRIDGE, MA
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing	WATER MAIN LINING & INSTALLATION

Sheet	C-18
File No.	



MATCHLINE SEE SHEET C-18

- NOTES:**
- CONTRACTOR TO FURNISH, INSTALL, AND TEST WATER SYSTEM BYPASS MAINS PRIOR TO PERFORMING CIPP WORK.
 - CONTRACTOR TO VERIFY EXISTING UTILITY LINES PRIOR TO EXCAVATING ACCESS PITS.
 - ACCESS PIT LOCATIONS TO BE DETERMINED BY CONTRACTOR. PITS SHALL NOT OBSTRUCT PEDESTRIAN ACCESS TO BUILDINGS OR SUBWAY ENTRANCES.
 - CONTRACTOR TO RESTORE WORK AREA TO EXISTING CONDITIONS.



REMOVE & INSTALL NEW 12" GATE VALVES

MAIN STREET

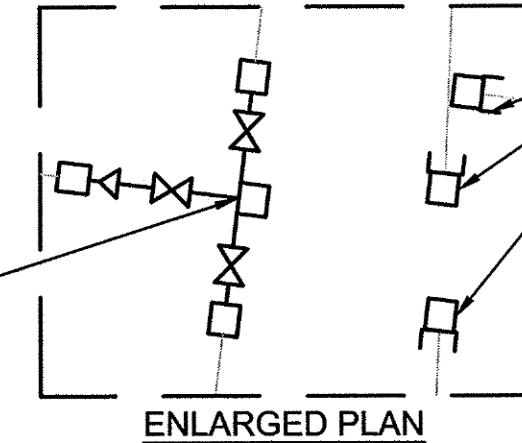
REMOVE AND INSTALL 12" GATE VALVE

REMOVE AND INSTALL 8" GATE VALVE

HAYWARD STREET

WADSWORTH STREET

- FURNISH AND INSTALL
- (1) 12" X12"X12" TEE
 - (3) 12" GATE VALVES
 - (2) 12" SOLID SLEEVES
 - (1) 8" SOLID SLEEVE
 - (1) THRUST BLOCK
 - (1) 12"X8" REDUCER

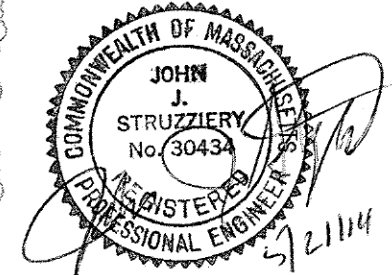


CONNECT TO EXIST. WITH SOLID SLEEVE

LIMIT OF 8" CIPP

SEE NOTES
CUT AND CAP 12" WATER
(2) RESTRAINED-CAPS
(2) THRUST BLOCKS

SEE ENLARGED PLAN AT LEFT



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KLOPFER MARTIN DESIGN GROUP

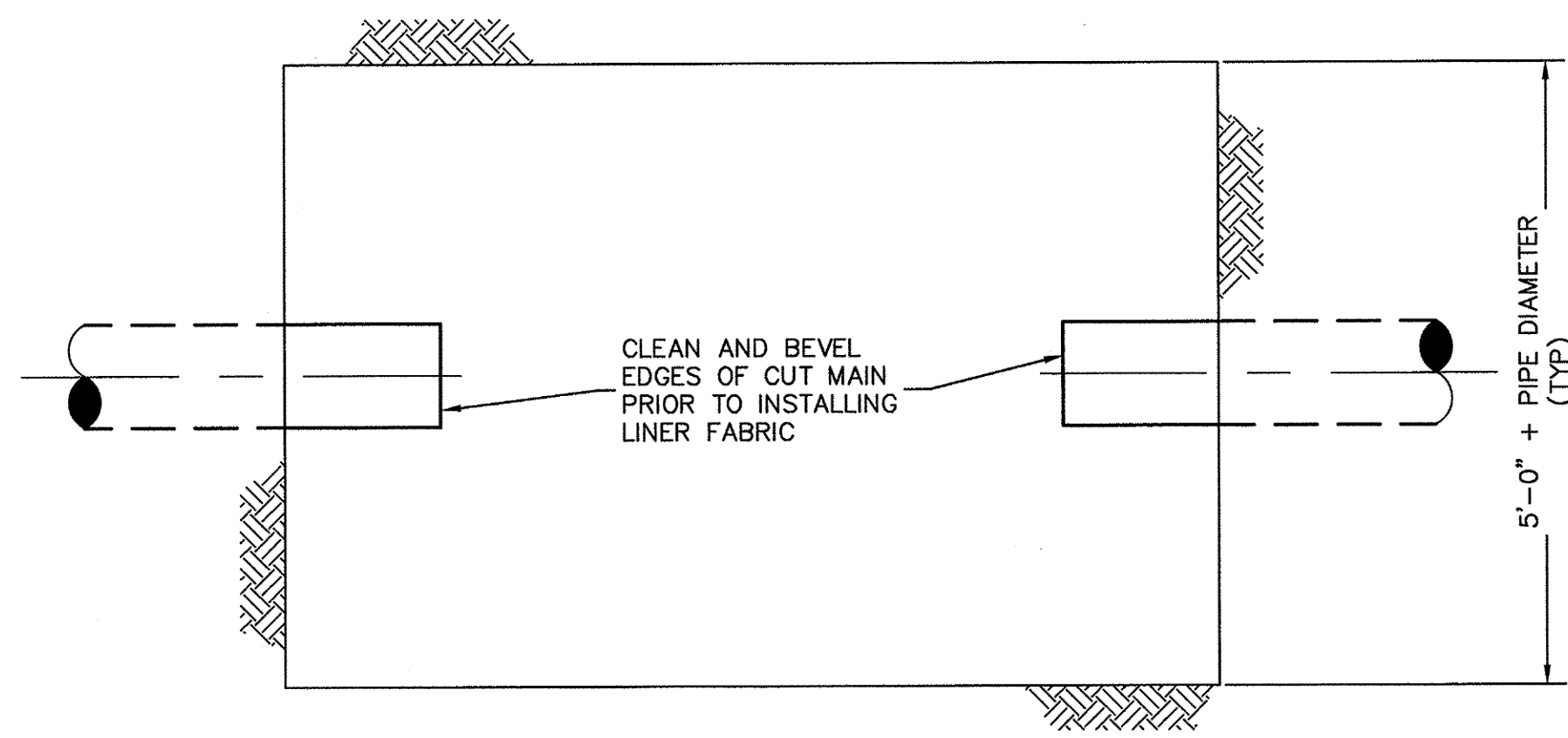
KLEINFELDER
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Scale	AS NOTED		
Date	MAY 2014		
Job No.	2010031.08-A		
Designed by	TSTINSON		
Drawn by	GOLEARY		
Checked by	TSTINSON	No.	Description
Approved by	JSTRUZZIERY	No.	Description

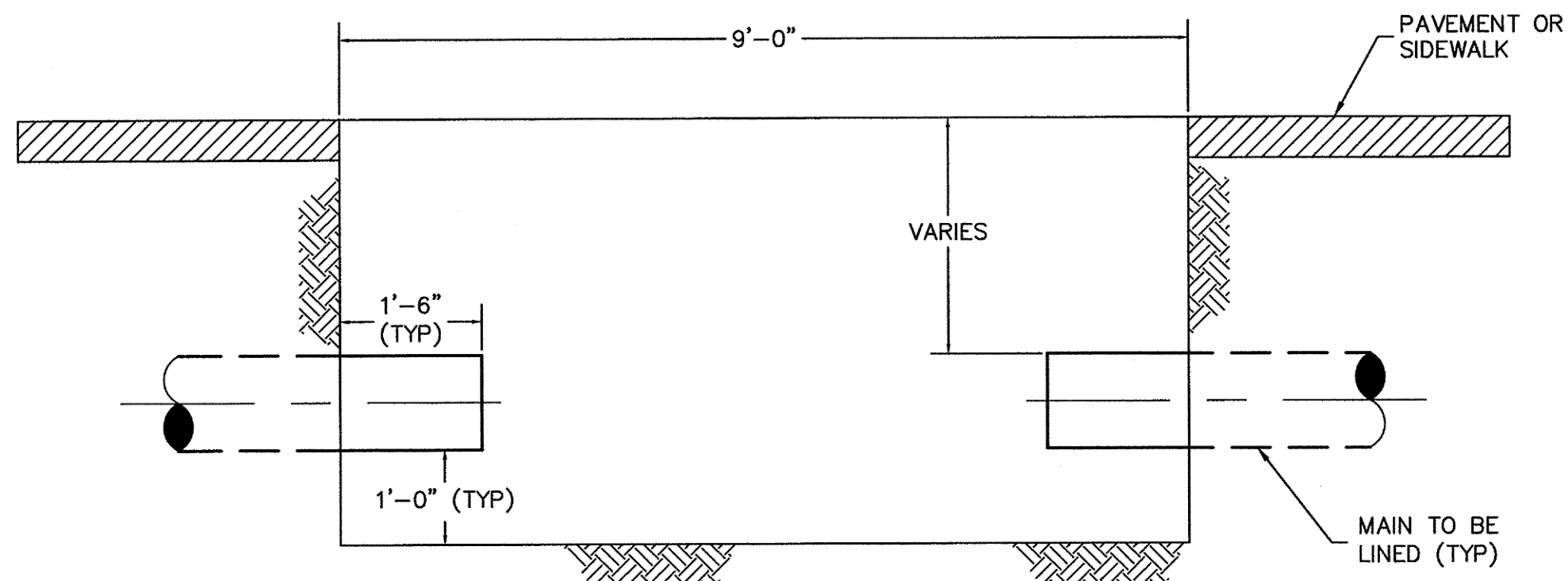


Client	CITY OF CAMBRIDGE, MA
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing	WATER MAIN LINING & INSTALLATION

Sheet	C-19
File No.	



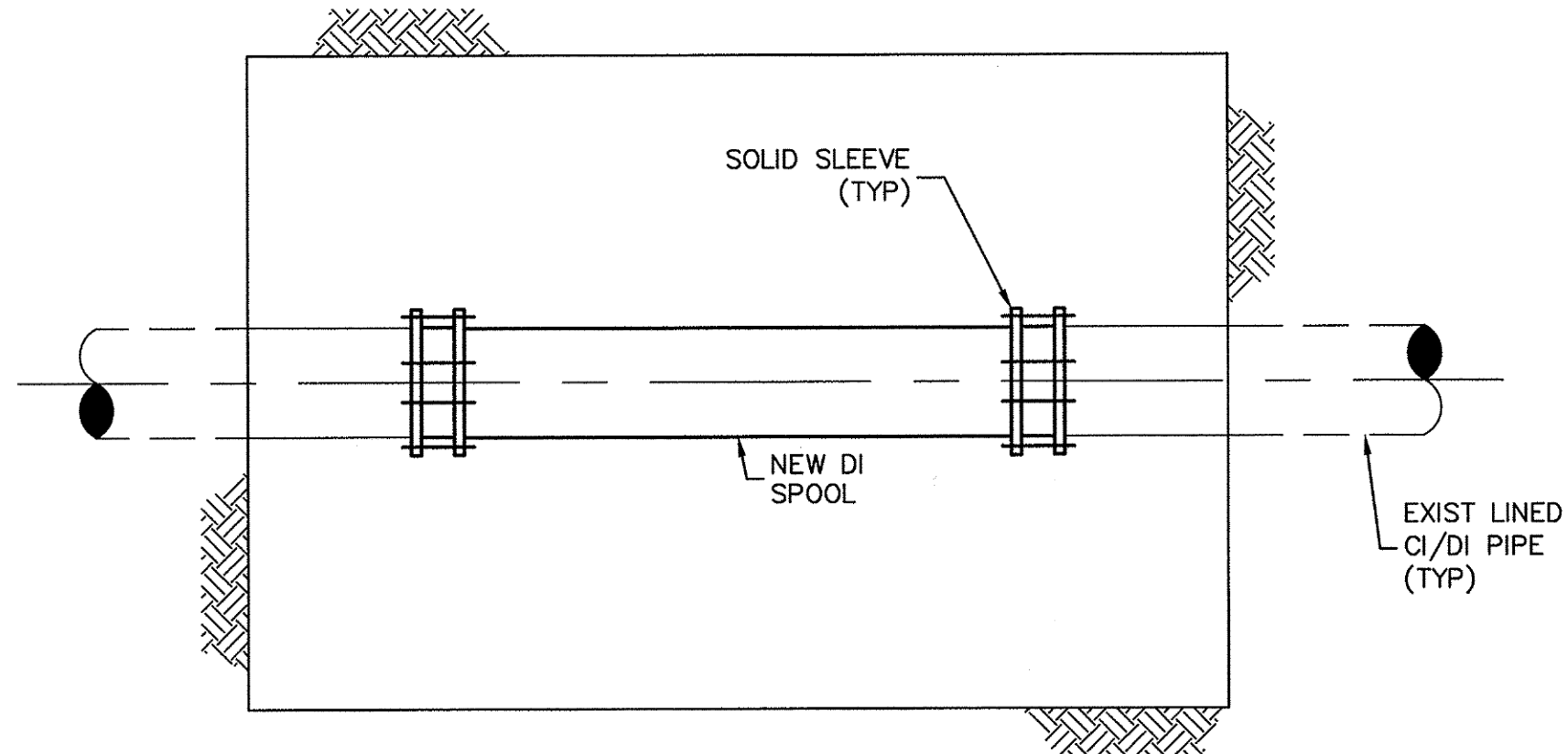
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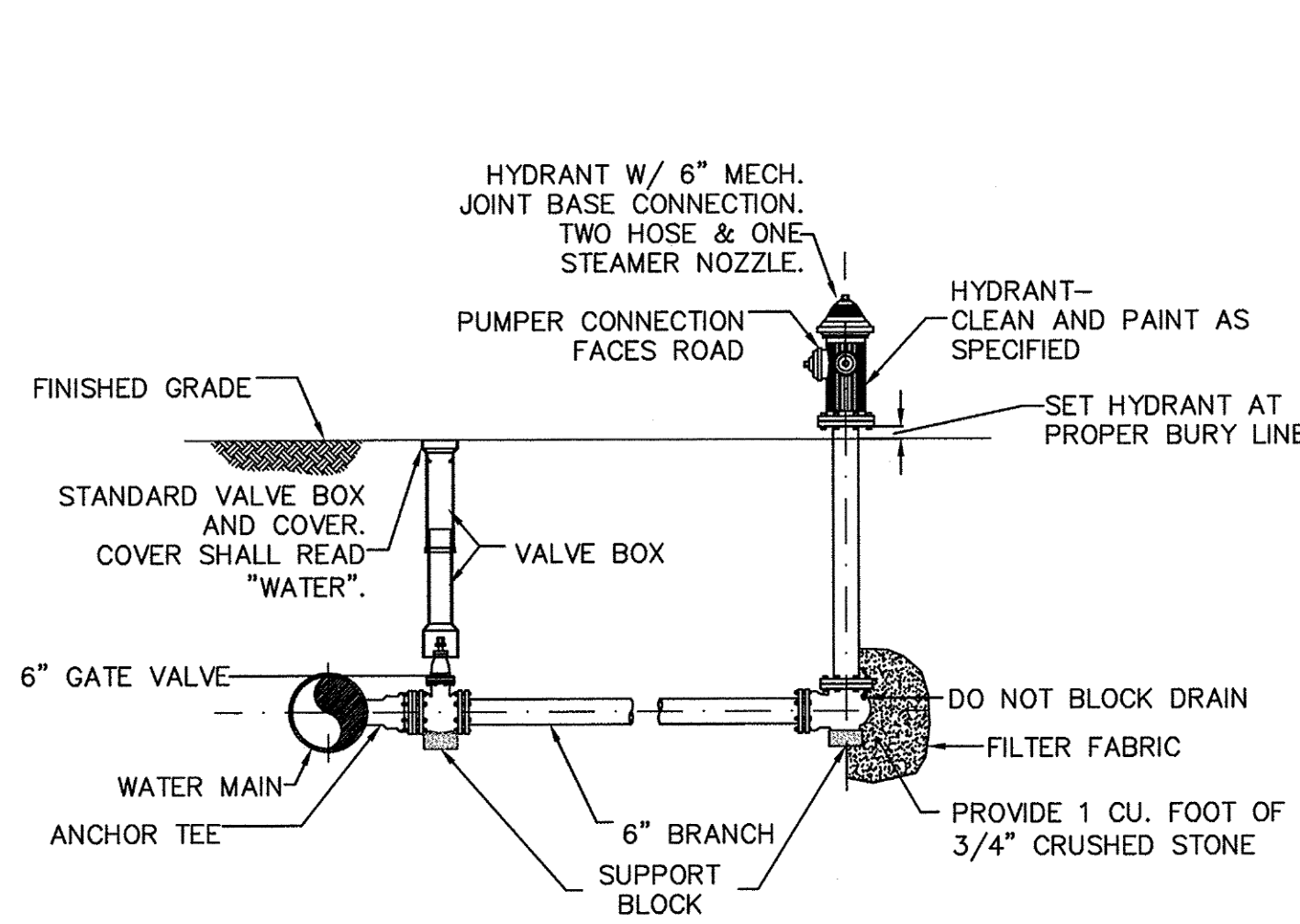
SECTION

- NOTES:
1. ALL MECHANICAL JOINTS AND ADJACENT PIPE JOINTS TO BE INSTALLED WITH RESTRAINED JOINTS. REFER TO SPECIFICATIONS FOR DETAILS.
 2. CONTRACTOR TO VERIFY PIPE MATERIAL AND FIELD MEASURE OUTSIDE DIAMETER PRIOR TO ORDERING/INSTALLING VALVES, COUPLINGS, ETC. ON EXISTING MAINS.

ACCESS PIT DETAIL
SCALE: N.T.S.

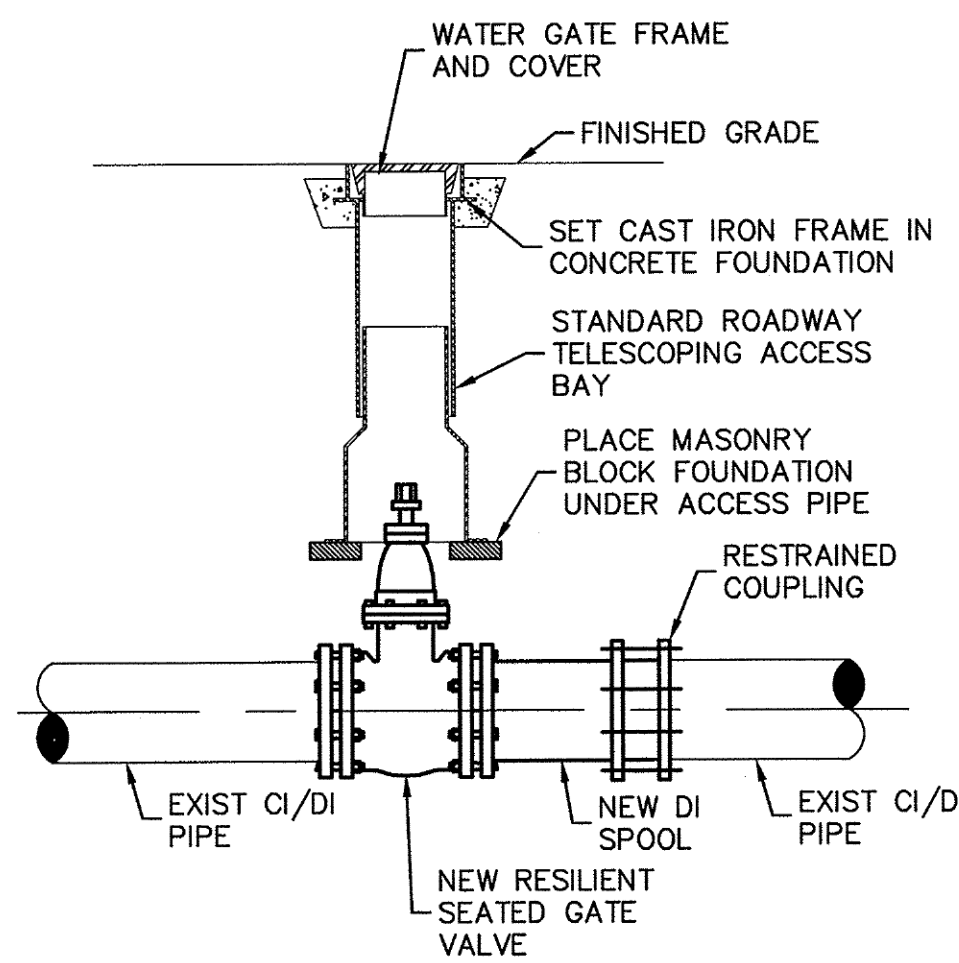


RECONNECTION DETAIL
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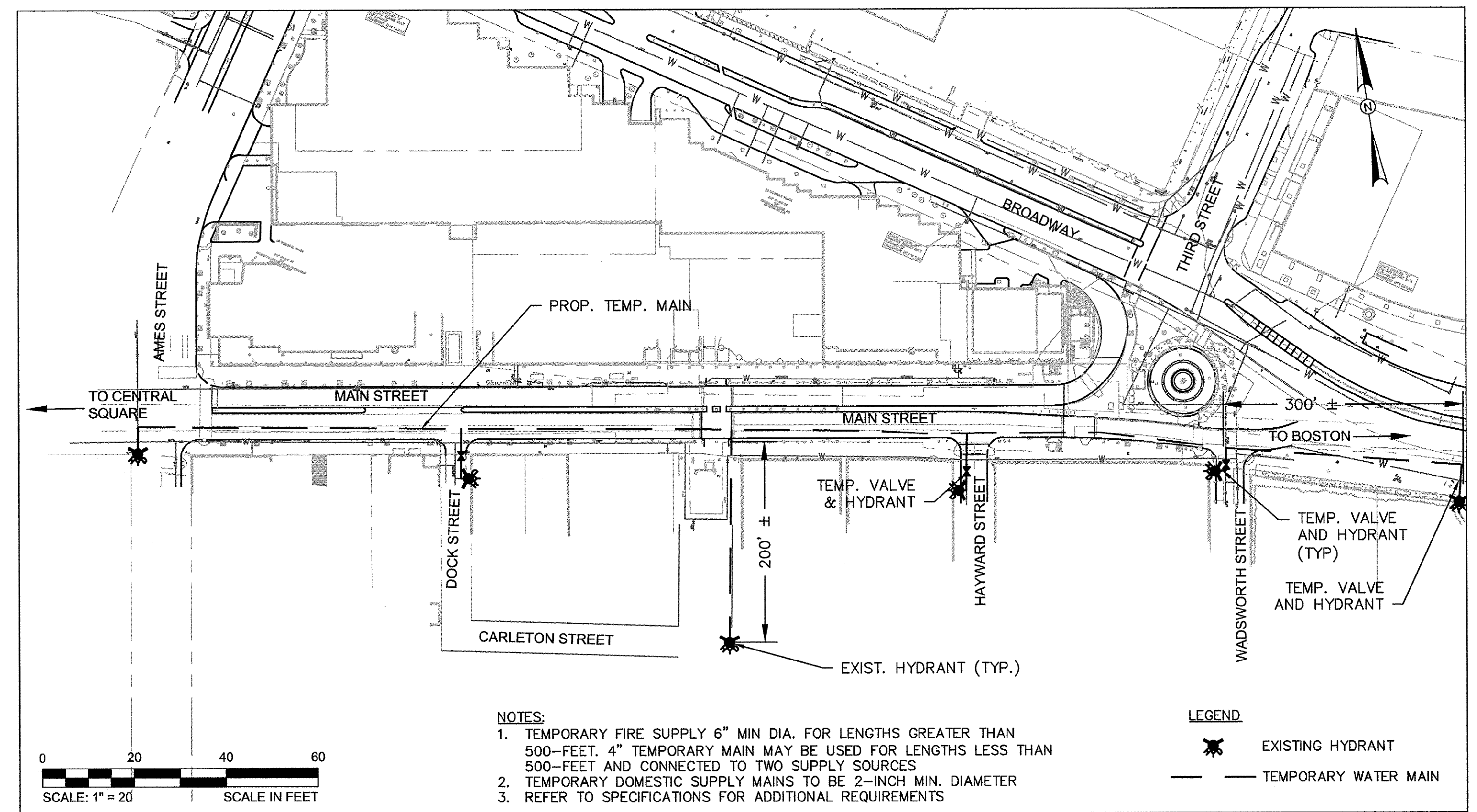


FIRE HYDRANT DETAIL
SCALE: N.T.S.

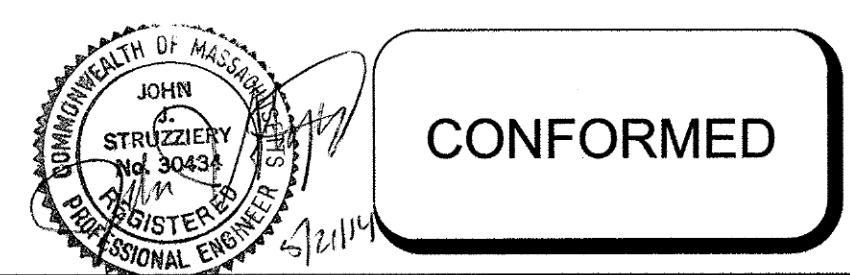
- NOTES:
1. PROVIDE HYDRANT AND VALVE JOINTS WITH APPROVED MECHANICAL JOINTS.
 2. SUPPORT BLOCKS TO BE PRESSURE TREATED WOOD OR CONCRETE MASONRY BLOCK.
 3. ALL VALVES OPEN LEFT.
 4. ALL JOINTS ON HYDRANT BRANCHES TO BE INSTALLED WITH RESTRAINED MECHANICAL JOINTS.



VALVE REPLACEMENT DETAIL
SCALE: N.T.S.



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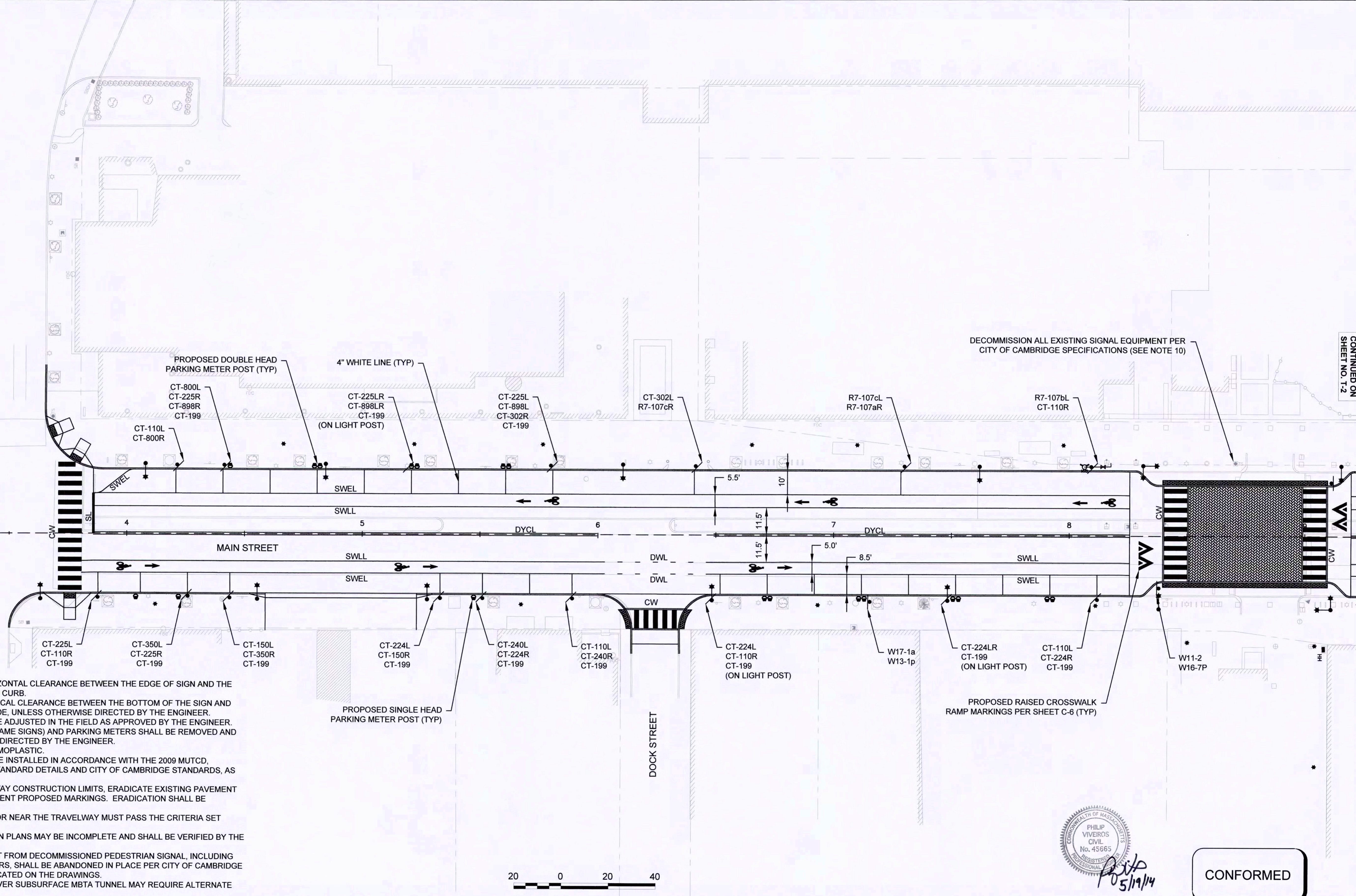
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Date	MAY 2014			
Job No.	2010031.08-A			
Designed by	TSTINSON			
Drawn by	DRM			
Checked by	TSTINSON	No.	Description	Date
Approved by	JSTRUZZIERY		REVISIONS	



Client	CITY OF CAMBRIDGE, MA	Sheet	C-20
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE	File No.	
Drawing	WATER DETAILS		



SIGNAGE & PAVEMENT MARKING NOTES:

1. ALL SIGNS SHALL HAVE A 2' MINIMUM HORIZONTAL CLEARANCE BETWEEN THE EDGE OF SIGN AND THE EDGE OF FINISHED PAVEMENT OR FACE OF CURB.
2. ALL SIGNS SHALL HAVE A 7' MINIMUM VERTICAL CLEARANCE BETWEEN THE BOTTOM OF THE SIGN AND THE TOP OF THE FINISHED SIDEWALK GRADE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
3. THE FINAL LOCATION OF THE SIGNS MAY BE ADJUSTED IN THE FIELD AS APPROVED BY THE ENGINEER.
4. ALL EXISTING SIGNS (INCLUDING STREET NAME SIGNS) AND PARKING METERS SHALL BE REMOVED AND DISPOSED UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER.
5. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
6. PROPOSED PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE 2009 MUTCD, MASSDOT CONSTRUCTION AND TRAFFIC STANDARD DETAILS AND CITY OF CAMBRIDGE STANDARDS, AS AMENDED.
7. IN AREAS OUTSIDE THE PROPOSED ROADWAY CONSTRUCTION LIMITS, ERADICATE EXISTING PAVEMENT MARKINGS WHICH CONFLICT WITH PERMANENT PROPOSED MARKINGS. ERADICATION SHALL BE CONSIDERED INCIDENTAL.
8. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELWAY MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350.
9. EXISTING SURVEY INFORMATION SHOWN ON PLANS MAY BE INCOMPLETE AND SHALL BE VERIFIED BY THE CONTRACTOR.
10. EXISTING SUBSURFACE SIGNAL EQUIPMENT FROM DECOMMISSIONED PEDESTRIAN SIGNAL, INCLUDING CONDUIT, PULLBOXES AND LOOP DETECTORS, SHALL BE ABANDONED IN PLACE PER CITY OF CAMBRIDGE SPECIFICATIONS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
11. INSTALLATION OF PROPOSED FEATURES OVER SUBSURFACE MBTA TUNNEL MAY REQUIRE ALTERNATE SURFACE MOUNT DETAIL.

DECOMMISSION ALL EXISTING SIGNAL EQUIPMENT PER CITY OF CAMBRIDGE SPECIFICATIONS (SEE NOTE 10)

CONTINUED ON SHEET NO. T-2



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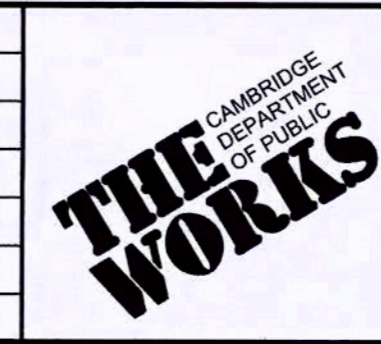
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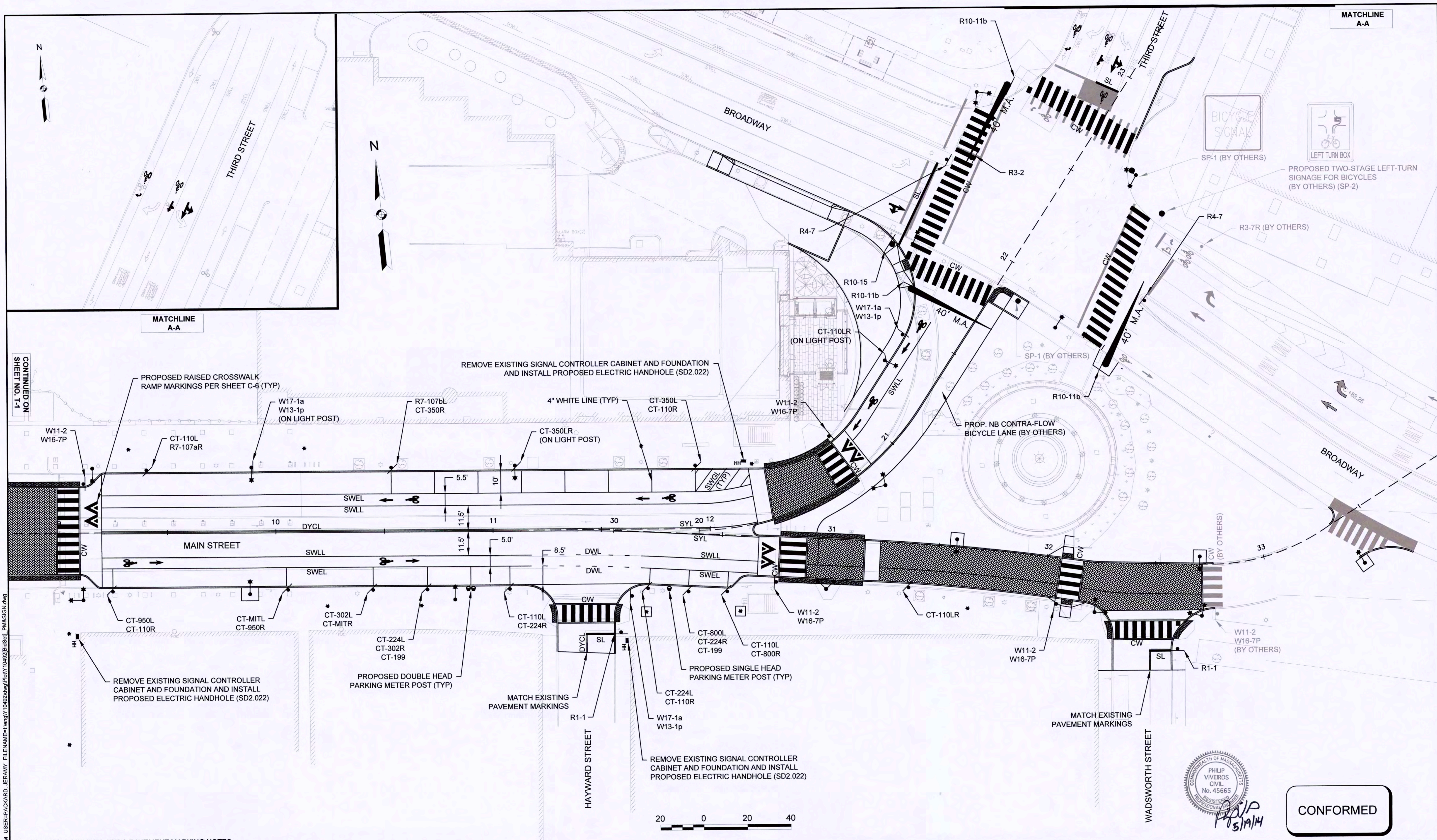
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Client	CITY OF CAMBRIDGE, MA
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing	SIGNAGE & PAVEMENT MARKING PLAN - 1

Sheet	T-1
File No.	



CONTINUED ON SHEET NO. T-1

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SEE SHEET T-1 FOR SIGNAGE & PAVEMENT MARKING NOTES

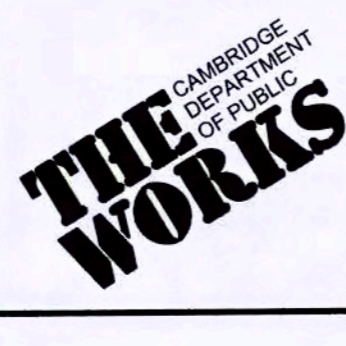
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Client	CITY OF CAMBRIDGE, MA
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing	SIGNAGE & PAVEMENT MARKING PLAN - 2

Sheet	T-2
File No.	



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IDENTIFICATION NUMBER	SIZE OF SIGN (IN)		TEXT	TEXT DIMENSIONS (IN)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (SF)	TOTAL AREA (SF)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
R1-1	30	30		SEE 2009 MUTCD			2	SEE 2009 MUTCD			P5-1 (2)	6.25	12.50
R3-2	24	24					1				MAST ARM (1)	4.00	4.00
R4-7	24	30					2				P5-1 (2)	5.00	10.00
R7-107aR	12	42		SEE MASSDOT STANDARD			2	SEE MASSDOT STANDARD			P5-1 (2)	3.50	7.00
R7-107bL	12	42					2				P5-1 (2)	3.50	7.00
R7-107cL	12	24		SEE CITY OF CAMBRIDGE STANDARD SPECIFICATIONS			1	SEE CITY OF CAMBRIDGE STANDARD SPECIFICATIONS			MOUNTED WITH R7-107aR (1)	2.00	2.00
R7-107cR	12	24					1				P5-1 (1)	2.00	2.00
R10-11b	36	36		SEE 2009 MUTCD			3	SEE 2009 MUTCD			SIGNAL POST (3)	9.00	27.00
R10-15	36	36					1				SIGNAL POST (1)	9.00	9.00
W11-2	36	36					5				P5-1 (5)	9.00	45.00
W17-1a	36	36					4				P5-1 (3) LIGHT POST (1)	9.00	36.00
W13-1P	24	12					4				MOUNTED WITH W17-1a (4)	2.00	8.00
W16-7P	24	12					5				MOUNTED WITH W11-2 (5)	2.00	10.00
CT-110L	12	18		SEE CITY OF CAMBRIDGE STANDARD SPECIFICATIONS			6	SEE CITY OF CAMBRIDGE STANDARD SPECIFICATIONS			P5-1 (3) MOUNTED WITH R7-107aR (1) CT-199 (2)	1.50	9.00

IDENTIFICATION NUMBER	SIZE OF SIGN(IN)		TEXT	TEXT DIMENSIONS (IN)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (SF)	TOTAL AREA (SF)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
CT-110LR	12	18		SEE CITY OF CAMBRIDGE STANDARD SPECIFICATIONS			2	SEE CITY OF CAMBRIDGE STANDARD SPECIFICATIONS			P5-1 (1) LIGHT POST (1)	1.50	3.00
CT-110R	12	18					6				P5-1 (3) LIGHT POST (1) MOUNTED WITH R7-107bL (1) CT-199 (1)	1.50	9.00
CT-150L	12	18					1				MOUNTED WITH CT-199 (1)	1.50	1.50
CT-150R	12	18					1				MOUNTED WITH CT-199 (1)	1.50	1.50
CT-199	12	18					14				P5-1 (11) LIGHT POST (3)	1.50	21.00
CT-224L	12	18					4				LIGHT POST (1) MOUNTED WITH CT-110R (1) CT-199 (2)	1.50	6.00
CT-224LR	12	18					1				LIGHT POST (1)	1.50	1.50
CT-224R	12	18					4				MOUNTED WITH CT-110L (1) CT-199 (3)	1.50	6.00
CT-225L	12	18					2				MOUNTED WITH CT-199 (2)	1.50	3.00
CT-225LR	12	18					1				LIGHT POST (1)	1.50	1.50
CT-225R	12	18					2				MOUNTED WITH CT-199 (2)	1.50	3.00
CT-240L	12	18					1				MOUNTED WITH CT-199 (1)	1.50	1.50
CT-240R	12	18					1				MOUNTED WITH CT-199 (1)	1.50	1.50
CT-302L	12	18					2				P5-1 (1) MOUNTED WITH R7-107cR (1)	1.50	3.00

NOTES: 1. PROPOSED STOP AND YIELD SIGNS ARE SUBJECT TO FIELD INVESTIGATION BY THE CITY OF CAMBRIDGE TO JUSTIFY WARRANTS PRIOR TO INSTALLATION.
 2. HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING SHALL BE USED FOR ALL SIGNS. THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" 2009 EDITION, THE 1996 MASSDOT CONSTRUCTION AND TRAFFIC STANDARD DETAILS (AS RELATES TO TRAFFIC STANDARD DETAILS ONLY), CITY OF CAMBRIDGE SPECIFICATIONS, AND ALL AMENDMENTS WILL GOVERN.
 3. SIGN PANEL CT-MIT SHALL BE FABRICATED BY THE CONTRACTOR FOLLOWING SPECIFICATIONS PROVIDED BY THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) DEPARTMENT OF FACILITIES. CONTACT INFORMATION: BETHANY FROST 617-452-2420

TOTAL AREA OF SIGNS: 188.50 SF

TOTAL AREA OF SIGNS: 63.00 SF

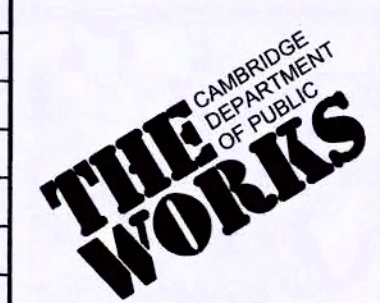


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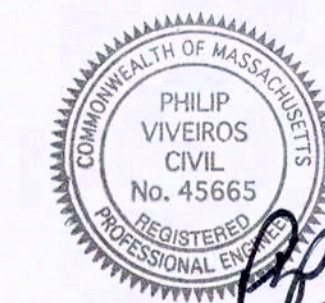
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Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE	File No.	
Drawing	TRAFFIC SIGN SUMMARY - 1		

IDENTIFICATION NUMBER	SIZE OF SIGN(IN)		TEXT	TEXT DIMENSIONS (IN)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (SF)	TOTAL AREA (SF)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
CT-302R	12	18		SEE CITY OF CAMBRIDGE STANDARD SPECIFICATIONS			2	SEE CITY OF CAMBRIDGE STANDARD SPECIFICATIONS			MOUNTED WITH CT-199 (2)	1.50	3.00
CT-350L	12	18					2				MOUNTED WITH CT-110R (1) CT-199 (1)	1.50	3.00
CT-350LR	12	18					1				LIGHT POST (1)	1.50	1.50
CT-350R	12	18					2				MOUNTED WITH R7-107bL (1) CT-199 (1)	1.50	3.00
CT-800L	12	18					2				MOUNTED WITH CT-199 (2)	1.50	3.00
CT-800R	12	18					2				MOUNTED WITH CT-110L (2)	1.50	3.00
CT-898L	24	24					1				MOUNTED WITH CT-199 (1)	4.00	4.00
CT-898LR	24	24					1				LIGHT POST (1)	4.00	4.00
CT-898R	24	24					1				MOUNTED WITH CT-199 (1)	4.00	4.00
CT-950L	12	18					1				MOUNTED WITH CT-110R (1)	1.50	1.50
CT-950R	12	18					1				P5-1 (1)	1.50	1.50
CT-MITL	12	18		SEE SIGNAGE NOTE 3			1	SEE SIGNAGE NOTE 3			MOUNTED WITH CT-950R (1)	1.50	1.50
CT-MITR	12	18					1				MOUNTED WITH CT-302L (1)	1.50	1.50

TOTAL AREA OF SIGNS: 34.50 SF

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SEE SHEET T-3 FOR SIGNAGE NOTES



P. Viveiros
5/19/14

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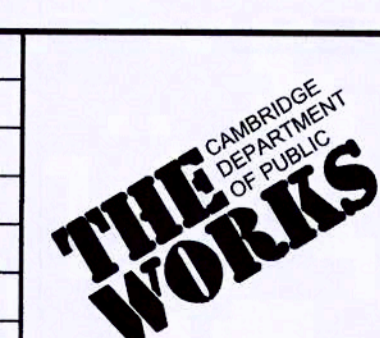
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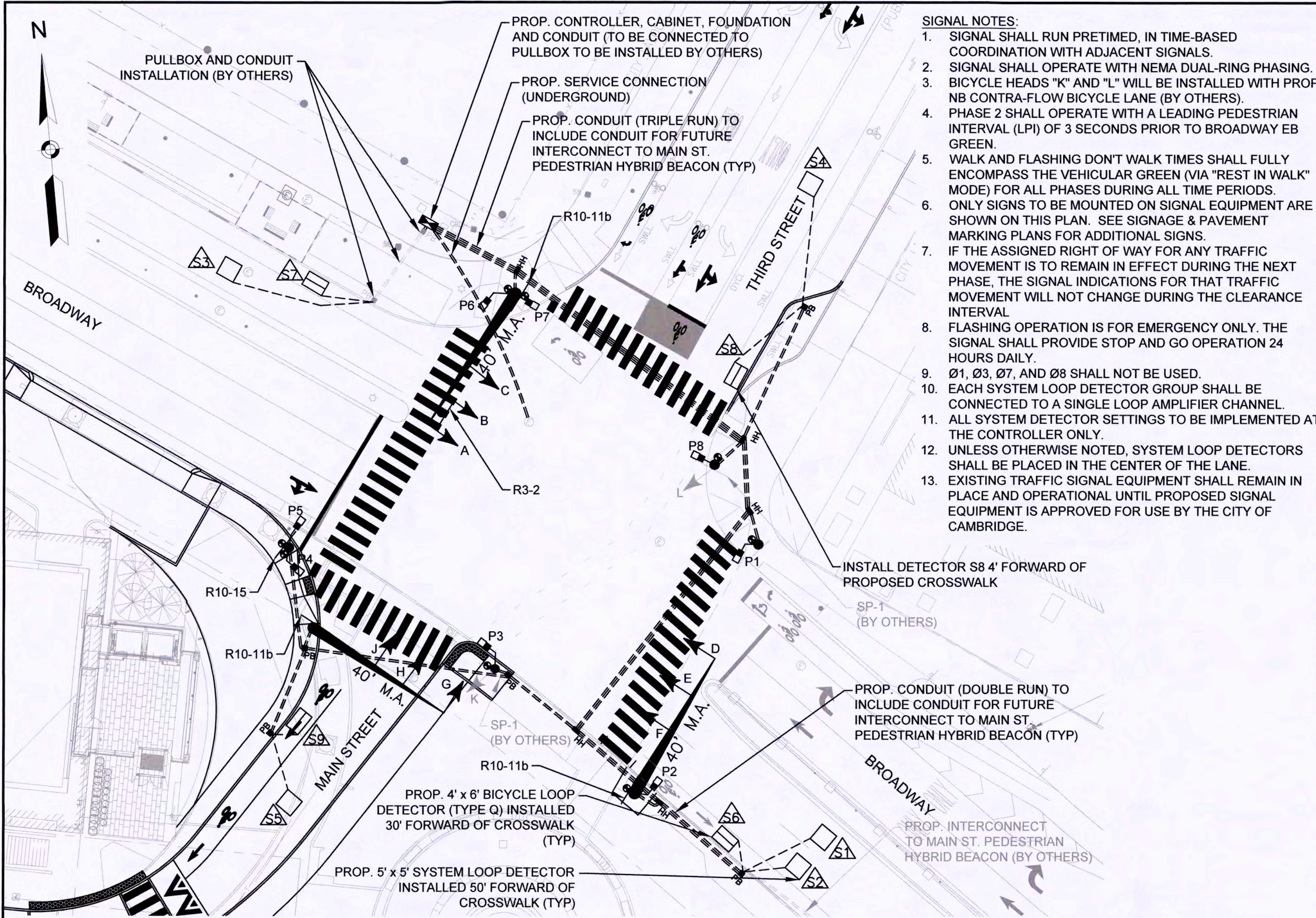
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Client	CITY OF CAMBRIDGE, MA	Sheet	T-4
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE	File No.	
Drawing	TRAFFIC SIGN SUMMARY - 2		



- SIGNAL NOTES:**
- SIGNAL SHALL RUN PRETIMED, IN TIME-BASED COORDINATION WITH ADJACENT SIGNALS.
 - SIGNAL SHALL OPERATE WITH NEMA DUAL-RING PHASING. BICYCLE HEADS "K" AND "L" WILL BE INSTALLED WITH PROP. NB CONTRA-FLOW BICYCLE LANE (BY OTHERS).
 - PHASE 2 SHALL OPERATE WITH A LEADING PEDESTRIAN INTERVAL (LPI) OF 3 SECONDS PRIOR TO BROADWAY EB GREEN.
 - WALK AND FLASHING DON'T WALK TIMES SHALL FULLY ENCOMPASS THE VEHICULAR GREEN (VIA "REST IN WALK" MODE) FOR ALL PHASES DURING ALL TIME PERIODS.
 - ONLY SIGNS TO BE MOUNTED ON SIGNAL EQUIPMENT ARE SHOWN ON THIS PLAN. SEE SIGNAGE & PAVEMENT MARKING PLANS FOR ADDITIONAL SIGNS.
 - IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL.
 - FLASHING OPERATION IS FOR EMERGENCY ONLY. THE SIGNAL SHALL PROVIDE STOP AND GO OPERATION 24 HOURS DAILY.
 - Ø1, Ø3, Ø7, AND Ø8 SHALL NOT BE USED.
 - EACH SYSTEM LOOP DETECTOR GROUP SHALL BE CONNECTED TO A SINGLE LOOP AMPLIFIER CHANNEL.
 - ALL SYSTEM DETECTOR SETTINGS TO BE IMPLEMENTED AT THE CONTROLLER ONLY.
 - UNLESS OTHERWISE NOTED, SYSTEM LOOP DETECTORS SHALL BE PLACED IN THE CENTER OF THE LANE.
 - EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL REMAIN IN PLACE AND OPERATIONAL UNTIL PROPOSED SIGNAL EQUIPMENT IS APPROVED FOR USE BY THE CITY OF CAMBRIDGE.

SEQUENCE AND TIMING														FLASH OPER.
STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	
BROADWAY	W.B.	A,B	R	R	R	R	R	R	R	R	R	Y	R	FY
BROADWAY	W.B.	C	R	R	R	R	Y	R	R	R	R	R	R	FY
BROADWAY	E.B.	D	R	R	R	R	R	R	R	R	R	R	R	FY
BROADWAY	E.B.	E	R	R	R	R	R	R	R	R	R	R	R	FY
BROADWAY	E.B.	F	R	R	R	R	R	R	R	R	R	R	R	FY
THIRD STREET	S.B.	G,H	R	R	R	R	R	R	R	R	R	R	R	FR
THIRD STREET	S.B.	J	R	R	R	R	R	R	R	R	R	R	R	FR
THIRD STREET CONNECTOR	N.B.	K,L	R	R	R	R	R	R	R	R	R	R	R	FR
PEDESTRIANS	N.B./S.B.	P1-P2	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIANS	E.B./W.B.	P3-P4	W/FDW	FDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIANS	N.B./S.B.	P5-P6	DW	DW	DW	W/FDW	FDW	DW	DW	DW	DW	DW	DW	OUT
PEDESTRIANS	E.B./W.B.	P7-P8	DW	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW	FDW	OUT

TIMING IN SECONDS														
MINIMUM INTERVAL	15													
VEHICLE EXTENSION	3													
MAXIMUM I (M-F 0600-1000)	32													
MAXIMUM II (M-F 1500-2000)	31													
MAXIMUM III (ALL OTHER TIMES)	35													
YELLOW AND RED CLEARANCE		3	1		3	1		3	1		3	1		
WALK	22*				5*			5*			18*			
PEDESTRIAN CLEARANCE	8	3	1	18	3	1	15	3	1	13	3	1		
RECALL		MAX			MAX			MAX			MAX			
MEMORY														

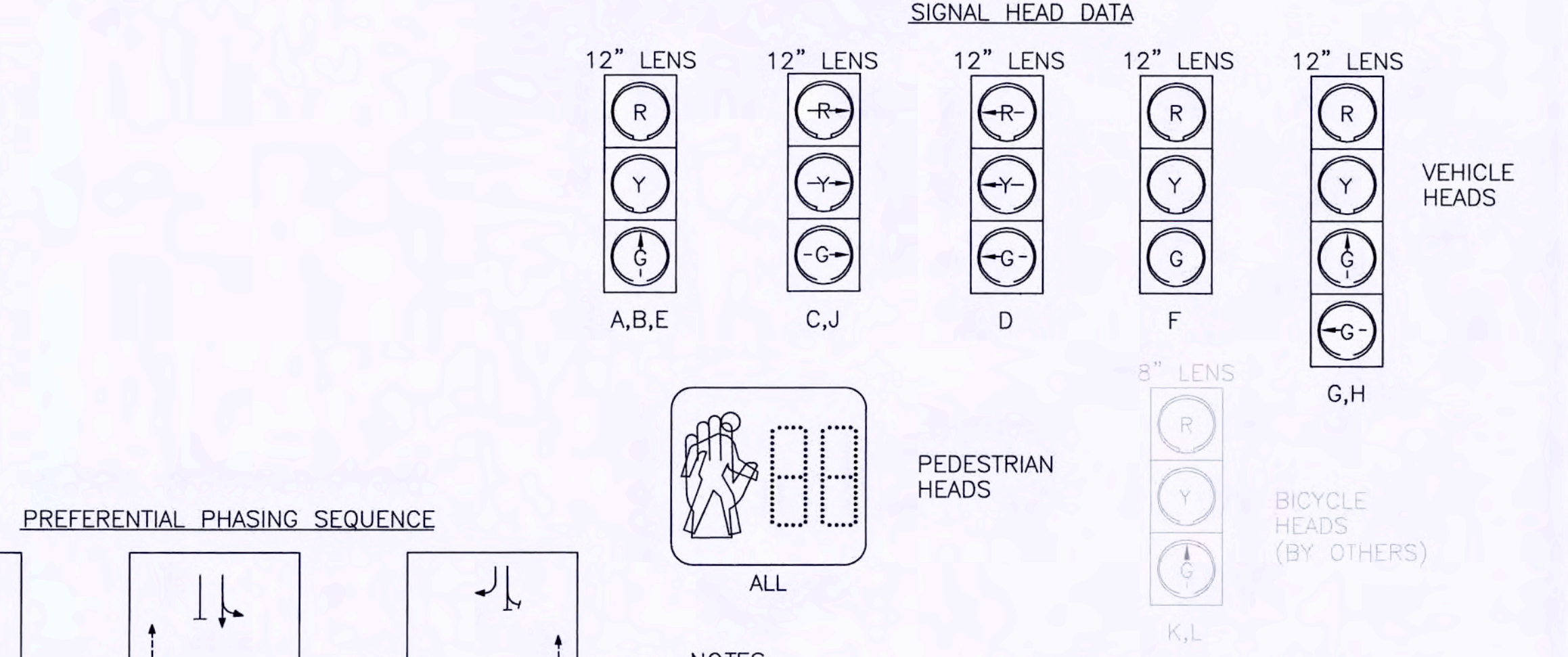
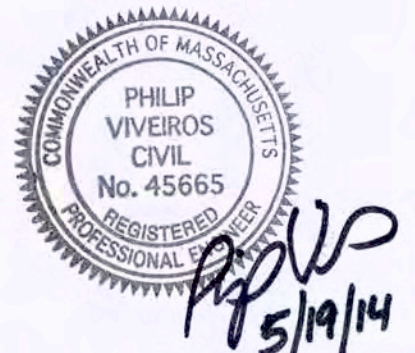
* REST IN WALK NOTE: FLASHING OPERATION PER MUTCD SECTIONS 4D.28-4D.31.

COORDINATION DATA		COORDINATION PHASE TIMING (SEC)			
TIMING PLAN	CYCLE LENGTH	REF / OFFSET	Ø2 & Ø6	Ø4	Ø5
M-F 0600-1000	90	1	36	28	26
M-F 1500-2000	90	14	35	31	24
ALL OTHER TIMES	90	0	39	27	24

DETECTOR DATA							
DETECTOR NO.	NO. SECTION / SIZE	NO. OF TURNS	CALL DELAY (SEC)	CALL PHASE	SWITCH+EXTEND PHASE	MODE	LOOP CONNECTION
S1	1-5'X5'	3	0	SYSTEM	-	PULSE	-
S2	1-5'X5'	3	0	SYSTEM	-	PULSE	-
S3	1-5'X5'	3	0	SYSTEM	-	PULSE	-
S4	1-5'X5'	3	0	SYSTEM	-	PULSE	-
S5	1-5'X5'	3	0	SYSTEM	-	PULSE	-
S6	1-4'X6'	Q	0	SYSTEM	-	PULSE/BICYCLE	-
S7	1-4'X6'	Q	0	SYSTEM	-	PULSE/BICYCLE	-
S8	1-4'X6'	Q	0	SYSTEM	-	PULSE/BICYCLE	-
S9	1-4'X6'	Q	0	SYSTEM	-	PULSE/BICYCLE	-

LIST OF MAJOR ITEMS REQUIRED	
PAY ITEM QUANTITY	DESCRIPTION
816.01	3 40' MAST ARM AND FOUNDATION (STEEL) WITH BLACK PAINT
	1 SERVICE CONNECTION (UNDERGROUND)
	2 10' SIGNAL POST AND FOUNDATION (STEEL) WITH BLACK PAINT
	2 8' SIGNAL POST AND FOUNDATION (STEEL) WITH BLACK PAINT
	8 PEDESTRIAN SIGNAL INDICATION WITH COUNTDOWN TIMER
	8 APS-CAPABLE PEDESTRIAN PUSHBUTTON ASSEMBLY
	1 TS2 TYPE 1 SIGNAL CONTROLLER (EAGLE SIEMENS), CABINET (TYPE M), AND FOUNDATION
	7 3 SECTION-12" LENS SIGNAL HEAD
	2 4 SECTION-12" LENS SIGNAL HEAD
	1 GPS TIME CLOCK MODULE (GARMIN), PER CITY SPEC
	9 WIRE LOOP SYSTEM DETECTOR - SIZE VARIES
	5 DUAL CHANNEL LOOP DETECTOR AMPLIFIER (RACK MOUNTED)
811.31	5 PULL BOX-12"X12" (SD2.031)
811.22	5 ELECTRIC HANDHOLE (SD2.022)

PLUS NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION AND PROVIDE AN OPERATING TRAFFIC CONTROL SIGNAL.



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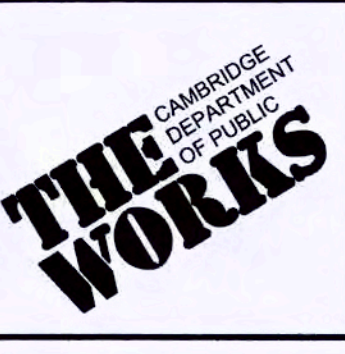
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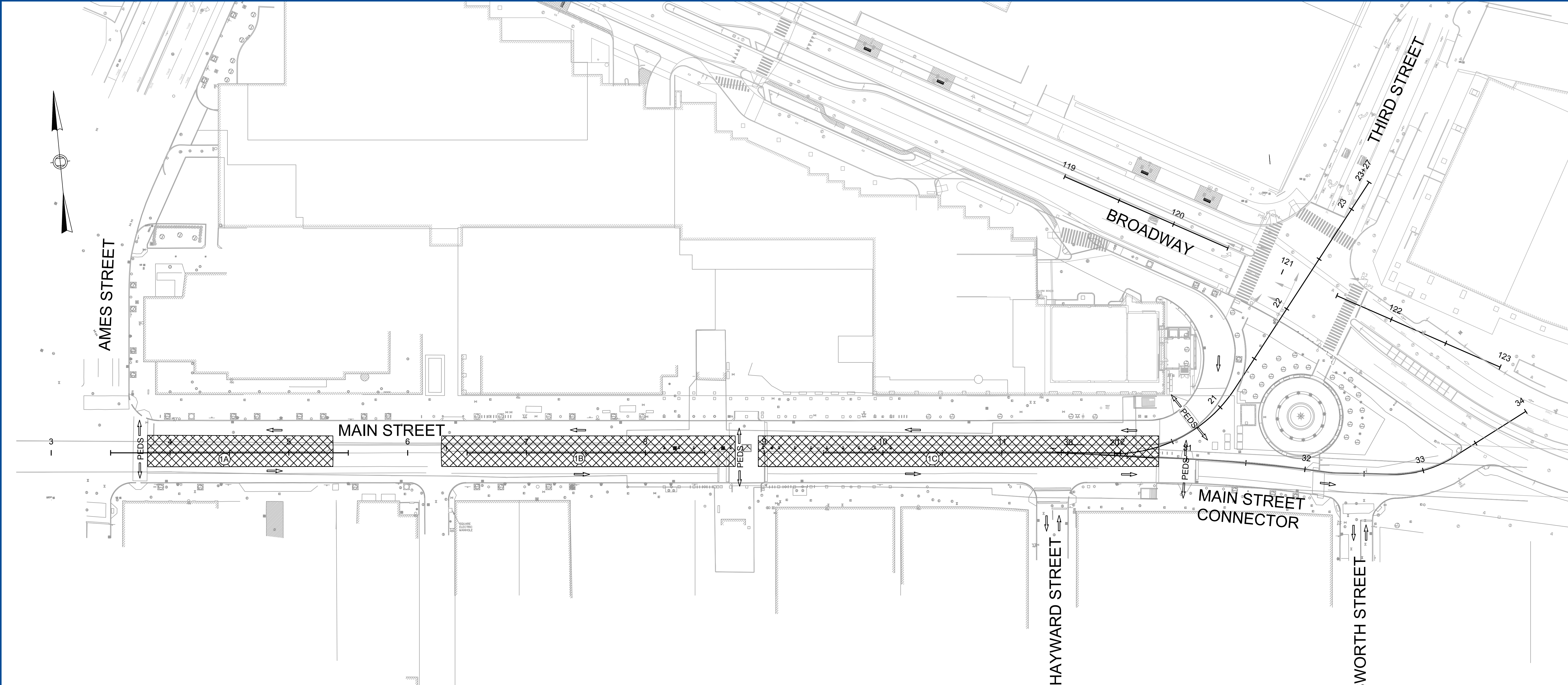
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Client	CITY OF CAMBRIDGE, MA
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing	THIRD STREET/ BROADWAY SIGNAL PLAN

Sheet	T-5
File No.	



STAGE 1 - MEDIAN REMOVAL

- GENERAL NOTES:**
1. CONTRACTOR SHALL MAINTAIN ABUTTER ACCESS AT ALL TIMES.
 2. CONTRACTOR SHALL MAINTAIN ONE 12 FOOT-MINIMUM TRAVEL LANE IN EACH DIRECTION AT ALL TIMES. SEE WORK ZONE DETAIL.
 3. CONTRACTOR SHALL MAINTAIN PEDESTRIAN CROSSINGS.
 4. CONTRACTOR SHALL PROVIDE "BIKE MAY USE FULL LANE" SIGNS AT LIMITS OF DAILY WORK ZONE SETUP. EASTBOUND BICYCLE LANES SHALL BE TEMPORARILY REMOVED OR PAINTED (TEMPORARY BLACK PAINT).
 5. CONTRACTOR SHALL MINIMIZE PARKING AND LOADING ZONE RESTRICTIONS TO THE IMMEDIATE WORK AREA. SEE ALSO SECTION 825 OF THE SPECIFICATIONS.

STAGE 1A - MEDIAN REMOVAL

- SEQUENCE NOTES:**
- (A) REMOVE TRAFFIC SIGNS AND RAISED MEDIAN ISLAND. PROVIDE TEMPORARY PAVEMENT PATCHING. PROVIDE TEMPORARY DYCL PAVEMENT MARKINGS.

STAGE 1B - MEDIAN REMOVAL

- SUGGESTED SEQUENCE NOTES:**
- (B) REMOVE FLAG POLES AND RAISED MEDIAN ISLAND. PROVIDE TEMPORARY PAVEMENT PATCHING. PROVIDE TEMPORARY DYCL AND CROSSWALK PAVEMENT MARKINGS.

STAGE 1C - MEDIAN REMOVAL

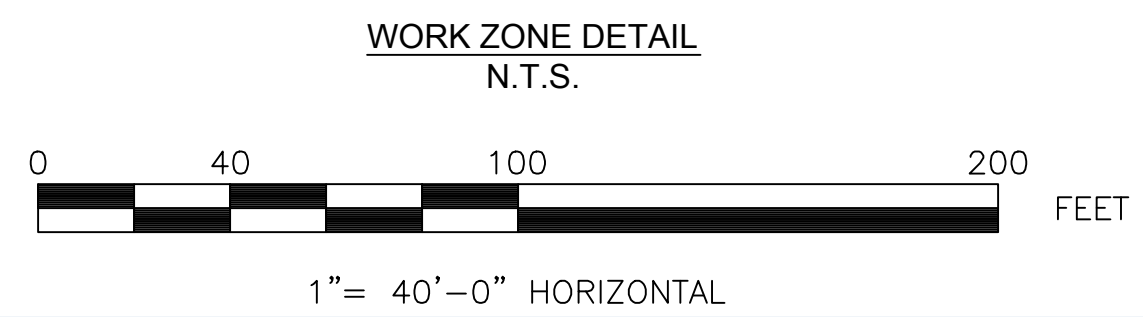
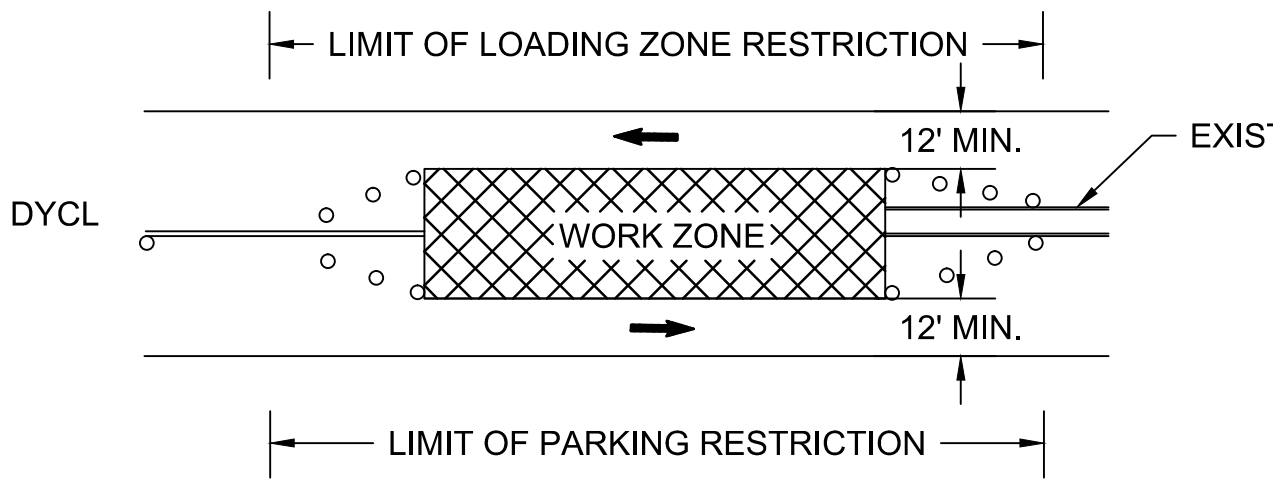
- SUGGESTED SEQUENCE NOTES:**
- (C) REMOVE FLAG POLES, TRAFFIC SIGNS AND RAISED MEDIAN ISLAND. PROVIDE TEMPORARY PAVEMENT PATCHING. PROVIDE TEMPORARY DYCL AND CROSSWALK PAVEMENT MARKINGS. NO TEMPORARY DYCL SHALL BE PROVIDED FROM STA 11+30 TO STA 11+60.

NOTE:

THIS PLAN ILLUSTRATES ONE POTENTIAL PLAN FOR SEQUENCING THE WORK. THE CITY MAY CONSIDER ALTERNATIVE SEQUENCING PROVIDED THAT THE CONTRACTOR SUBMITS COMPLETE REVISED SEQUENCE PLANS AND CORRESPONDING SCHEDULES AND TRAFFIC MANAGEMENT PLANS, SUBJECT TO CITY APPROVAL.

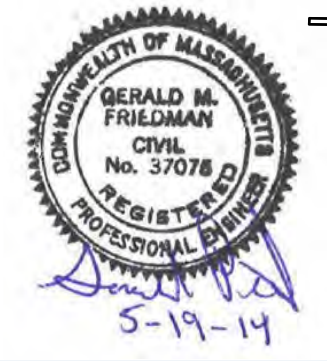
STAGE 1A THROUGH 1C - BUS STOPS & OPERATIONS

1. BUSES FOLLOW EXISTING PRE-CONSTRUCTION ROUTES. BUS STOPS ALONG THE NORTH SIDEWALK TO BE RELOCATED AS THE WORK ZONE IS MOVED ALONG MAIN STREET. SEE SECTION 825 OF SPECIFICATIONS.



LEGEND

- WORK ZONE
- SEQUENCE NOTE REFERENCE
- DIRECTION OF TRAFFIC



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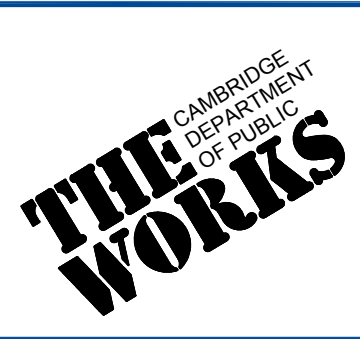
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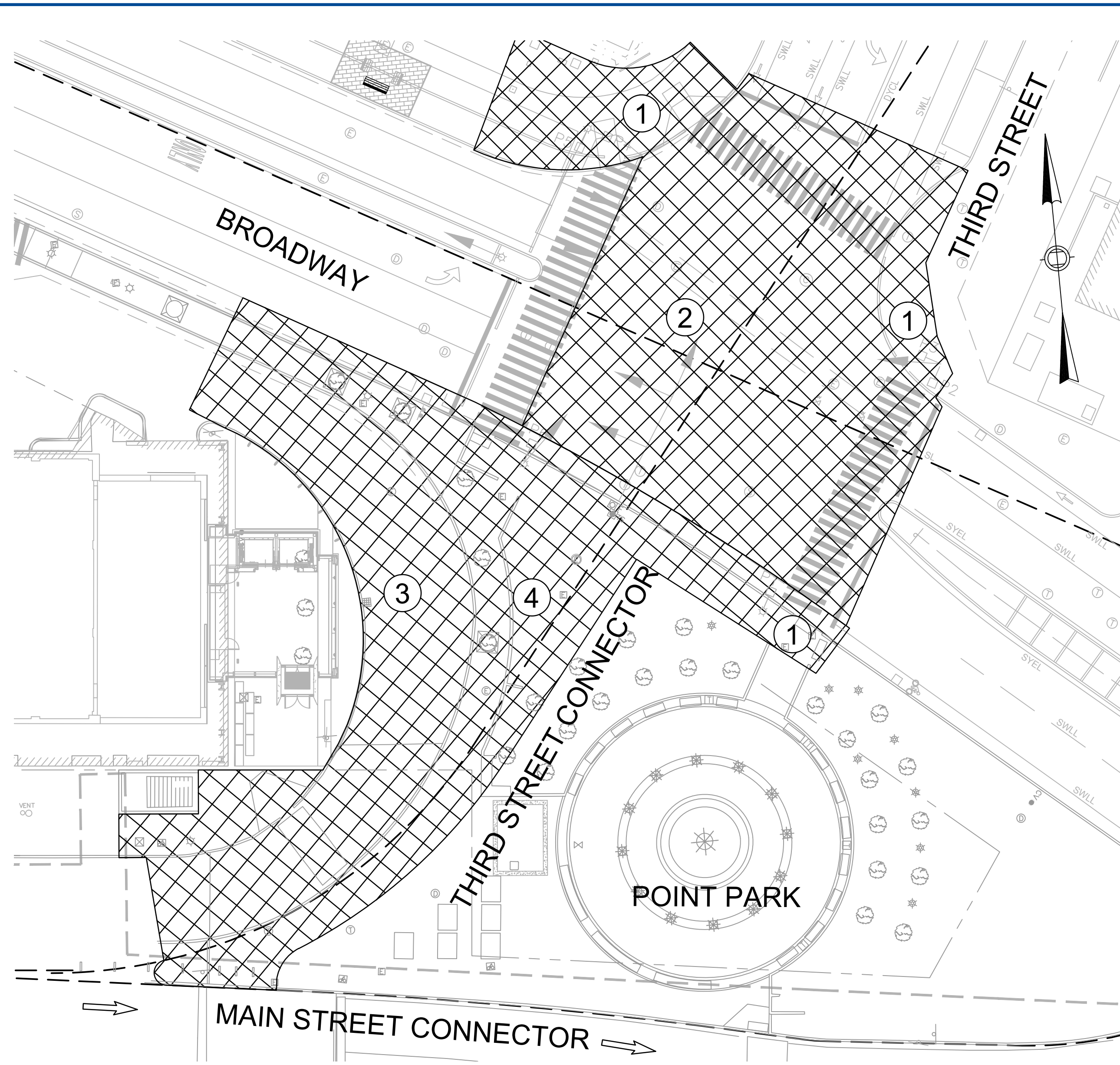
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Date	MAY 2014			
Job No.				
Designed by	PFB			
Drawn by	PFB			
Checked by	GMF	No.	Description	Date
Approved by	GMF		REVISIONS	



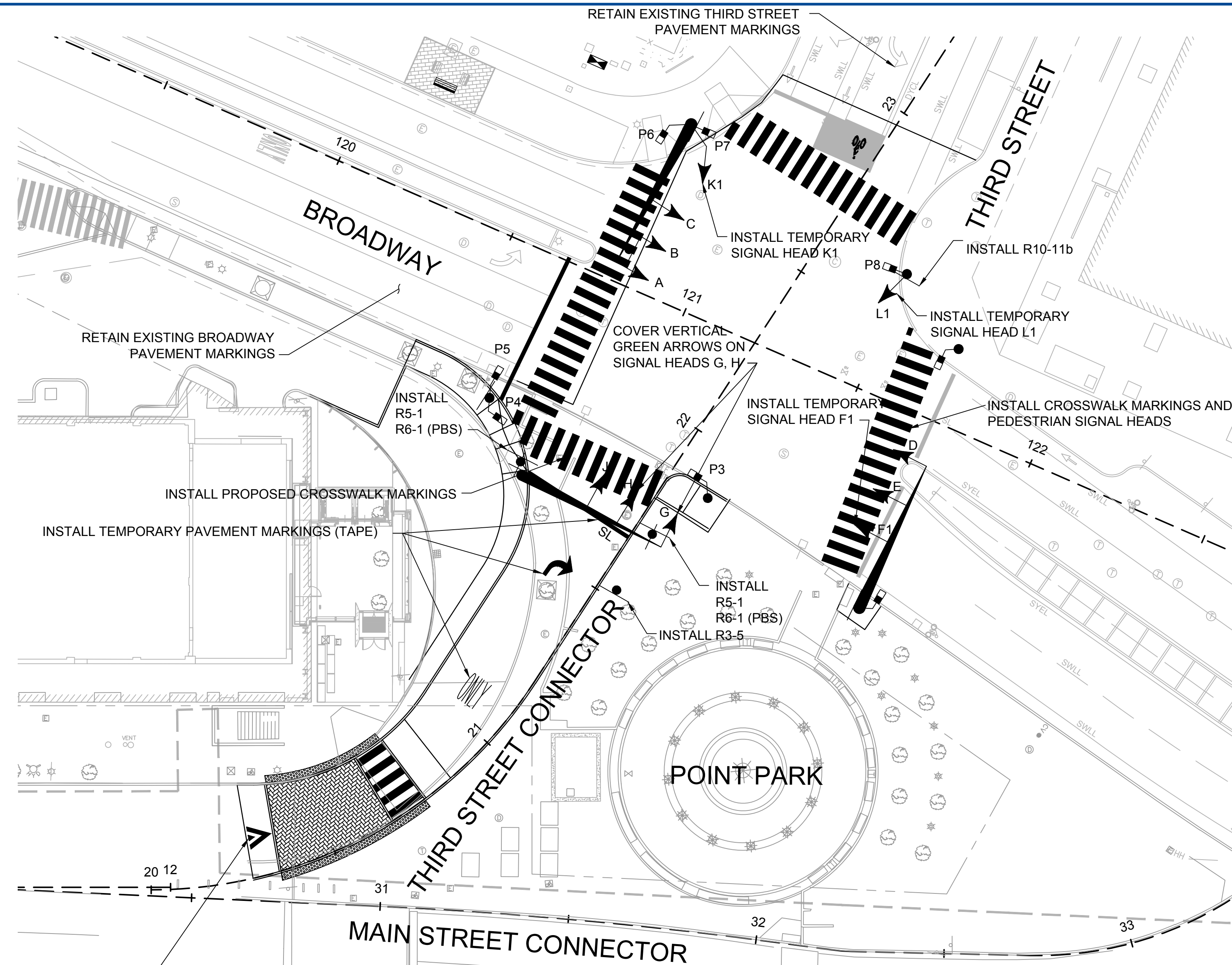
Client	CITY OF CAMBRIDGE, MA
Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing	SEQUENCE PLAN STAGE 1

Sheet	P-1
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STAGE 2A - THIRD STREET CONNECTOR



STAGE 2B - INTERIM SIGNAL AND MARKINGS

STAGE 2 - CONSTRUCT THIRD STREET CONNECTOR
GENERAL NOTES:

1. CONTRACTOR SHALL MAINTAIN ABUTTER ACCESS AT ALL TIMES.
2. CONTRACTOR SHALL MAINTAIN AN ACCESSIBLE PEDESTRIAN ROUTE BETWEEN THE NORTHERLY MAIN STREET SIDEWALK AND POINT PARK.
3. CONTRACTOR SHALL MAINTAIN AN ACCESSIBLE PEDESTRIAN ROUTE ACROSS BROADWAY.

STAGE 2 - BUS STOPS & OPERATIONS

1. DETOUR ARRIVING BUSES FROM BROADWAY ONTO AMES STREET SOUTHBOUND THEN MAIN STREET EASTBOUND TO RELOCATED BUS STOPS ON SOUTH SIDEWALK.
2. DETOUR DEPARTING BUSES FROM MAIN STREET EASTBOUND TO WADSWORTH STREET TO AMHERST STREET TO AMES STREET.

STAGE 2A - CONSTRUCT THIRD STREET CONNECTOR
SEQUENCE NOTES:

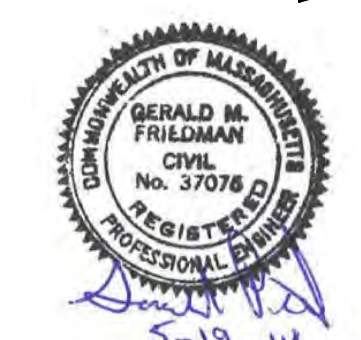
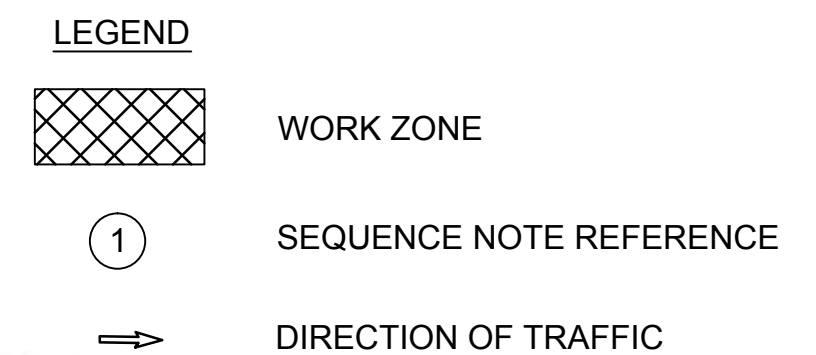
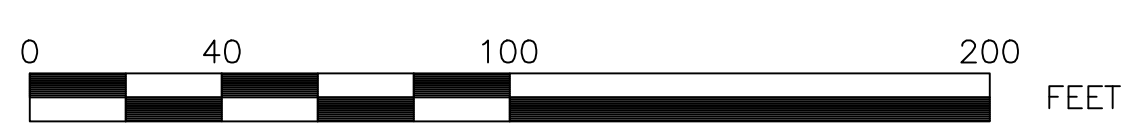
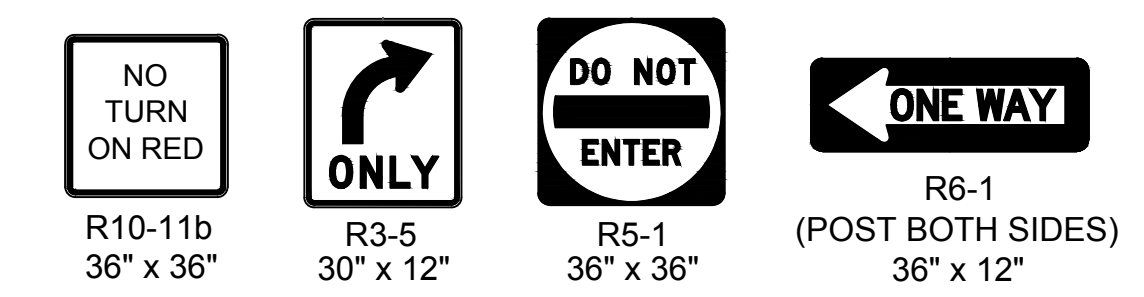
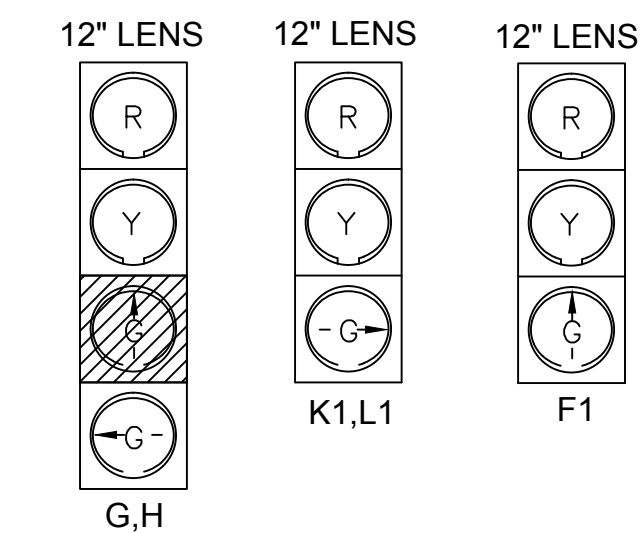
- ① INSTALL PROPOSED TRAFFIC SIGNAL FOUNDATIONS AND CONDUIT. CONSTRUCT PROPOSED SIDEWALKS. INSTALL PROPOSED BROADWAY/THIRD STREET SIGNAL EQUIPMENT.
- ② MILL & OVERLAY BROADWAY/THIRD STREET INTERSECTION.
- ③ CONSTRUCT THIRD STREET CONNECTOR SIDEWALK
- ④ CONSTRUCT THIRD STREET CONNECTOR.

NOTE:

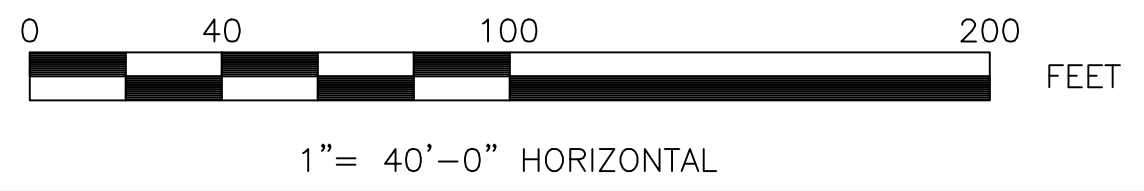
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PHASE 2B - INSTALL INTERIM TRAFFIC SIGNAL AND MARKINGS
SEQUENCE NOTES:

1. INSTALL INTERIM PAVEMENT MARKINGS (TAPE) AND REGULATORY SIGNS.
2. INSTALL PROPOSED TRAFFIC SIGNAL HEADS A, B, C, D, E, G, H, J. GREEN VERTICAL ARROW ON SIGNAL HEADS G, H SHALL BE COVERED. INSTALL PEDESTRIAN SIGNAL HEADS P3 THROUGH P8.
3. INSTALL INTERIM TRAFFIC SIGNAL HEADS F1, K1, L1.
4. REMOVE EXISTING TRAFFIC SIGNAL AND ACTIVATE PROPOSED INTERIM SIGNAL.



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Project	RECONSTRUCTION OF MAIN STREET KENDALL SQUARE
Drawing	SEQUENCE PLAN STAGE 2A & 2B

Sheet	P-2
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