

SITE PLAN FOR
STOREY AVENUE MARKETPLACE SHOPS
NEWBURYPORT, MA
NOVEMBER 3, 2016

GOVERNMENT/UTILITY CONTACTS

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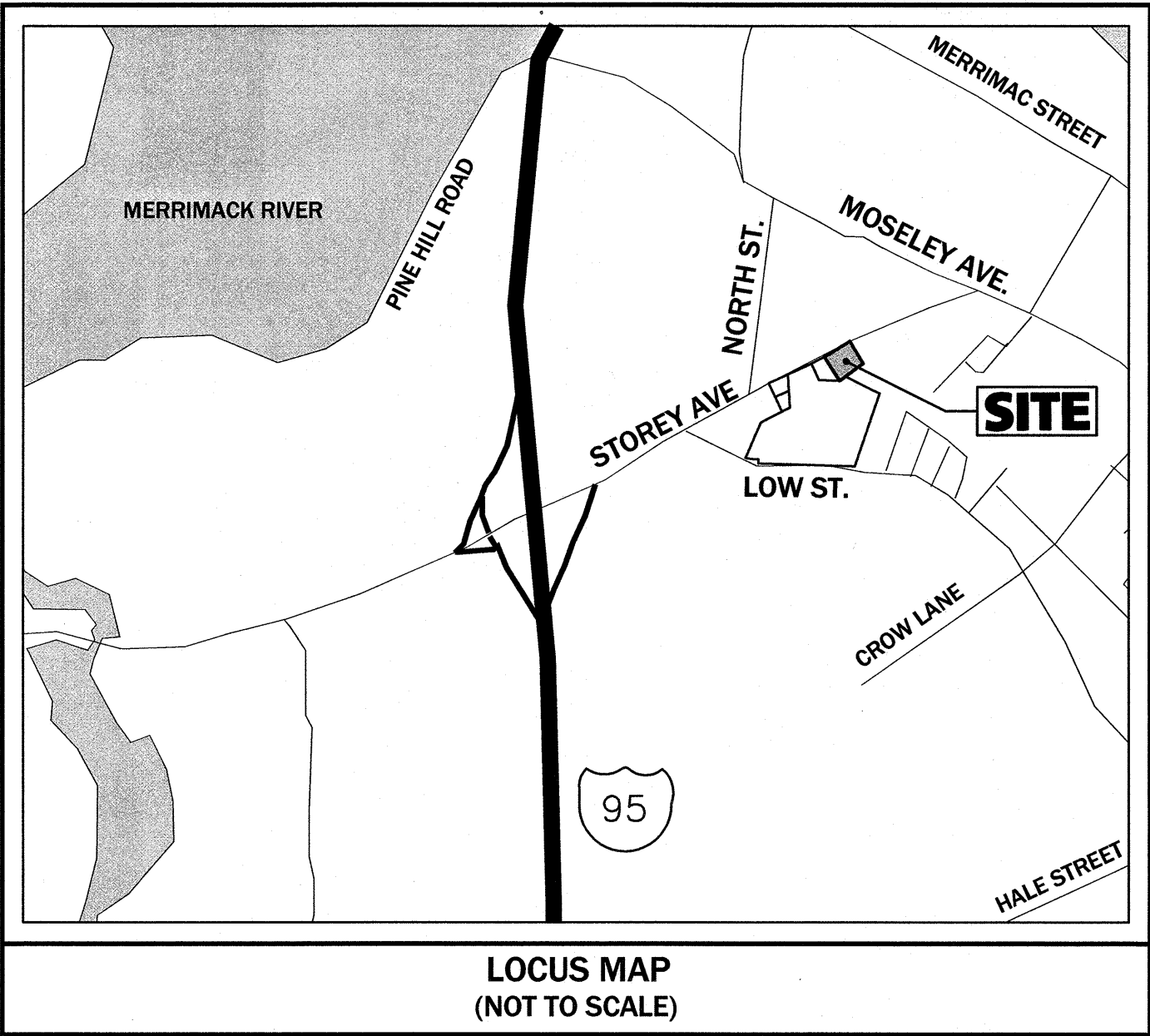
CONSULTANT

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PHONE: (781) 255-9754



PREPARED BY:

**RJO'CONNELL &
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PREPARED FOR:

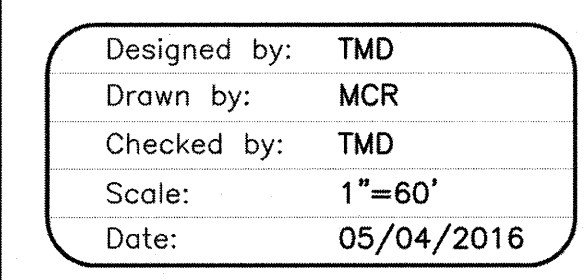
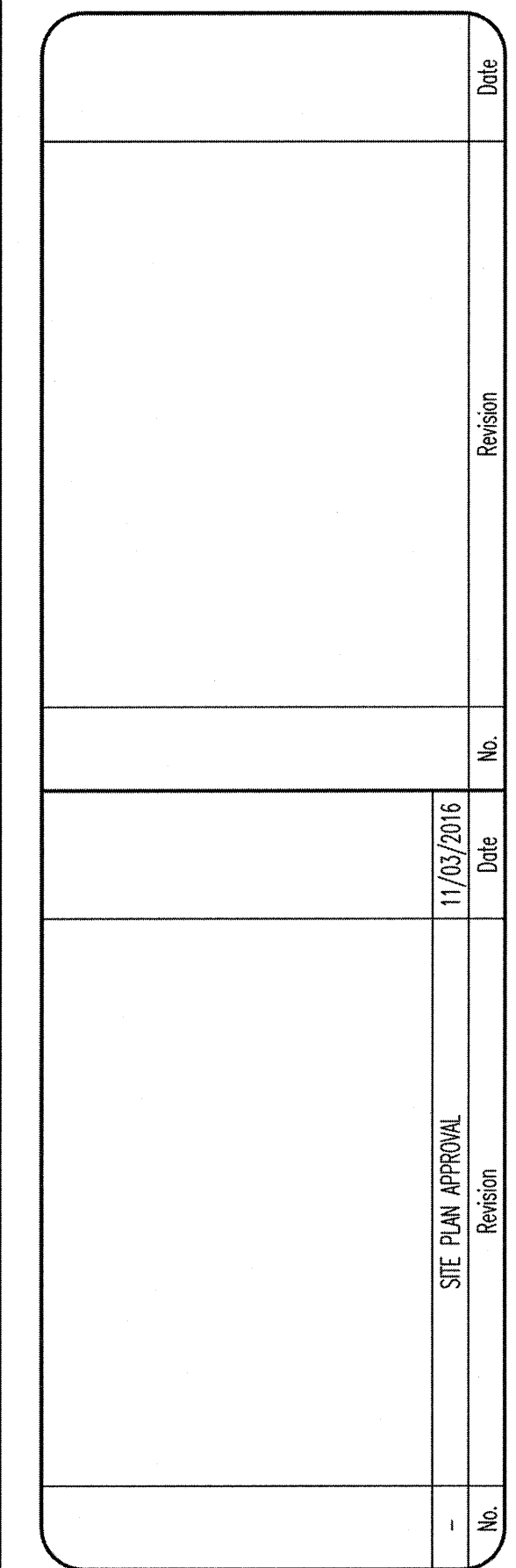
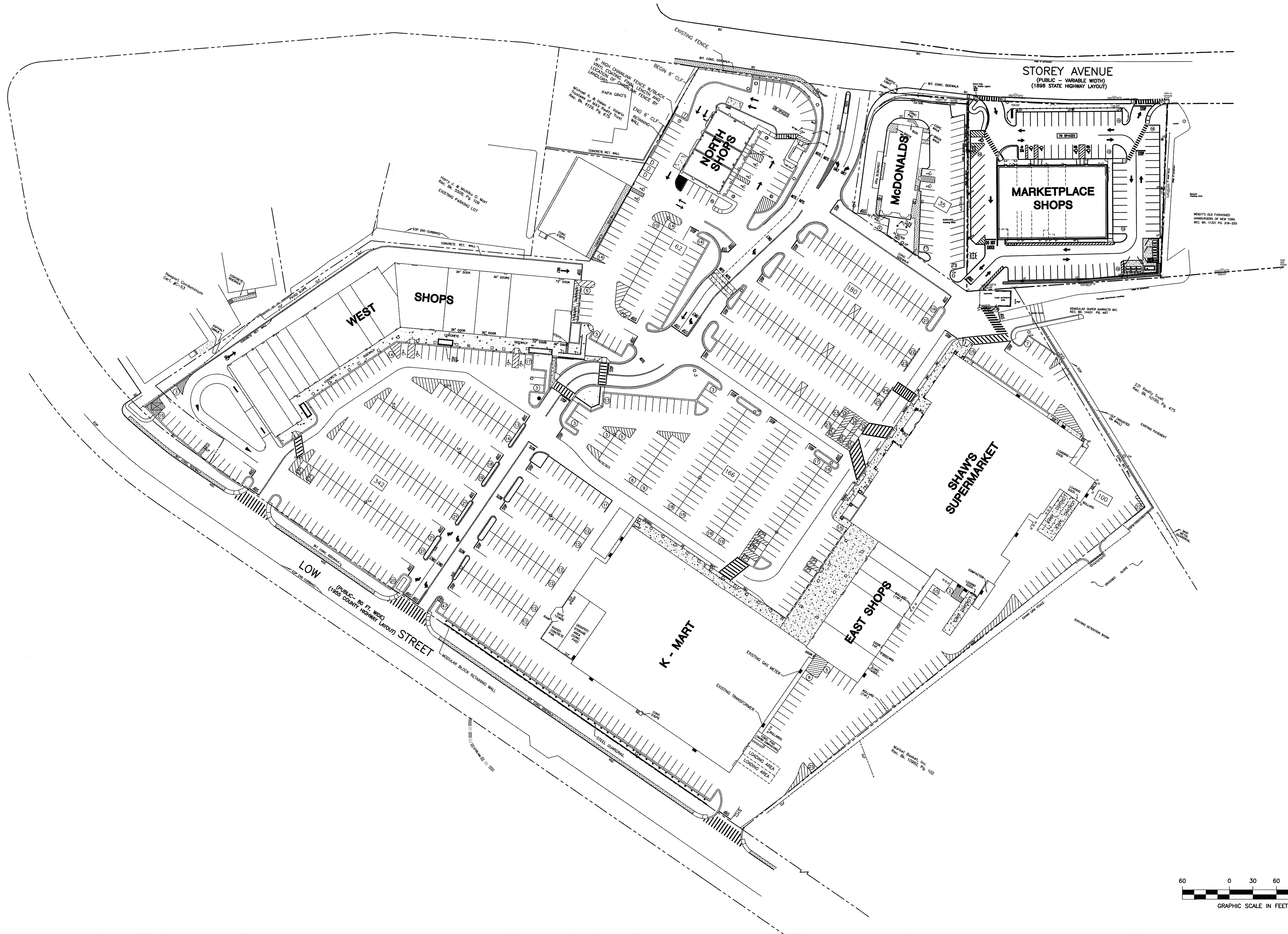
**PLAZA REALTY
DEVELOPMENT TRUST**

ECHO BRIDGE OFFICE PARK
381 ELLIOT STREET, #100L
NEWTON, MA 02464-1130
PHONE: 617-965-4570
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Drawing Index

Drawing Date	Last Revision	Drawing	Drawing Description
05/04/2016	11/03/2016	-	COVER SHEET
05/04/2016	11/03/2016	OS-1	OVERALL SITE PLAN
04/16/2014	-	1951	TOPOGRAPHIC SURVEY 29-35 STOREY AVENUE
05/04/2016	11/03/2016	C-1	EROSION CONTROL PLAN
05/04/2016	11/03/2016	C-2	GRADING & DRAINAGE PLAN
05/04/2016	11/03/2016	C-3	UTILITY PLAN
05/04/2016	11/03/2016	C-3A	FUTURE POSSIBLE OFFSITE WATER EXTENSION AND MDOT ROAD OPENING PLAN
05/04/2016	11/03/2016	C-4	PARKING & TRAFFIC CONTROL PLAN
11/03/2016	-	C-4A	SITE PLAN 2007 / 2016 OVERLAY
05/04/2016	11/03/2016	C-5	EROSION CONTROL DETAILS
05/04/2016	11/03/2016	C-6	DRAINAGE DETAILS
05/04/2016	11/03/2016	C-7	UNDERGROUND BASIN DETAILS
05/04/2016	11/03/2016	C-8	DRAINAGE AND UTILITIES DETAILS
05/04/2016	11/03/2016	C-9	PARKING AND TRAFFIC CONTROL DETAILS - 1
05/04/2016	11/03/2016	C-10	PARKING AND TRAFFIC CONTROL DETAILS - 2
10/19/2016	-	PH-1	SITE LIGHTING PHOTOMETRIC PLAN
05/04/2016	11/03/2016	L-1	LANDSCAPE PLAN (BY WFA)
-	11/03/2016	-	COLOR RENDERINGS
-	11/03/2016	-	ARCHITECTURAL ELEVATIONS

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Prepared for:

**PLAZA REALTY
DEVELOPMENT TRUST**

ECHO BRIDGE OFFICE PARK
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**RJO'CONNELL
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Project Name:
**MARKETPLACE SHOPS
NEWBURYPORT, MA**

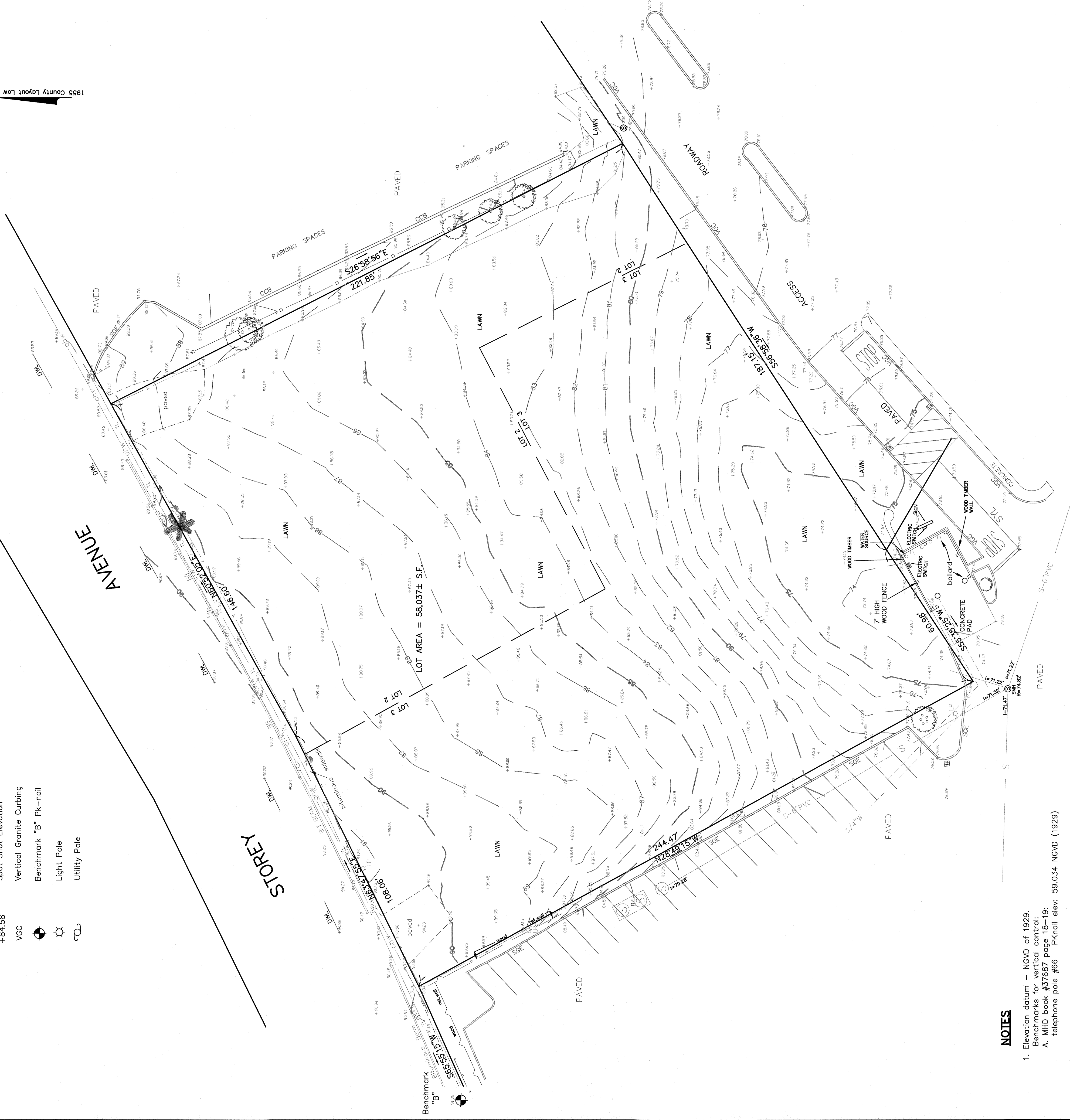
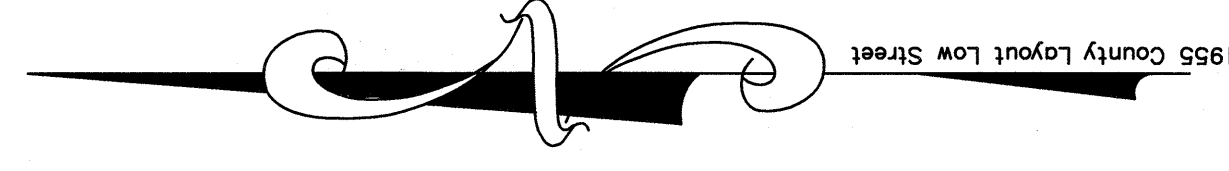
Drawing Name:
OVERALL SITE PLAN

Drawing No.:
OS-1
Project No.: 15099

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LEGEND

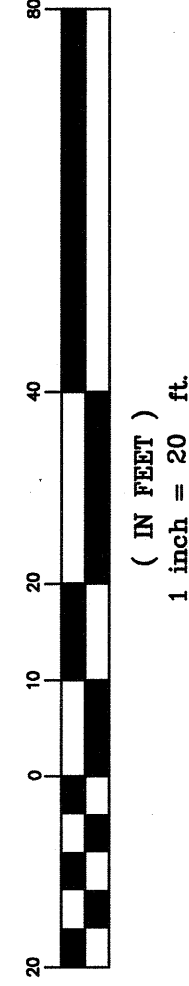
	Underground Traffic Light Lines
	Edge of Pavement
	Overhead Wire (OHW)
	Stackade Fence
	Chain Link Fence
	Wood Retaining Wall
	Catch Basin
	Sewer Manhole
	Dashed White Line
	Coniferous Trees
	Deciduous Trees
	Bituminous Curbing
	Cape Cod Bituminous Curbing
	Sloped Granite Edging
	Spot Shot Elevation
	Vertical Granite Curbing
	Benchmark "B" PK-nail
	Light Pole
	Utility Pole



NOTES

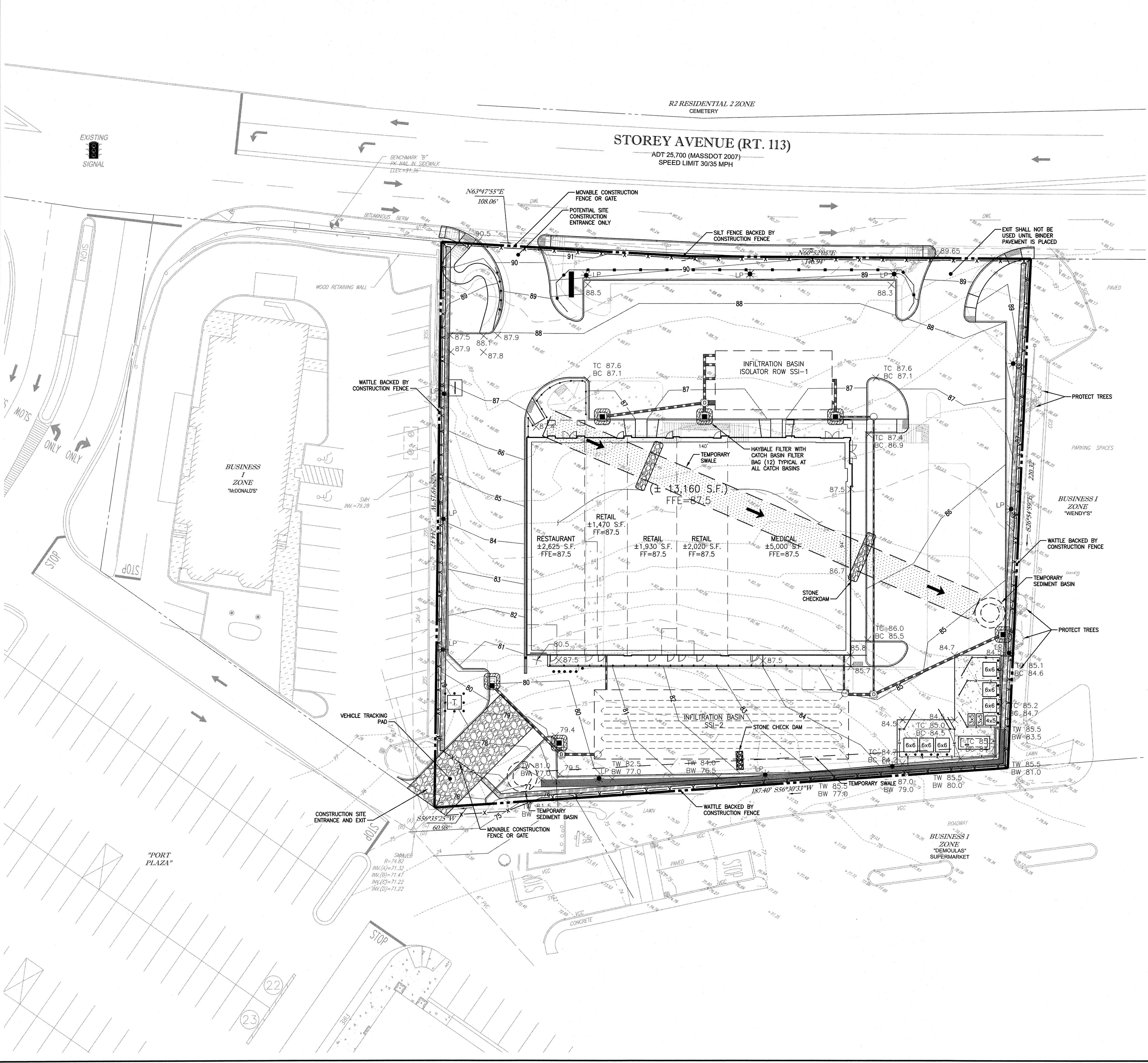
- Elevation datum - NGVD of 1929.
Benchmarks for vertical control:
A. MHD book #37687 page 18-19; telephone pole #66 PKnail elev. 59.034 NGVD (1929)
B. PK-NAIL IN SIDEWALK.
Elevation = 91.36'
- The locations of surface (above ground) utilities shown on this plan are per actual field survey performed by N.S.S. October 2002, & May 2005.
The locations of underground utilities shown on this plan are extrapolated from actual field survey and from the best information available from utility companies, public agencies and verbal review with Don Sady site superintendent also from a field sketch showing the approximate locations of utilities set by contractor D.P. Frey received from Carter & Burgess.

GRAPHIC SCALE



TOPOGRAPHICAL SURVEY

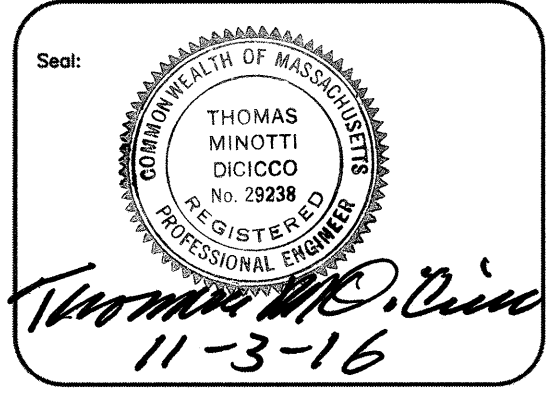
29-35 STOREY AVENUE
PREPARED FOR
PLAZA REALTY DEVELOPEMENT TRUST
Scale: 1"=20' Date: APRIL 16, 2014
NORTH SHORE SURVEY CORPORATION
14 Brown Street, Salem, MA 01970
(978) 744-4800



DEMOLITION & EROSION CONTROL NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIG SAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES AND THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN.
2. EXISTING UTILITIES AND TOPOGRAPHY SHOWN HEREON IS THE RESULT OF AN ON THE GROUND TOPOGRAPHY SURVEY PERFORMED BY NORTH SHORE SURVEY CORP. AUGUST 2003.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCH MARKS NECESSARY FOR THE WORK.
4. DISPOSAL OF ALL DEMOLISHED MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL MUNICIPAL REQUIREMENTS.
5. THE CONTRACTOR SHALL PROTECT AND/OR CAP OFF ALL EXISTING ON-SITE UTILITY SERVICES WHETHER DESIGNATED ON THESE DRAWINGS OR DISCOVERED IN THE FIELD. SERVICES SHALL BE THE SAME ENTER THE PERIMETER OF THE PROPERTY LINE. ALL CAPPING/REMOVAL SHALL BE IN ACCORDANCE WITH THE APPROPRIATE UTILITY COMPANY/ENTITY STANDARDS.
6. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS, DATED MARCH 1997, AND ALL LOCAL MUNICIPAL REGULATIONS.
7. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY SITE WORK OR EARTHWORK OPERATIONS, SHALL BE MAINTAINED DURING CONSTRUCTION, AND SHALL REMAIN IN PLACE UNTIL ALL SITE WORK IS COMPLETE AND GROUND COVER IS ESTABLISHED.
8. ALL DISTURBED OR EXPOSED AREAS SUBJECT TO EROSION SHALL BE STABILIZED WITH MULCH OR SEED FOR TEMPORARY VEGETATIVE COVER WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED OR HAVE TEMPORARILY BEEN SUSPENDED FOR MORE THAN FOURTEEN DAYS. WHEN FINAL GRADES ARE REACHED IN ANY PORTION OF THE SITE, STABILIZATION PRACTICES SHALL BE IMPLEMENTED WITHIN THREE DAYS. AREAS WHICH REMAIN DISTURBED BUT INACTIVE FOR AT LEAST THIRTY DAYS SHALL RECEIVE TEMPORARY SEEDING IN ACCORDANCE WITH THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES. IN ALL CASES, STABILIZATION MEASURES SHALL BE IMPLEMENTED AS SOON AS POSSIBLE IN ACCORDANCE WITH THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES.
9. ACTIVITY ON THE SITE SHALL BE DONE IN A MANNER SUCH THAT RUNOFF IS DIRECTED TO THE HAYBALE PROTECTED BASINS.
10. THE LOCATION OF SEDIMENTATION TRAPPING FEATURES ARE APPROXIMATE ONLY AND SHALL BE RELOCATED AS REQUIRED AS CONSTRUCTION PROGRESSES.
11. HAYBALE FILTERS SHALL BE CONSTRUCTED AT ALL EXISTING AND PROPOSED CATCH BASINS LOCATED IN DISTURBED AREAS & SUBJECT TO STORMWATER RUN-OFF FROM DISTURBED AREAS DURING CONSTRUCTION, OR AS DIRECTED BY THE OWNER/ENGINEER. (NO SEDIMENTS SHALL ENTER THE ON-SITE OR OFF-SITE DRAINAGE SYSTEMS AT ANY TIME.)
12. SILTATION FILTER BAGS SHALL BE INSTALLED INSIDE CATCH BASINS. THE SILT BAGS SHALL REMAIN IN PLACE UNTIL BINDER AND LANDSCAPE IS COMPLETE.
13. ALL EROSION CONTROL MEASURES SHALL BE ROUTINELY INSPECTED, CLEANED AND REPAIRED OR REPLACED AS NECESSARY THROUGHOUT ALL PHASES OF CONSTRUCTION. IN ADDITION, INSPECTIONS SHALL TAKE PLACE AFTER EACH RAINFALL EVENT OF GREATER THAN 0.5" OF RAINFALL.
14. THE CONTRACTOR SHALL KEEP ON-SITE AT ALL TIMES ADDITIONAL HAYBALES, SILT SOCK AND EXTRA SILTATION FENCING FOR INSTALLATION AT THE DIRECTION OF THE ENGINEER OR THE CONSERVATION COMMISSION TO MITIGATE ANY EMERGENCY SITUATION.
15. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ANY PERMITS AND/OR CONNECTION FEES REQUIRED TO CARRY OUT THE WORK INCLUDING BUT NOT LIMITED TO DEMOLITION.
16. THE AREA OR AREAS OF ENTRANCE AND EXIT TO AND FROM THE SITE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.
17. THE CONTRACTOR SHALL ANTICIPATE TO MODIFY EROSION CONTROL MEASURES BASED ON PAST, CURRENT AND FORECASTED WEATHER CONDITIONS, SEASON AND EXPECTED FUTURE CONSTRUCTION ACTIVITIES.
18. THE CONTRACTOR SHALL NOTIFY THE CITY BUILDING INSPECTION DEPARTMENT AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF SITE WORK CONSTRUCTION.
19. ALL NEW CATCH BASINS ON-SITE SHALL BE EQUIPPED WITH GAS/OIL HOODS AND FOUR FOOT(4') SUMPS.
20. UPON COMPLETION OF ALL SITE-WORK CONSTRUCTION, SITE CONTRACTOR SHALL INSPECT ALL ON-SITE CATCH BASINS, DRAINAGE SWALES, ETC. AND REMOVE ALL SEDIMENT AND TRASH DEBRIS THAT HAS ACCUMULATED WITHIN EACH STRUCTURE DURING THE COURSE OF CONSTRUCTION.
21. ALL CONSTRUCTION SHALL MEET OR EXCEED THE CITY OF NEWBURYPORT DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS.
22. DUST CONTROL SHALL BE USED DURING CONSTRUCTION OPERATIONS. DUST CONTROL METHODS MAY CONSIST OF GRADING FINE SOILS ON CALM DAYS ONLY OR DAMPENING THE GROUND WITH WATER.

Revision	Date
1	11/03/2016
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Designed by: TMD
Drawn by: RJK
Checked by: TMD
Scale: 1"=20'
Date: 05/04/2016

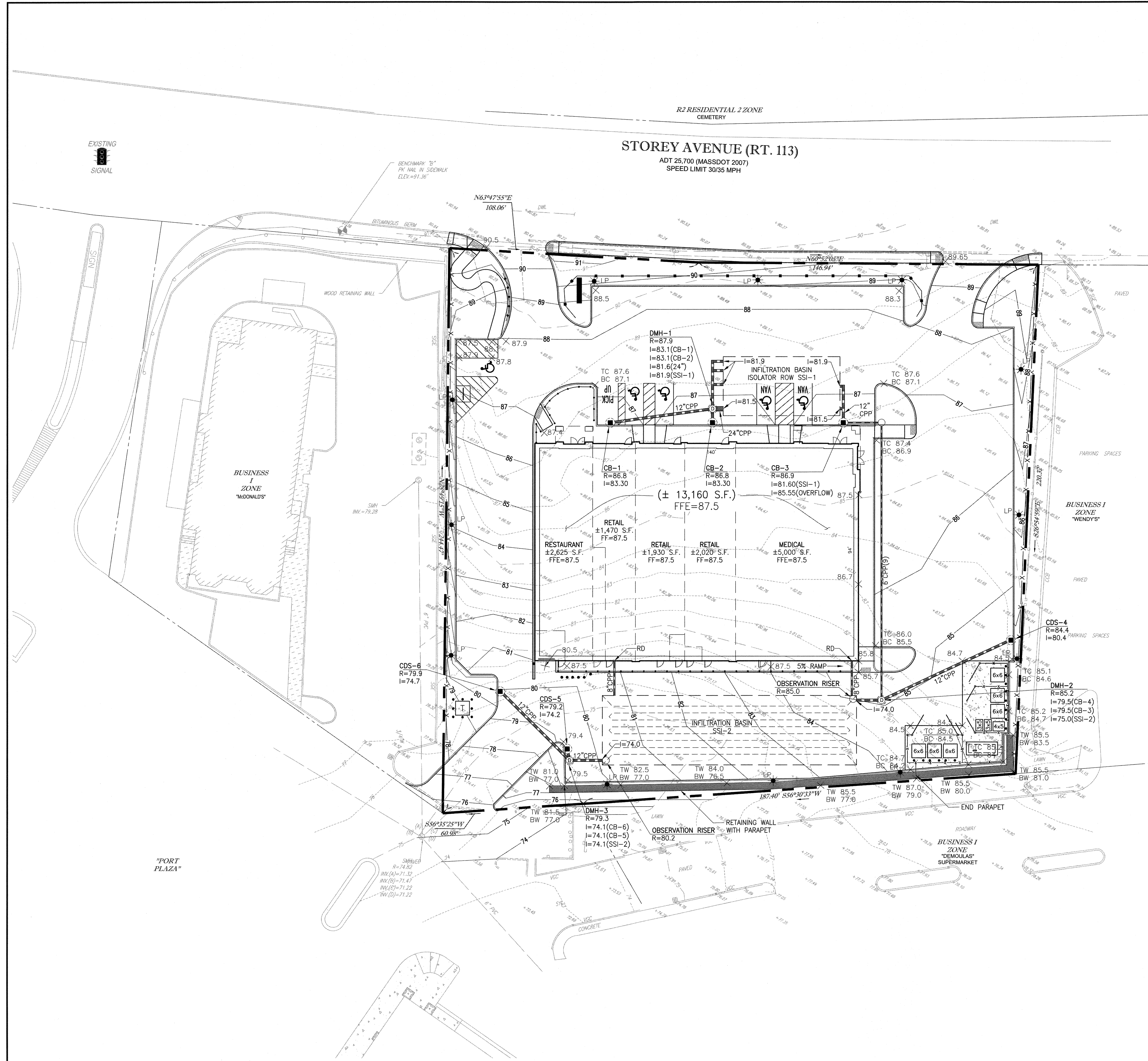
Prepared for:
PLAZA REALTY DEVELOPMENT TRUST
ECHO BRIDGE OFFICE PARK
381 ELLIOT STREET, 110L
NEWTON, MA 02464-1130

Prepared by:
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Project Name:
MARKETPLACE SHOPS NEWBURYPORT, MA
Drawing Name:
EROSION CONTROL PLAN

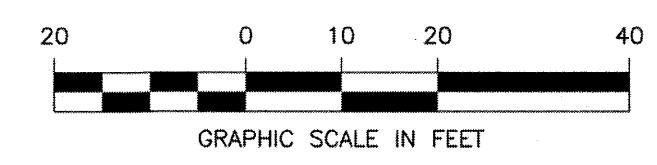
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Project No.: 15099

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GRADING & DRAINAGE NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIG SAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES AND THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENT SHOWN ON THE PLAN.
 2. TOPOGRAPHY AND EXISTING UTILITIES SHOWN HEREON IS THE RESULT OF AN ON THE GROUND DATA ACCUMULATION SURVEY PERFORMED BY NORTH SHORE SURVEY CORP. INC.
 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCH MARKS NECESSARY FOR THE WORK.
 4. ALL STORM DRAINAGE PIPES 12" AND OVER SHALL BE CPP, UNLESS NOTED OTHERWISE. ROOF DRAIN AND FRENCH DRAIN PIPE 4" TO 8" SHALL BE PVC.
 5. CORRUGATED POLYETHYLENE PIPE SHALL CONFORM WITH AASHTO DESIGNATIONS M294 AND M252, SHALL BE MANUFACTURED WITH HIGH DENSITY POLYETHYLENE PLASTIC AND SHALL BE ADS N-12 PIPE AS MANUFACTURED BY ADVANCE DRAINAGE SYSTEM, INC. OR HANCOR HI Q PIPE AS MANUFACTURED BY HANCOR, INC. OR APPROVED EQUAL UNLESS OTHERWISE NOTED OR DETAILED.
 6. ALL DRAINAGE STRUCTURES SHALL BE 5,000 PSI PRECAST CONCRETE AND SHALL MEET H20 (HEAVY DUTY TRAFFIC) LOADING REQUIREMENTS.
 7. INFILTRATION TRENCH STONE SHALL BE 2" DOUBLE WASHED. CARE SHALL BE TAKEN DURING CONSTRUCTION TO ENSURE THAT THE INFILTRATION TRENCH STONE REMAINS FREE OF SILT.
 8. TOP OF WALL (TW) IS AT THE TOP OF THE PARAPET ON THE PORTION OF WALL WITH A PARAPET.
 9. 100-YEAR PLUS STORM OVER FLOW.
- INFILTRATION BASIN SSI-1**
5 ROWS X 7 CHAMBERS* = 35 CHAMBERS
STONE DIMENSIONS = 50.5"x25.5"x4.7'
BOTTOM OF STONE = 80.0'
BOTTOM OF CHAMBER = 81.5'
TOP OF CHAMBER = 84.0'
TOP OF STONE = 85.5'
- *STORMTECH SC-740 CHAMBERS
- INFILTRATION BASIN SSI-2**
4 - 100' ROWS OF 48" CMP WITH 2 HEADERS
STONE DIMENSIONS = 110"x30"x6"
BOTTOM OF STONE = 71.5'
PIPE INVERT = 72.5'
TOP OF PIPE = 76.5'
TOP OF STONE = 77.5'



Revision	Date	No.
1	11/03/2016	1

Seal:

Designed by: TMD
Drawn by: RJK
Checked by: TMD
Scale: 1"=20'
Date: 05/04/2016

Prepared for:

PLAZA REALTY DEVELOPMENT TRUST

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781-279-0180
FAX: 781-279-0173

Project Name:

MARKETPLACE SHOPS NEWBURYPORT, MA

Drawing Name:

GRADING AND DRAINAGE PLAN

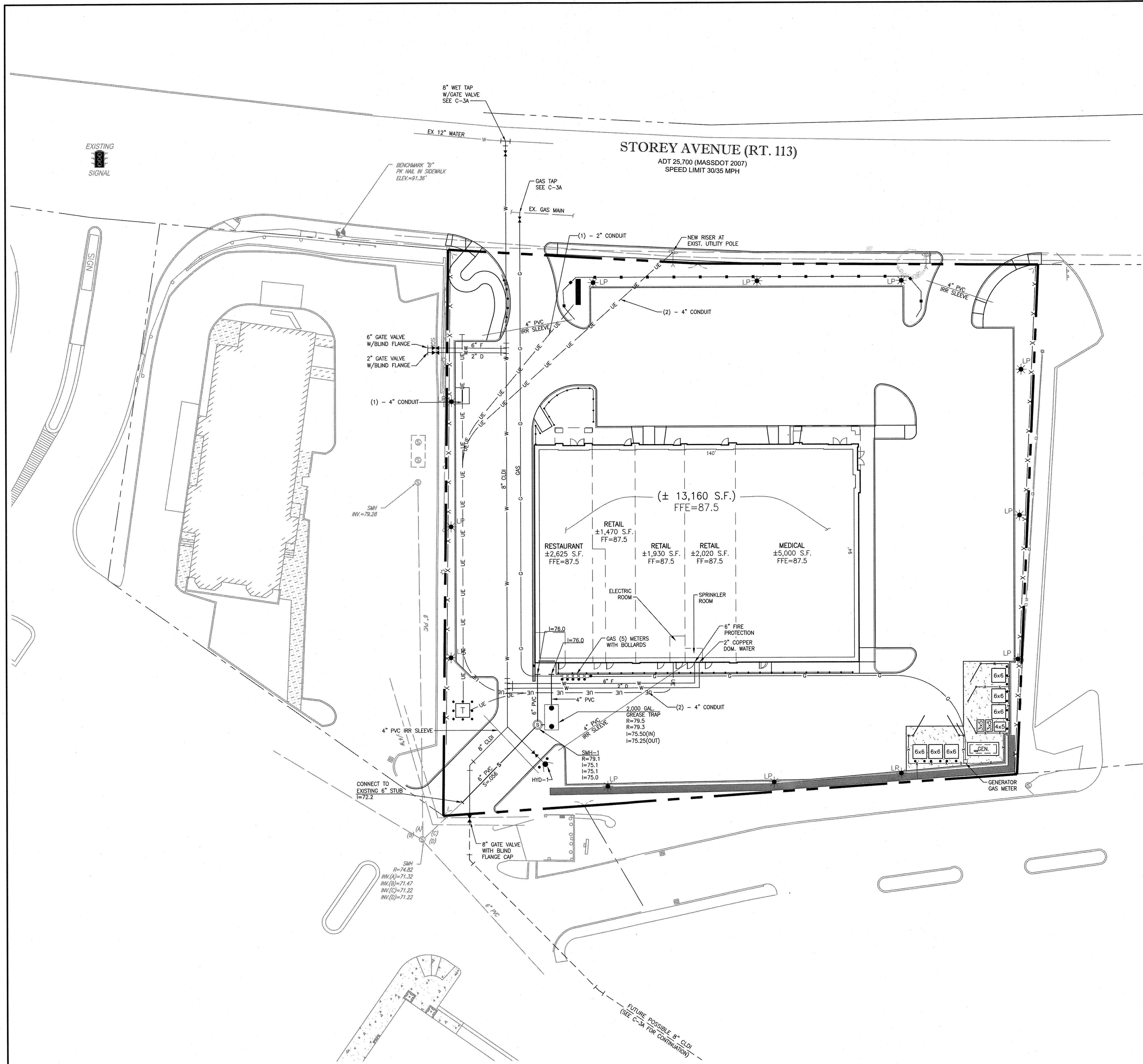
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Project No.: 15099

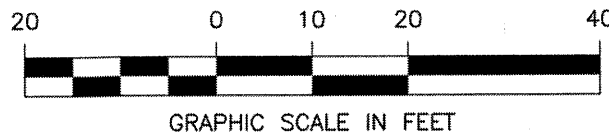
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Drawing name: G:\MA\Newburyport\SBK Associates\15099 Port Plaza Marketplace Shops\15099_G-3 UTILITY.dwg
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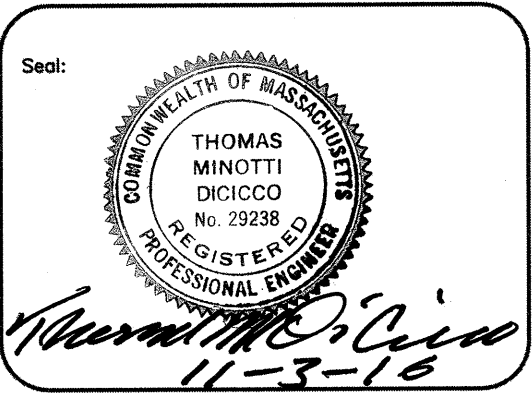


UTILITY NOTES

1. ALL WATER MAINS SHALL BE INSTALLED WITH A MINIMUM OF 5 FEET OF COVER AND A MAXIMUM OF 6 FEET OF COVER EXCEPT AS NOTED OR DETAILED OTHERWISE. GREATER DEPTHS ARE PERMITTED WHERE REQUIRED TO AVOID CONFLICTS WITH OTHER UTILITIES.
2. GENERALLY, WATER MAIN FITTINGS IDENTIFIED ON THIS DRAWING ARE SHOWN FOR INSTALLATION LOCATION PURPOSES. THE CONTRACTOR SHALL NOTE THAT NOT ALL FITTINGS ARE NOTED, SHOWN, OR INDICATED.
3. ALL WATER MAIN FITTINGS, TEES, HYDRANTS, ETC. SHALL BE RESTRAINED WITH CONCRETE THRUST BLOCKS.
4. ALL FIRE HYDRANTS SHALL BE INSTALLED WITH A 6" C.I.D.I. RUN OUT AND SHALL BE INSTALLED WITH APPROPRIATELY SIZED GATE VALVE, BOX, AND TEE FITTING. ALL HYDRANT ASSEMBLIES SHALL MEET LOCAL MUNICIPAL SPECIFICATION REQUIREMENTS AND SHALL BE INSTALLED IN ACCORDANCE WITH ALL LOCAL MUNICIPAL REQUIREMENTS. GATE VALVE SHALL BE A MAXIMUM OF 5'-0" FROM HYDRANT.
5. DOMESTIC WATER SERVICES 2.5" AND SMALLER SHALL BE TYPE K COPPER TUBING AND SHALL BE INSTALLED WITH APPROPRIATELY SIZED CORPORATION STOP WITH APPROVED SADDLE, CURB STOP, AND BOX.
6. ALL WATER MAINS 3" AND LARGER SHALL BE CLASS 52 CEMENT LINED DUCTILE IRON CONFORMING TO AASHTO A21.50 AND AASHTO A21.51 AND SHALL BE INSTALLED WITH APPROPRIATELY SIZED FITTINGS AND RESILIENT SEAT GATE VALVES.
7. ALL WATER MAIN APPURTENANCES, MATERIALS, METHODS OF INSTALLATION AND TESTING REQUIREMENTS SHALL MEET OR EXCEED ALL LOCAL MUNICIPAL REQUIREMENTS.
8. PRESSURE AND LEAKAGE TEST, DISINFECTION AND FLUSHING SHALL BE IN ACCORDANCE WITH ALL LOCAL MUNICIPAL STANDARDS AND REQUIREMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS IN CONNECTION WITH UTILITY TESTS, FLUSHING AND INSPECTIONS AS REQUIRED BY THE LOCAL MUNICIPALITY. WATER LINES MUST BE COMPLETED INTO BUILDING PRIOR TO TESTING.
9. PRIMARY WATER METER AND BACK FLOW PREVENTER SHALL BE LOCATED INSIDE THE BUILDING AT THE POINT WHERE THE WATER LINE ENTERS THE BUILDING UNLESS OTHERWISE NOTED OR DETAILED ON THE DRAWINGS.
10. A MINIMUM OF 10 FEET CLEAR HORIZONTALLY SHALL BE MAINTAINED BETWEEN SANITARY SEWER MAINS AND ALL WATER MAINS, HYDRANT ASSEMBLIES OR SERVICES. WHENEVER CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET TO A WATER MAIN, THE WATER MAIN SHALL BE LAID IN A SEPARATE TRENCH AND THE ELEVATION OF THE CROWN OF THE SEWER SHALL BE AT LEAST 18 INCHES BELOW THE INVERT OF THE WATER MAIN.
11. A MINIMUM OF 12" VERTICAL CLEARANCE SHALL BE MAINTAINED WHERE WATER MAINS CROSS STORM DRAIN LINES, AND ALL OTHER UTILITIES.
12. WHERE SANITARY SEWERS CROSS WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST EIGHTEEN INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION AND CONSTRUCTED WITH MECHANICAL JOINT PIPE FOR A DISTANCE OF TEN FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.
13. ALL GRAVITY SEWER PIPE SHALL BE POLYVINYL CHLORIDE PIPE (P.V.C.), S.D.R. 35 AND SHALL CONFORM WITH ASTM-D3034 UNLESS NOTED OTHERWISE.
14. PROPOSED GAS SERVICE LOCATIONS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL CONFIRM WITH THE GAS COMPANY THAT GAS LINE INSTALLATION SHALL BE BY THE LOCAL GAS COMPANY. THE CONTRACTOR SHALL GIVE THE GAS COMPANY ADVANCE NOTICE OF WHEN THE GAS LINE CAN BE INSTALLED. THE CONTRACTOR IS RESPONSIBLE FOR ALL EXCAVATION AND BACK FILL AND COMPACTION FOR THE GAS LINE.
15. EXACT LOCATION OF UTILITY STUBS FOR BUILDING CONNECTIONS SHALL BE VERIFIED WITH THE BUILDING DRAWINGS. SERVICE STUBS TO THE BUILDING SHALL BE INSTALLED TO A POINT 5 FEET FROM THE BUILDING WALL UNLESS OTHERWISE NOTED OR DETAILED, SHALL BE PROVIDED WITH TEMPORARY PLUGS AT THE END AND THE INSTALLED LOCATIONS SHALL BE MARKED AND IDENTIFIED WITH WITNESS STAKES AND PROTECTED.
16. THE CONTRACTOR SHALL INSTALL THE PRIMARY AND SECONDARY UNDERGROUND CONDUITS AND PROVIDE THE TRANSFORMER PAD PER THE UTILITY REQUIREMENTS. BUILDING ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THE CONDUCTOR FROM THE TRANSFORMER TO THE BUILDING.
17. LIGHT POLE LOCATIONS ARE SHOWN GRAPHICALLY FOR COORDINATION PURPOSES. SEE SITE LIGHTING DRAWINGS FOR DESIGN INFORMATION. SITE CONTRACTOR TO INSTALL CONDUITS AND LP BASES. NO DIRECT BURY CABLE SHALL BE ALLOWED.



Revision	Date
No.	11/02/2016
Revision	Date
No.	



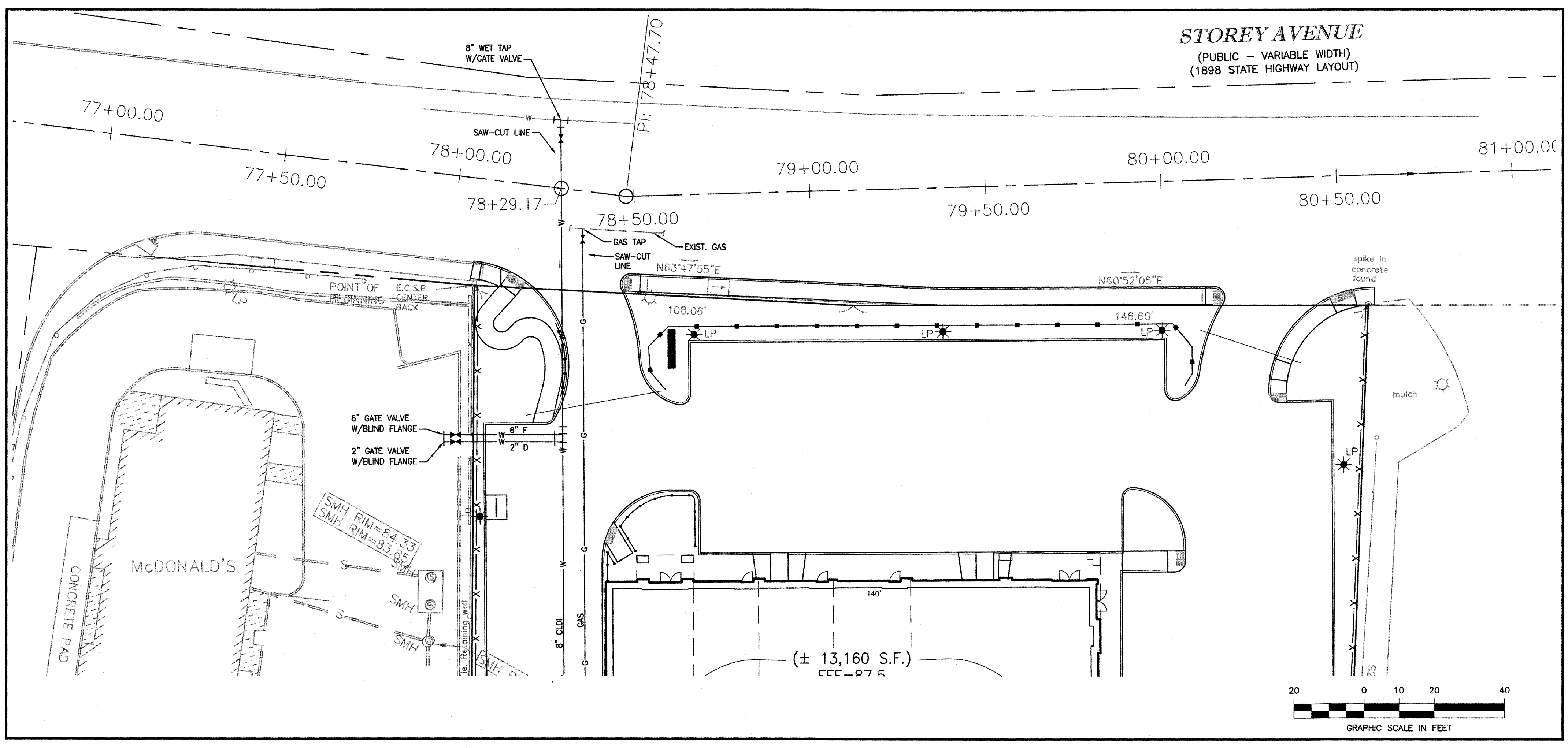
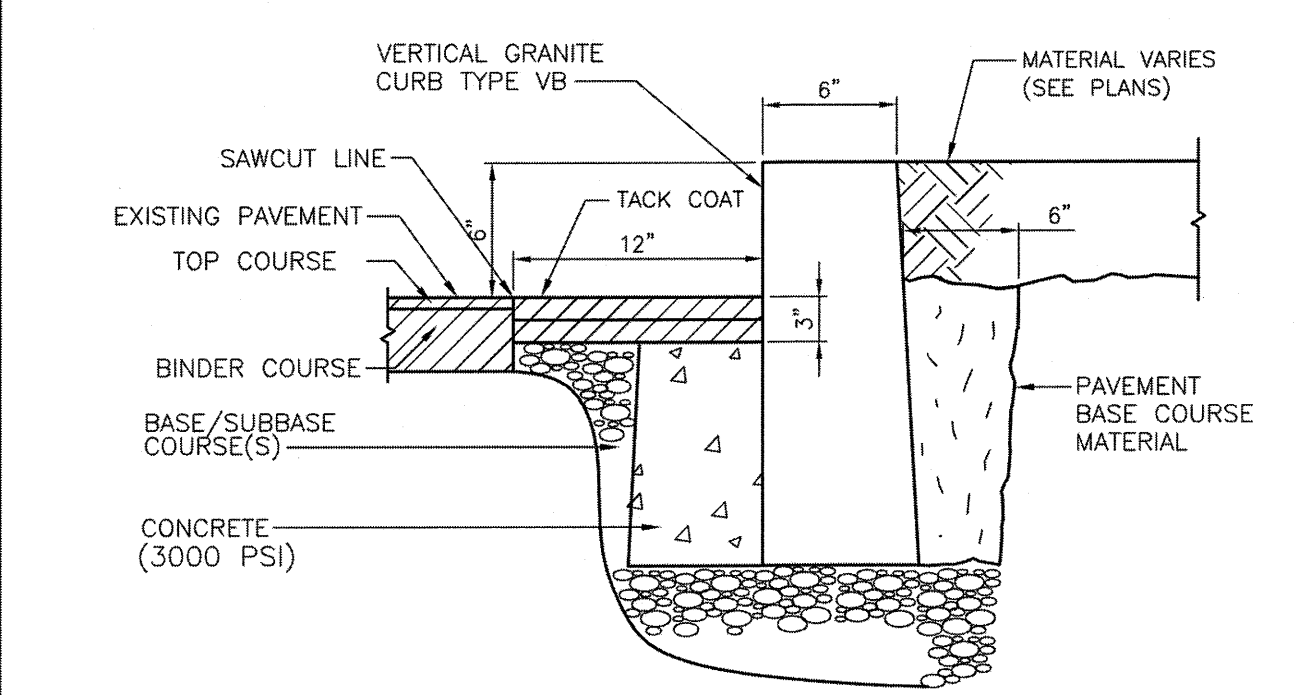
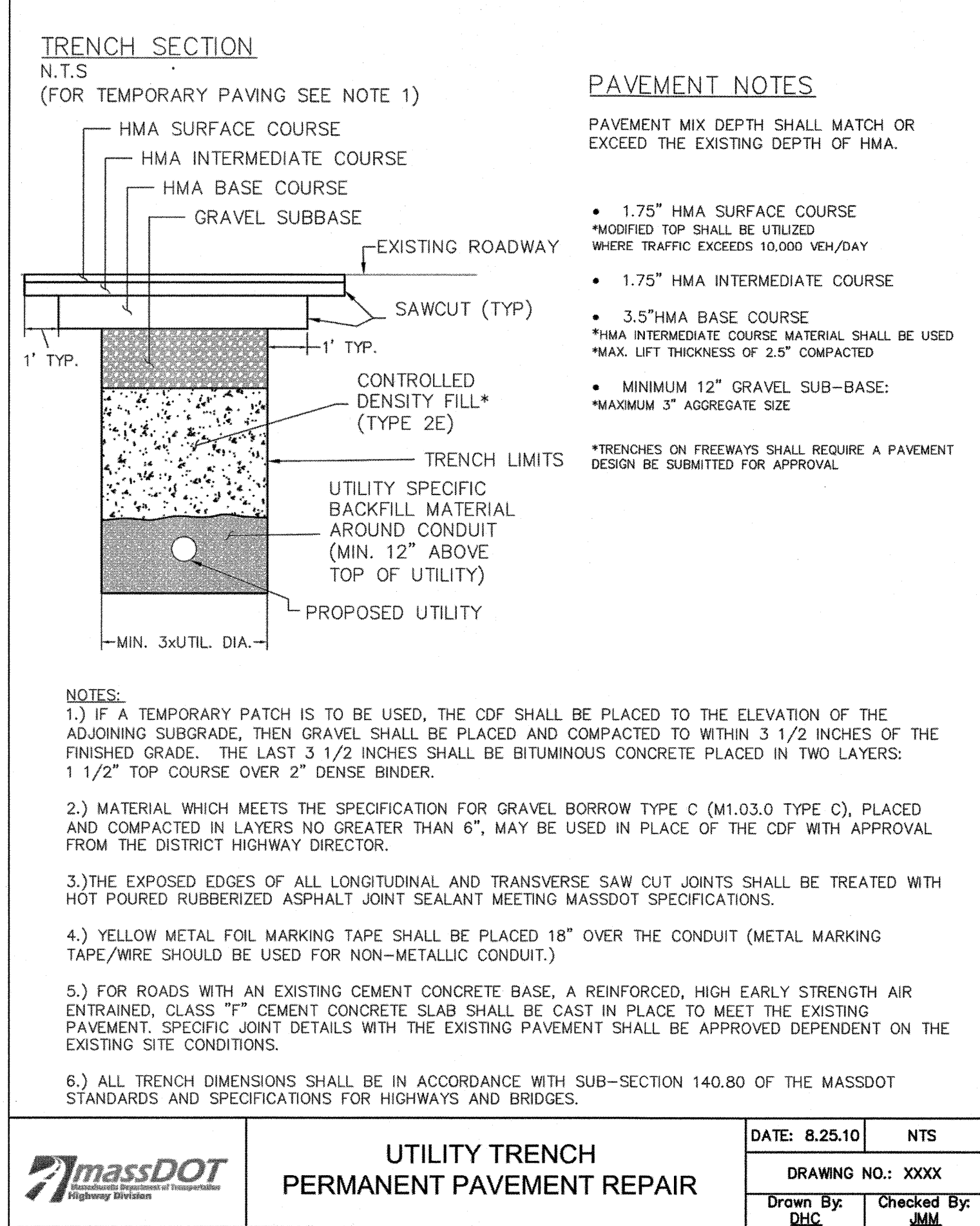
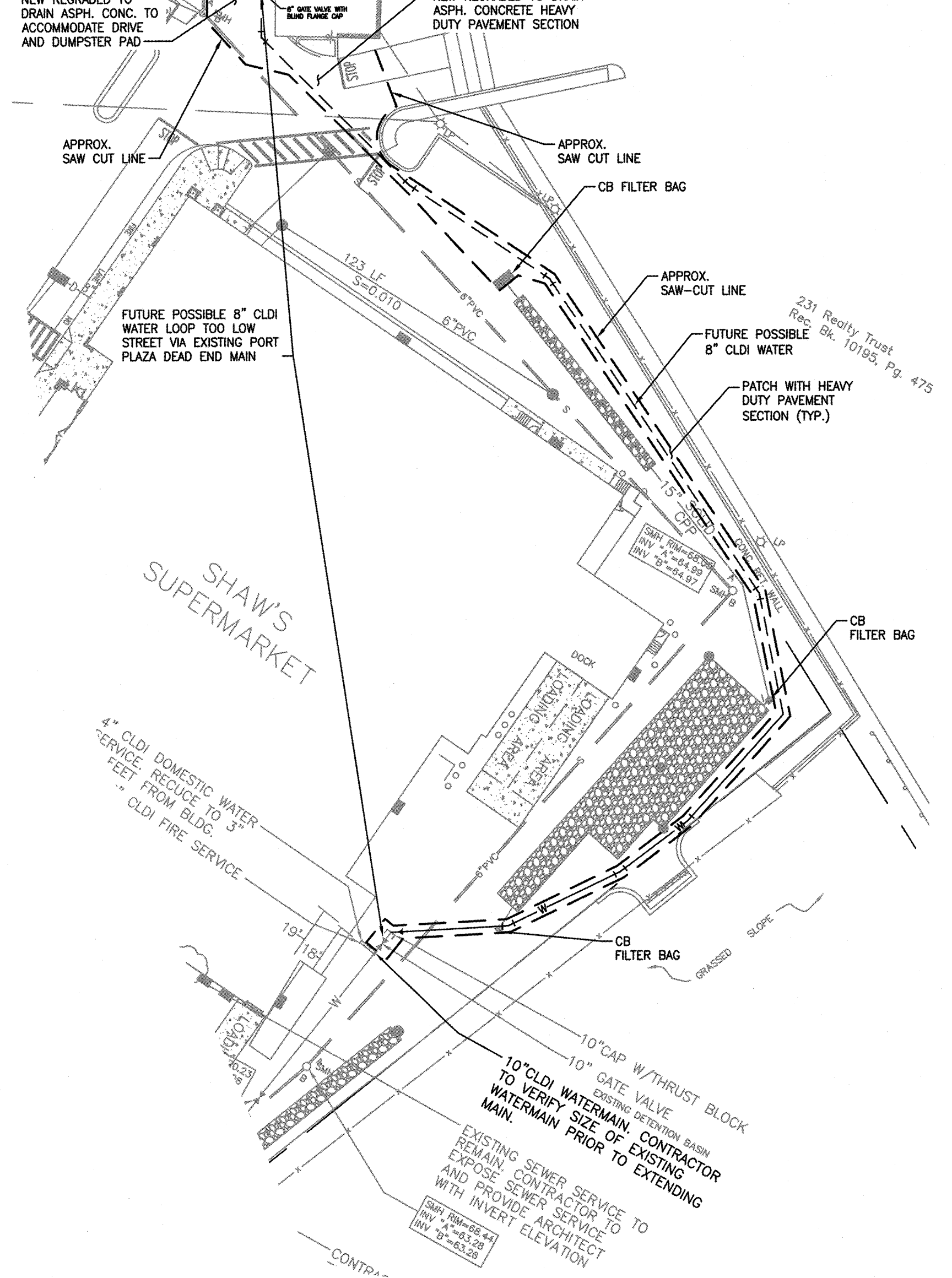
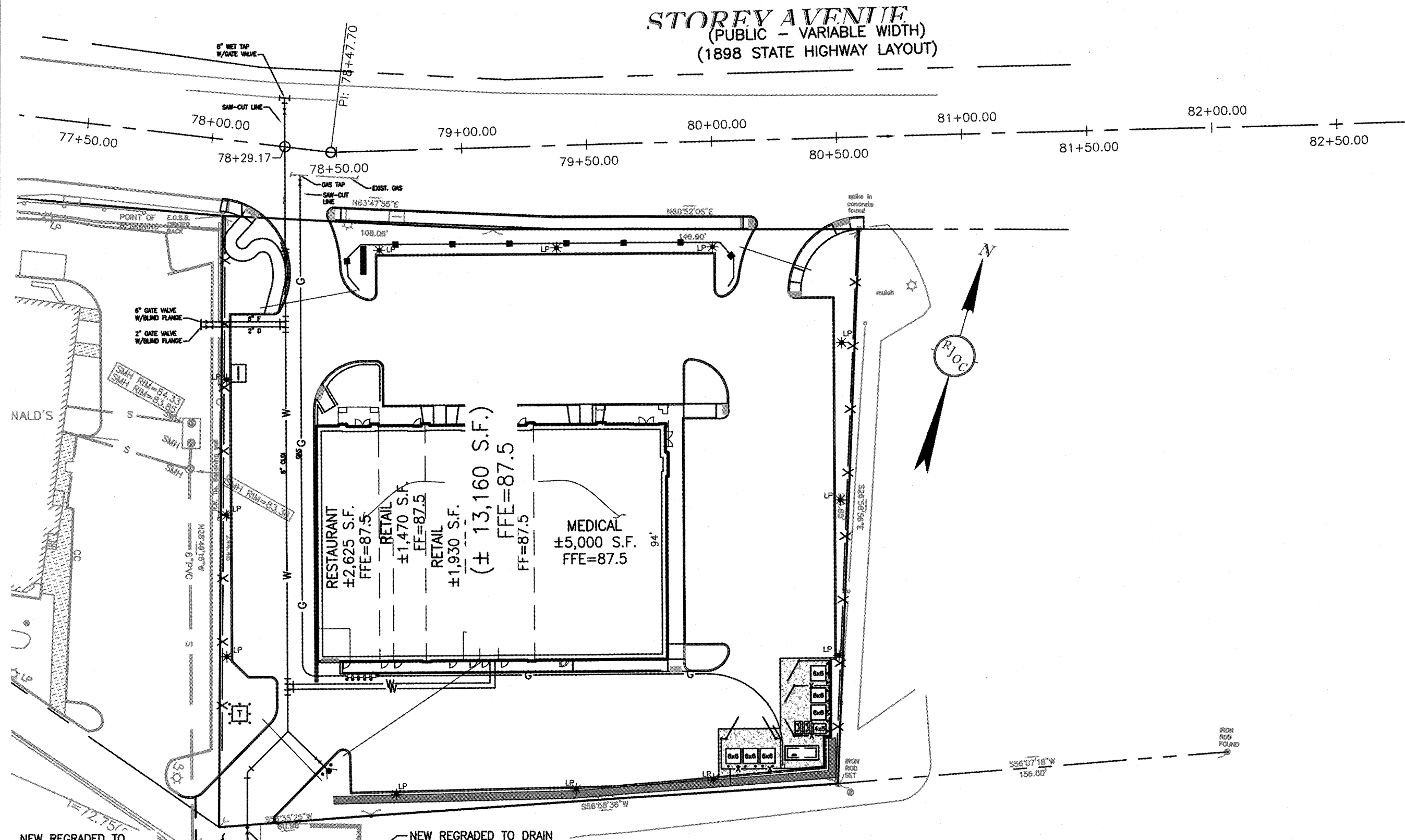
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Drawn by: RJK
Checked by: TMD
Scale: 1"=20'
Date: 05/04/2016

Prepared for:
PLAZA REALTY DEVELOPMENT TRUST
ECHO BRIDGE OFFICE PARK
381 ELLIOT STREET, 110L
NEWTON, MA 02464-1130

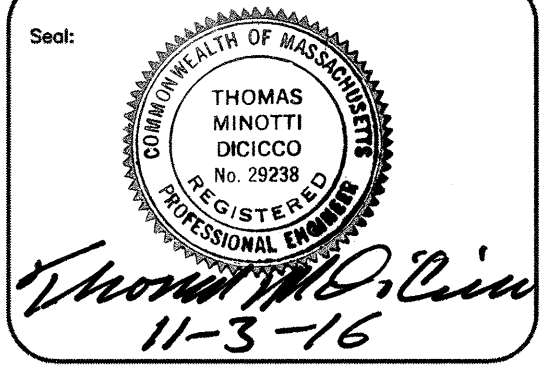
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781-279-0180
FAX: 781-279-0173

Project Name:
MARKETPLACE SHOPS NEWBURYPORT, MA
Drawing Name:
UTILITY PLAN

Drawing No.:
C-3
Project No.:
15099



Revision	Date	No.
SITE PLAN APPROVAL	11/03/2016	No.



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Date: 05/04/2016

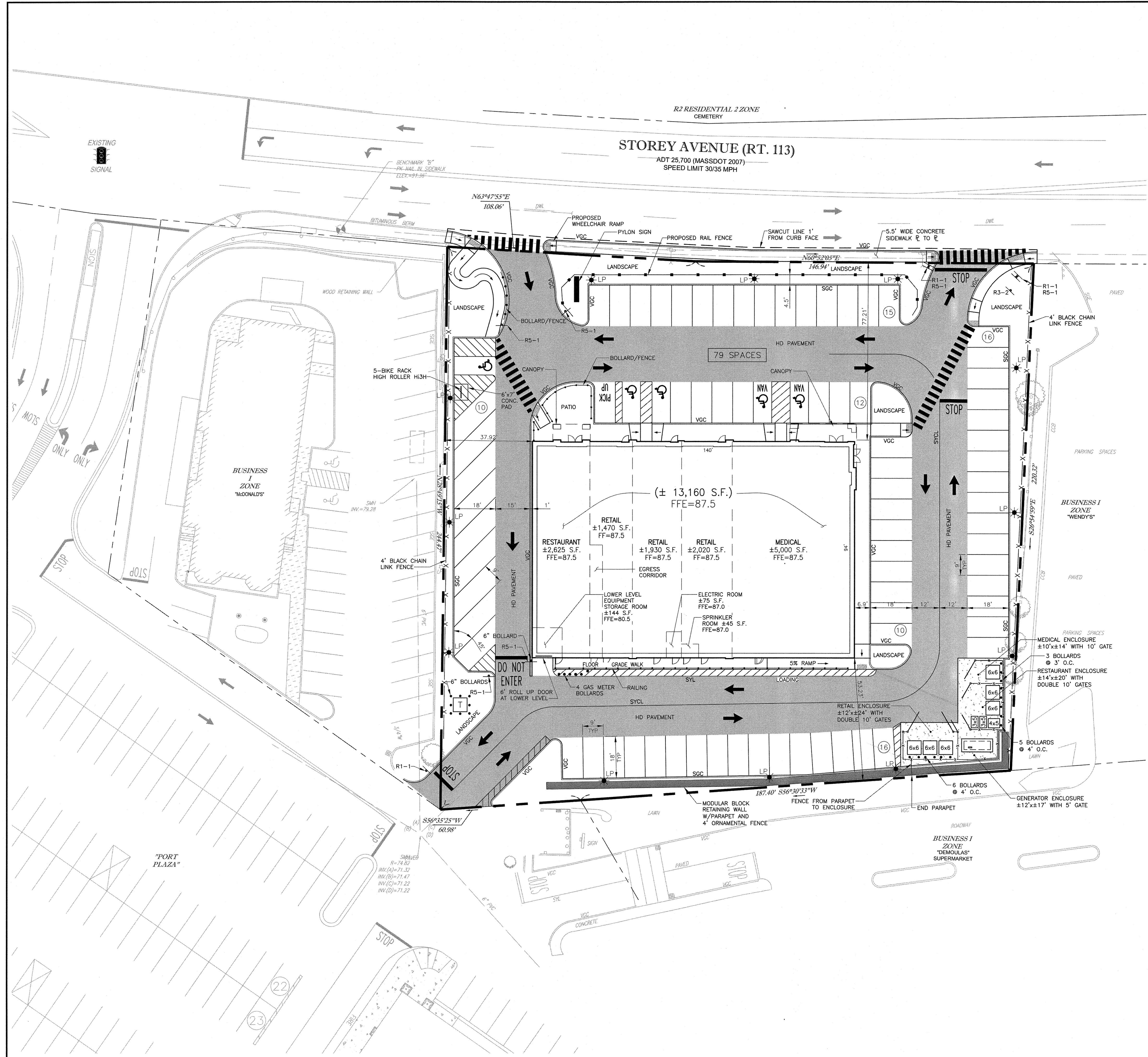
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381 ELLIOT STREET, 110L
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Project Name:
**MARKETPLACE SHOPS
NEWBURYPORT, MA**
Drawing Name:
**FUTURE POSSIBLE OFFSITE
WATER EXTENSION AND
MDOT ROAD OPENING PLAN**

Drawing No.:
C-3A
Project No.: 15099

Drawing name: G:\A\Newburyport\SBK Associates\5099 Port Plaza Marketplace Shops\Main\5099_C-4_PTC.dwg
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PARKING AND TRAFFIC CONTROL NOTES

- HANDICAP ACCESSIBLE PARKING SPACES SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (A.D.A.) OF JANUARY, 1992 AND THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD OF REGULATIONS, 521 CMR UNLESS OTHERWISE NOTED.
- ACCESSIBLE PARKING SPACES DESIGNATED WITH A "VAN" SHALL BE SIGNED AS VAN ACCESSIBLE ACCESSIBLE" PER A.D.A. 4.1.2.5B.
- ENTRANCE AND ISLAND CURB SHALL BE VERTICAL GRANITE (VGC). PARKING SPACE END CURB SHALL BE SLOPED GRANITE (SGC). BUILDING SIDEWALK SHALL HAVE INTEGRAL CONCRETE CURB.
- ALL PARKING SPACES SHALL BE 9' IN WIDTH BY 18 FEET IN LENGTH. PARKING DRIVE AISLES SHALL BE 24' WIDE.
- ALL PAVEMENT STRIPING SHALL BE PAINTED WITH 2 COATS OF PAINT.
- CONTRACTOR SHALL REFER TO ARCHITECTURAL/BUILDING PLANS FOR EXACT LOCATIONS, DETAILS AND DIMENSIONS OF CONCRETE SIDEWALKS, EXIT PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS, CONCRETE PADS AND EXACT UTILITY ENTRANCE LOCATIONS.
- PARKING AND TRAFFIC CONTROL PLANS ARE SCHEMATIC AND FOR LOCATION OF MARKINGS ONLY. SPECIFIC DETAILS FOR INSTALLATION OF PAVEMENT MARKINGS ARE PROVIDED AS PART OF THIS PLAN SET.
- FOR PARKING LOT PAVEMENT SECTION SEE DETAIL SHEET C-6.
- CONTRACTOR SHALL REFER TO BUILDING PLANS FOR THE EXACT DIMENSIONS AND LOCATIONS OF BUILDING APPURTENANCES.
- ALL SIDEWALK RAMPS SHALL BE CONSTRUCTED IN CONCRETE AND COMPLY WITH A.D.A. REQUIREMENTS. PRIOR TO INSTALLING HANDICAP RAMPS, CONTRACTOR SHALL SUBMIT A DESIGN DETAIL FOR EACH HANDICAP RAMP FOR THE ENGINEER'S APPROVAL.

PAVEMENT NOTES

- NEW ASPHALTIC AND CONCRETE PAVEMENT SHALL BE PLACED TO THE LIMITS INDICATED ON THESE PLANS. PAVEMENT CROSS SECTION SHALL BE AS DETAILED IN THIS PLAN SET. CONTRACTOR SHALL MATCH EXISTING PAVEMENT THICKNESS IN CUT AND PATCH AREAS.
- SAW CUT AND PAVEMENT LIMITS ARE SHOWN AS APPROXIMATE ONLY. FINAL LIMITS SHALL BE DETERMINED IN THE FIELD PRIOR TO COMMENCEMENT OF PAVING OPERATIONS.
- THE CONTRACTOR SHALL ADJUST ALL UTILITY CASTINGS TO THE PROPER LINE AND GRADE PRIOR TO AND IF NECESSARY, AFTER PLACING FINAL PAVEMENT.
- PAVEMENT WORK WITHIN THE MHD ROW SHALL BE IN ACCORDANCE WITH MHD STANDARDS.

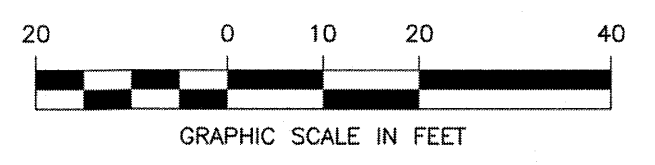
GENERAL NOTES

- TENANT AND UTILITY ROOM AREAS (S.F.) CALCULATED TO OUTSIDE FACE OF FOUNDATION WALL AND CENTER LINE OF DEMISING PARTITION.

ZONING CHART		
ZONE DISTRICT: B1 RETAIL TRADE 403, RESTAURANT AND RETAIL ALLOWED BY RIGHT.		
	REQUIRED	PROVIDED
MIN LOT AREA	10,000 S.F.	58,037 S.F.
MIN STREET FRONTAGE	120 FT.	254 FT.
MIN FRONT SETBACK	20 FT.	77.21 FT.
MIN SIDE SETBACK	20 FT.	37.92 FT.
MIN REAR SETBACK	20 FT.	53.23 FT.
MAX LOT COVERAGE	30%	23%
MAX BUILDING HEIGHT	35 FT.*	< 30 FT.
MIN PARKING REQUIRED	58 SPACES**	79 SPACES**

* 35 FEET FOR RETAIL / 30 FEET FOR RESTAURANT

** ±65 SEATS @ 1 SPACE/4 SEATS = 17 SPACES
5,420 S.F. SPECIAL RETAIL @ 3 SP/1,000 S.F. = 17 SPACES
5,000 S.F. MEDICAL @ 1 SPACE/300 S.F. = 17 SPACES
14 MEDICAL EMPLOYEES @ 1 SPACE/2 EMPLOYEES = 7 SPACES
±119 S.F. COMMON UTILITY ROOM SPACE (NO PARKING REQUIRED)
NOTE: ADDITIONAL/EMPLOYEE PARKING AVAILABLE IN THE ADJACENT PORT PLAZA LOT



Seal:

Designed by: TMD
Drawn by: RJK
Checked by: TMD
Scale: 1"=20'
Date: 05/04/2016

Prepared for:
PLAZA REALTY DEVELOPMENT TRUST
ECHO BRIDGE OFFICE PARK
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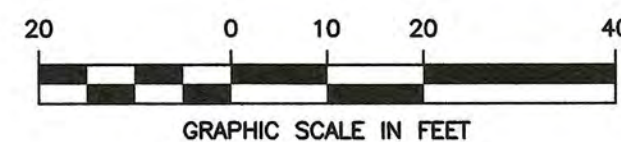
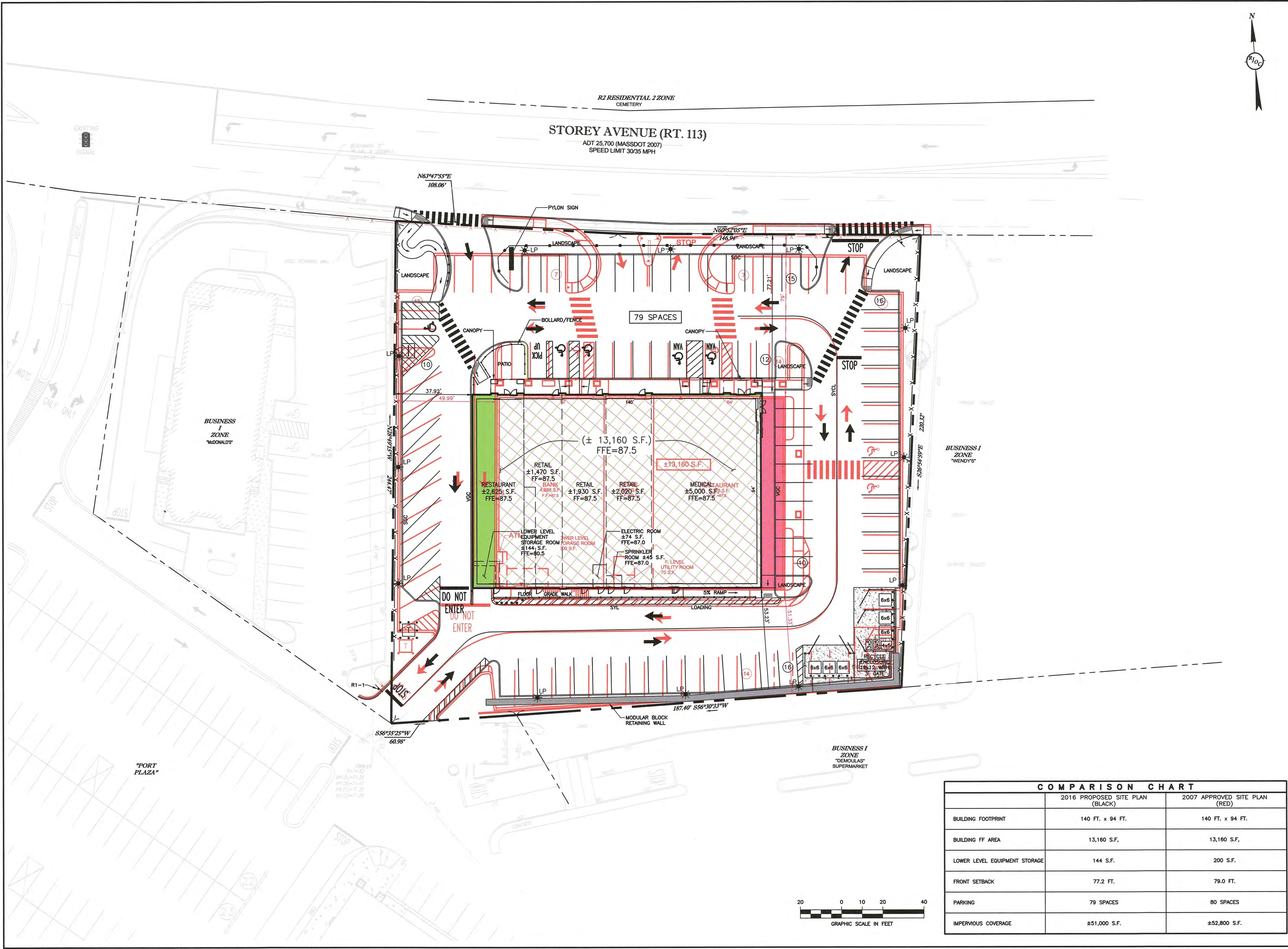
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Project Name:
MARKETPLACE SHOPS NEWBURYPORT, MA
Drawing Name:
PARKING AND TRAFFIC CONTROL PLAN

Drawing No.:
C-4
Project No.: 15099

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COMPARISON CHART		
	2016 PROPOSED SITE PLAN (BLACK)	2007 APPROVED SITE PLAN (RED)
BUILDING FOOTPRINT	140 FT. x 94 FT.	140 FT. x 94 FT.
BUILDING FF AREA	13,160 S.F.	13,160 S.F.
LOWER LEVEL EQUIPMENT STORAGE	144 S.F.	200 S.F.
FRONT SETBACK	77.2 FT.	79.0 FT.
PARKING	79 SPACES	80 SPACES
IMPERVIOUS COVERAGE	±51,000 S.F.	±52,800 S.F.



No.	Revision	Date
1	SITE PLAN APPROVAL	11/03/2016

Seal:
THOMAS MINOTTI DICICCO
No. 29238
REGISTERED PROFESSIONAL ENGINEER
11-3-16

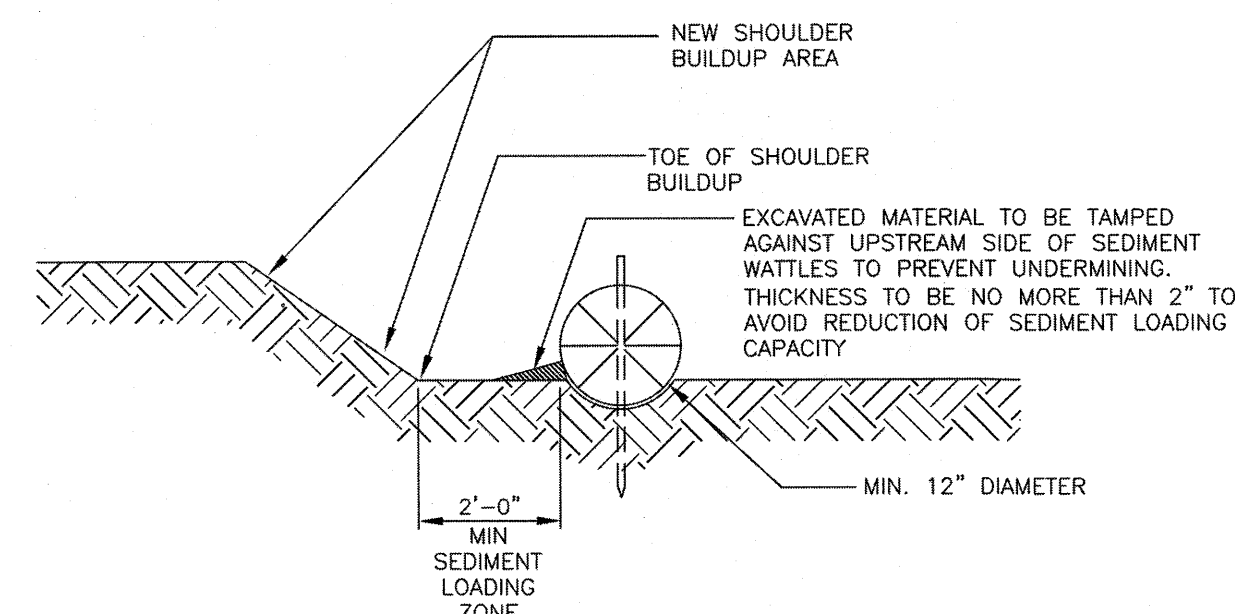
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Drawn by:	RJK
Checked by:	TMD
Scale:	1"=20'
Date:	11/03/2016

Prepared for:
PLAZA REALTY DEVELOPMENT TRUST
ECHO BRIDGE OFFICE PARK
381 ELLIOT STREET, 110L
NEWTON, MA 02464-1130

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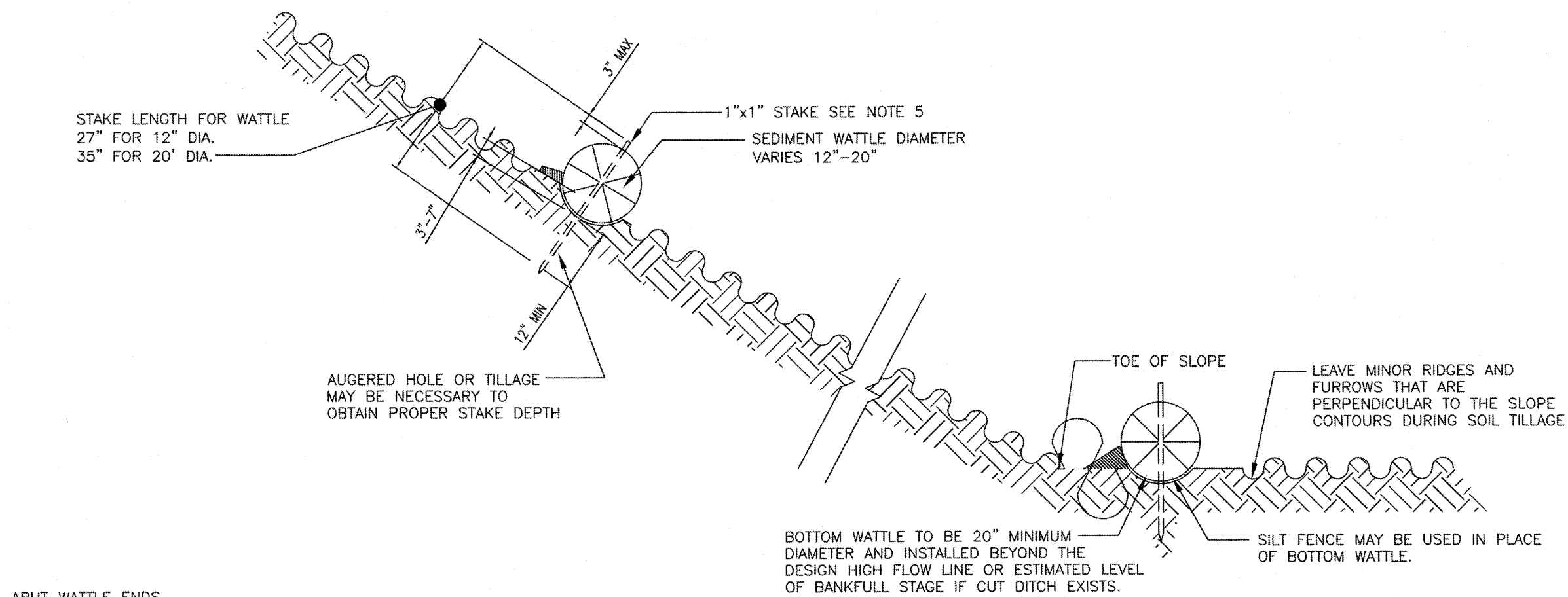
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MARKETPLACE SHOPS NEWBURYPORT, MA
Drawing Name:
SITE PLAN 2007 / 2016 OVERLAY

Drawing No.:
C-4A
Project No.: 15099

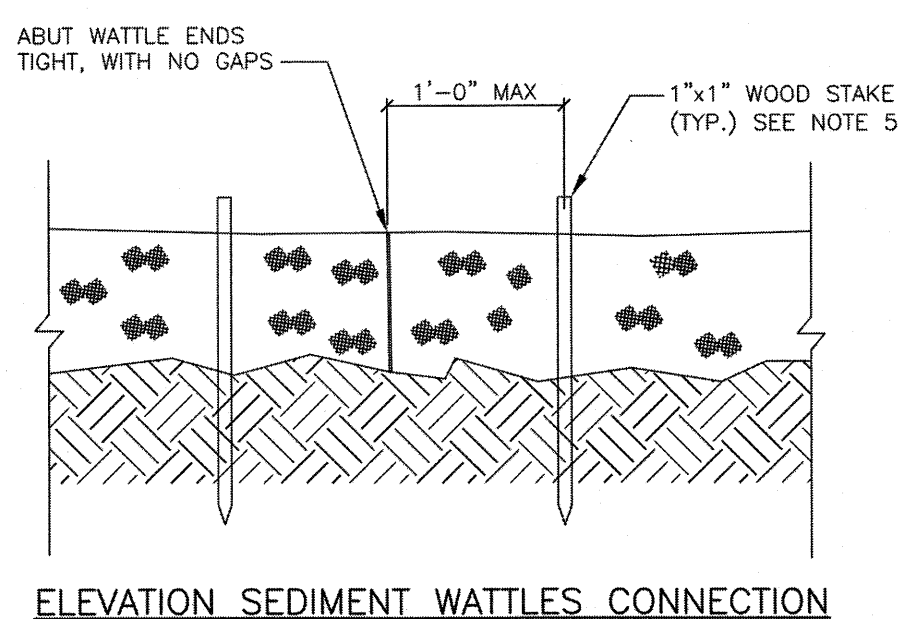


WATTLES LAYOUT ON SLOPES

SECTION SEDIMENT WATTLE



SECTION – WATTLES LAYOUT ON SLOPES



ELEVATION SEDIMENT WATTLES CONNECTION

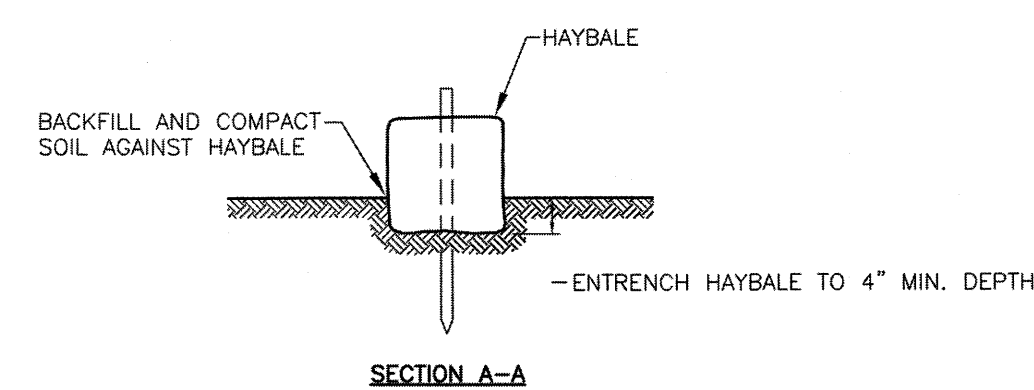
NOTES:

1. SEDIMENT WATTLES ARE TO BE INSTALLED, AS SLOPES ARE CONSTRUCTED TO GRADE OR AS DIRECTED BY THE ENGINEER. SIZE, INSTALLATION, AND MAINTENANCE SHALL BE PER THE MANUFACTURER'S SPECIFICATIONS FOR SLOPE, SWALE, AND PERIMETER PROTECTION AND AS FILED CONDITIONS WARRANT.
2. TRENCHES TO BE CONSTRUCTED ALONG AND PARALLEL TO THE CONTOURS. TRENCH DEPTH TO BE $\frac{3}{4}$ THE THICKNESS OF THE SEDIMENT WATTLE. PLACE EXCAVATED MATERIAL ON UPHILL SIDE OF TRENCH.
3. LOCATE SEDIMENT WATTLES AS INDICATED ON PLANS OR AS DIRECTED BY THE ENGINEER. SPACE WATTLE TRENCHES ACCORDING TO THE FOLLOWING SCHEDULE:

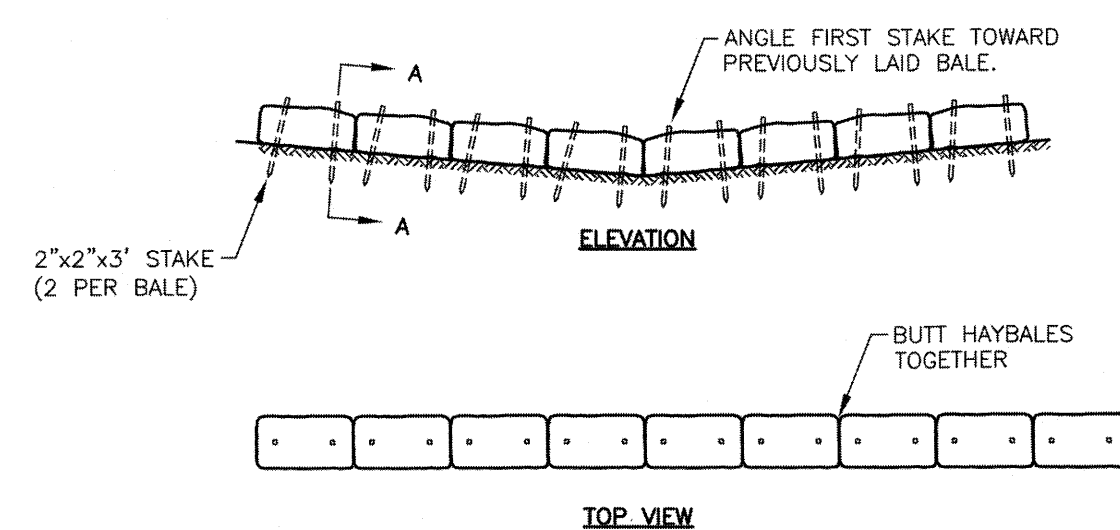
SLOPE RATIO	MAX SPACING INTERVALS
1:1 AND STEEPER, APPLY MINIBENCHING OR OTHER SUITABLE BMP'S.	
2:1	10'-0"
3:1	20'-0"
4:1	30'-0"
5:1	40'-0"
6:1	40'-0"

4. SEDIMENT WATTLES TO BE IN CONTINUOUS CONTACT WITH TRENCH BOTTOM AND SIDES. NO DAYLIGHT SHOULD BE SEEN UNDER THE WATTLE. DO NOT OVERLAP THE END OF ONE TATTLE ON THE OTHER.
5. STAKES TO PENETRATE SOIL OF TRENCH BOTTOM 12" MINIMUM. STAKES TO BE EXPOSED 3" MAXIMUM ABOVE THE TOP OF WATTLE. SPACE STAKES 4'-0" O.C. MAX., 1'-0" MAX. AT WATTLE ENDS. A 20" DIAMETER WATTLE MAY NEED TO BE MADE FROM 2-3 ROLLED EXCELSIOR OR STRAW BLANKETS.
6. REPAIR ANY RILLS OR GULLIES PROMPTLY.
7. THE INSTALLATION AND MAINTENANCE OF SEDIMENT WATTLE BMP'S SHALL NOT NEGATIVELY IMPACT TRAFFIC SAFETY.

WATTLE EROSION AND SILTATION BARRIER
SCALE: N.T.S.

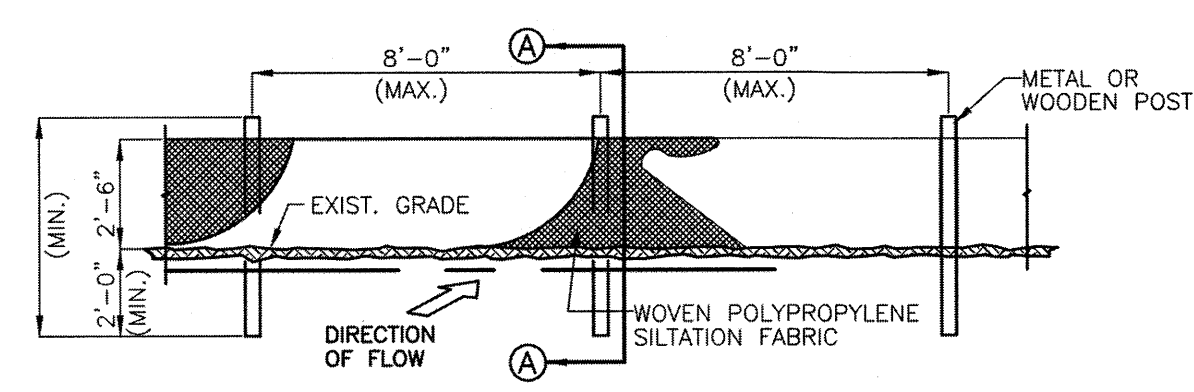


SECTION A-A

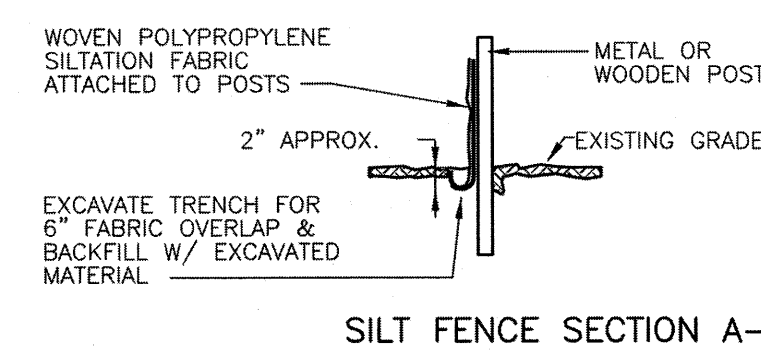


TOP VIEW

TYPICAL SINGLE ROW HAYBALE INSTALLATION DETAIL
SCALE: N.T.S.



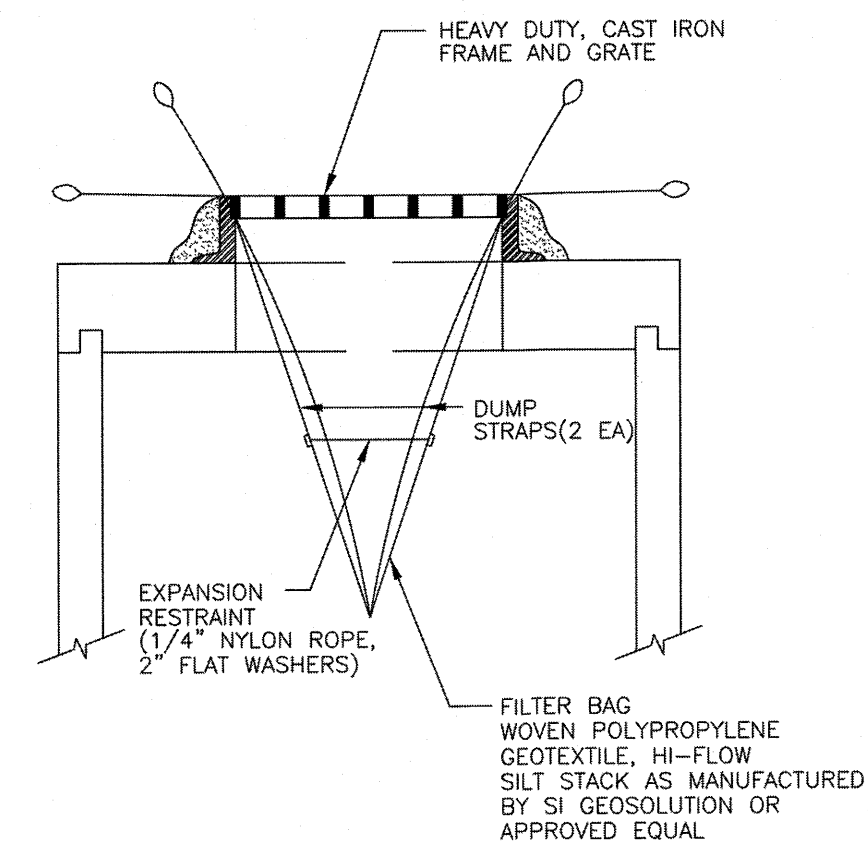
SILT FENCE ELEVATION



SILT FENCE SECTION A-A

NOTE:
IN AREAS WHERE ANCHOR TRENCH CANNOT BE
DUG, FABRIC WILL BE LAID ON SURFACE AND
COVERED WITH A MINIMUM OF 6" DEPTH OF SOIL.

SILTATION FENCE DETAIL
SCALE: N.T.S.

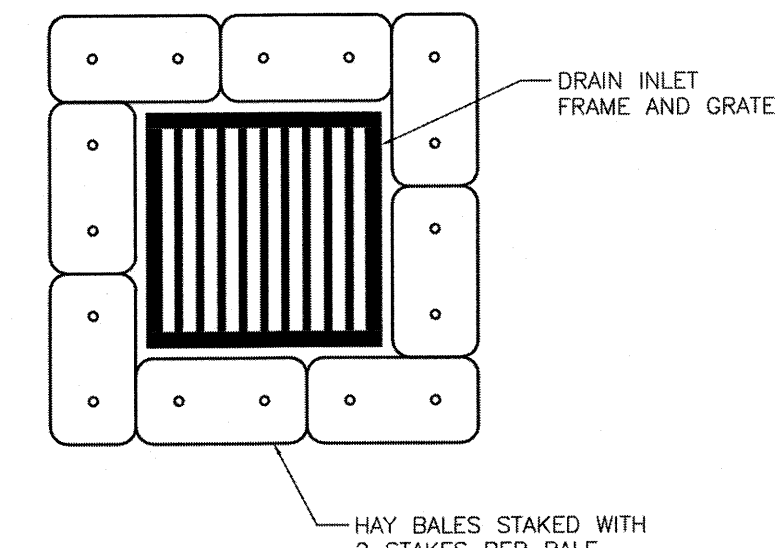


NOTES:

- NOTES:**
1. INSTALL SILT BAG IN ACCORDANCE WITH MANUFACTURES INSTRUCTIONS.
 2. WHEN EXPANSION RESTRAINT CORD IS NO LONGER VISIBLE, THE SILT BAG IS FULL AND SHOULD BE EMPTIED.
 3. REMOVE SILT BAG PER MANUFACTURES INSTRUCTIONS.

TYPICAL FILTER BAG DETAIL
SCALE: N.T.S.

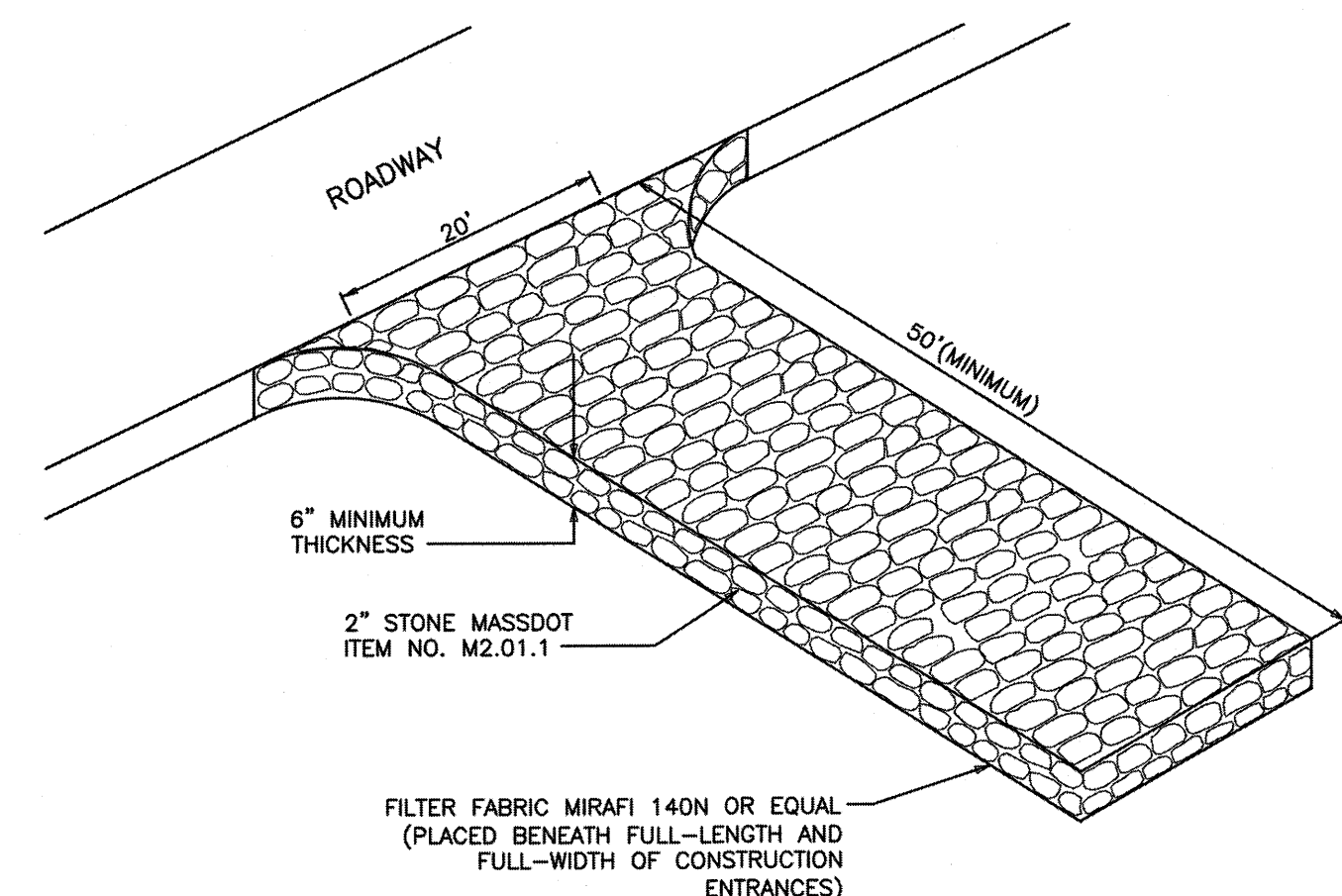
NOTE:
THIS DETAIL IS TO BE USED
WHEN PARKING AREAS ARE AT
SUBGRADE ELEVATION.



NOTES:

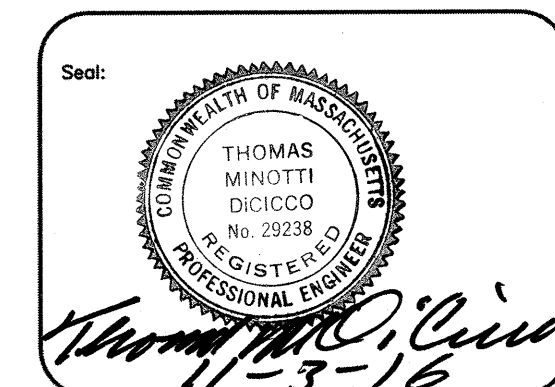
- NOTES:**
1. BALES SHALL BE PLACED IN A ROW WITH THE ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
 2. BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR RE-BARS DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
 3. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

TYPICAL HAYBALE FILTER DETAIL
SCALE: N.T.S.



PERSPECTIVE

VEHICLE TRACKING PAD
SCALE: N.T.S.



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Drawn by:	MCR
Checked by:	TMD
Scale:	N.T.S.
Date:	05/04/2016

Prepared for:

**PLAZA REALTY
DEVELOPMENT TRUST**

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**RJO'CONNELL
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Project Name:
MARKETPLACE SHOPS
NEWBURYPORT, MA

Drawing Name:
EROSION CONTROL
DETAILS

Drawing No.: **C-5**

Project No.: 15099

1. STORMTECH SC-310 & SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS.
 - STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

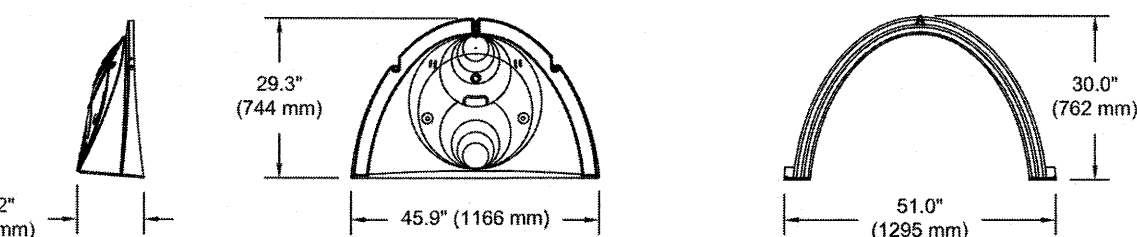
1. STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER TIRE LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE DETERMINED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT

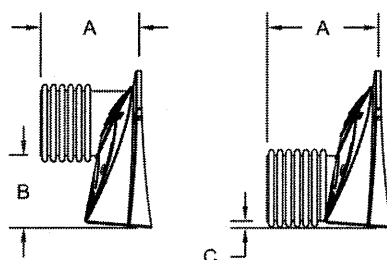


1. CHAMBERS SHALL BE STORMTECH SC-740, SC-310, OR APPROVED EQUIVAL.
2. CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS.
3. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
4. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET. THE 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
5. CHAMBERS SHALL MEET ASTM F2922 (POLYETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
6. CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOADS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
7. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. THE CHAMBER MANUFACTURER SHALL SUBMIT THE FOLLOWING UPON REQUEST TO THE SITE DESIGN ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
 - a. A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY AASHTO FOR THERMOPLASTIC PIPE.
 - b. A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET. THE 50-YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2418 OR ASTM F2922 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG TERM PERFORMANCE.
 - c. STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.
8. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.



NOMINAL CHAMBER SPECIFICATIONS		
SIZE (W X H X INSTALLED LENGTH)	51.0" X 30.0" X 85.4"	(1295 mm X 762 mm X 2169 mm)
CHAMBER STORAGE	45.9 CUBIC FEET	(1.30 m³)
MINIMUM INSTALLED STORAGE*	74.9 CUBIC FEET	(2.12 m³)
WEIGHT	75.0 lbs.	(33.6 kg)

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS

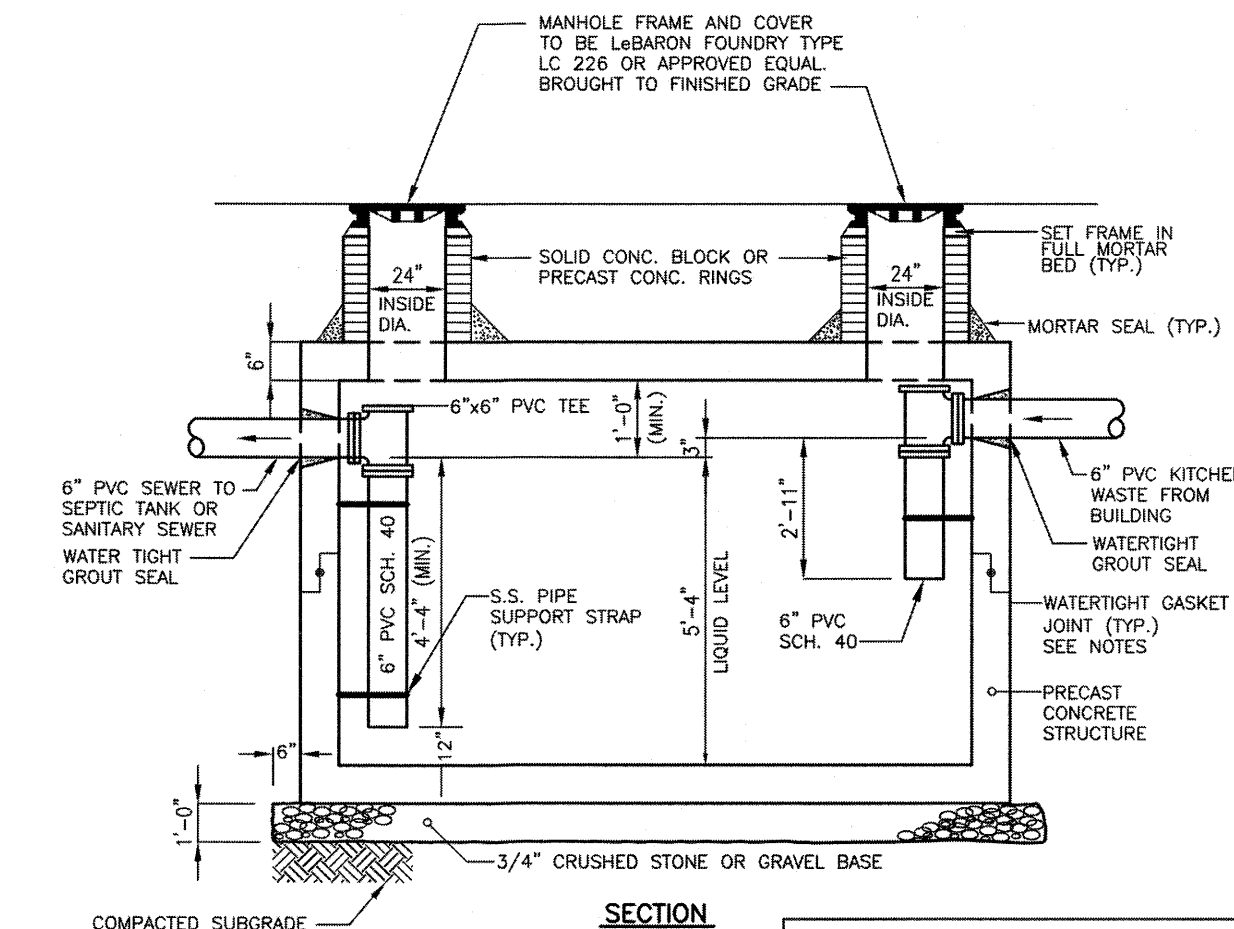
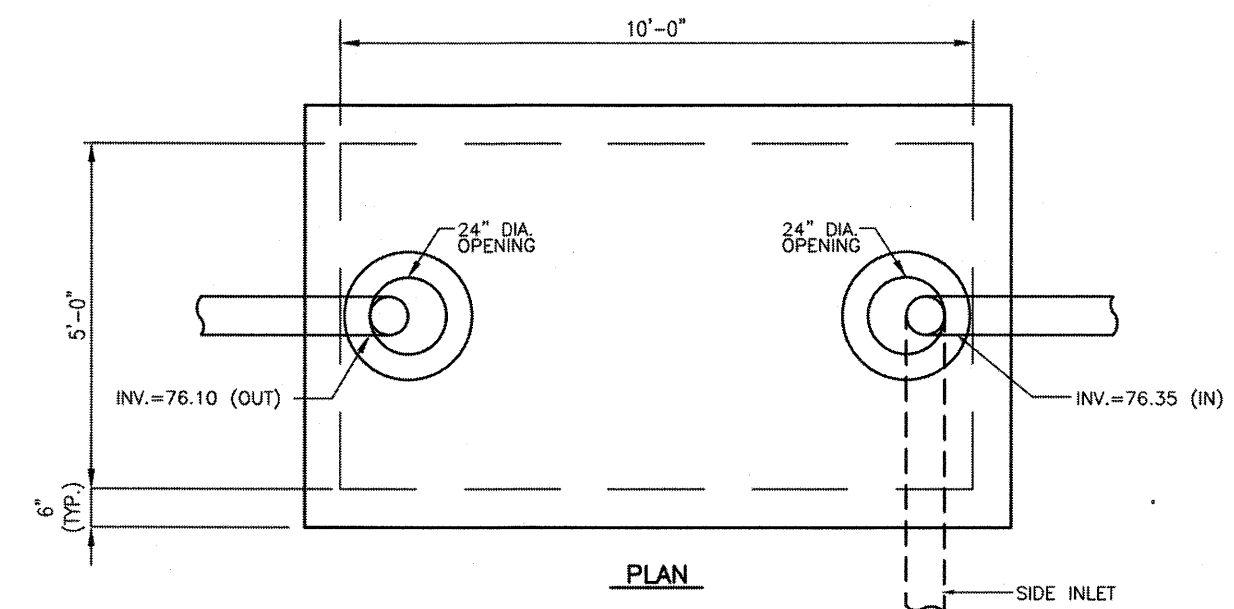


STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"		STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"	
PART #	STUB	A	B
SC740EPE06T	6" (150 mm)	10.8" (277 mm)	18.5" (470 mm)
SC740EPE06B			0.5" (13 mm)
SC740EPE08T	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)
SC740EPE08B			0.6" (15 mm)
SC740EPE10T	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)
SC740EPE10B			0.7" (18 mm)
SC740EPE12T	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)
SC740EPE12B			1.2" (30 mm)
SC740EPE15T	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)
SC740EPE15B			1.3" (33 mm)
SC740EPE18T	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)
SC740EPE18B			1.6" (41 mm)
SC740EPE24B*	24" (600 mm)	18.5" (470 mm)	0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740EPE24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC740EPE24B THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL



NOTES:

- STRUCTURE TO BE MODEL STX10-2 - MANUFACTURED BY ROTONDY & SON, INC. APPROVED ELEVATION
- CONCRETE MINIMUM STRENGTH: 5000 PSI AT 28 DAYS.
- SLOPE REINFORCED CONCRETE - 1" MIN. COVER
- DESIGN DRAINAGE: ASHITO H2520-24 INCLUDING CONSIDERATION FOR CONTRAINTS
- MINIMUM CAPACITY: 2000 GALLONS AT LIQUID LEVEL
- MINIMUM 12" MIN. COVER WHEN USING BUTYL RUBBER OR EQUIVALENT.
- REMOVE CONCRETE COVER WHEN USING RISERS WITH MH COVERS
- VENT PER PLUMBING CODE

TYPICAL 2000 GAL. GREASE TRAP

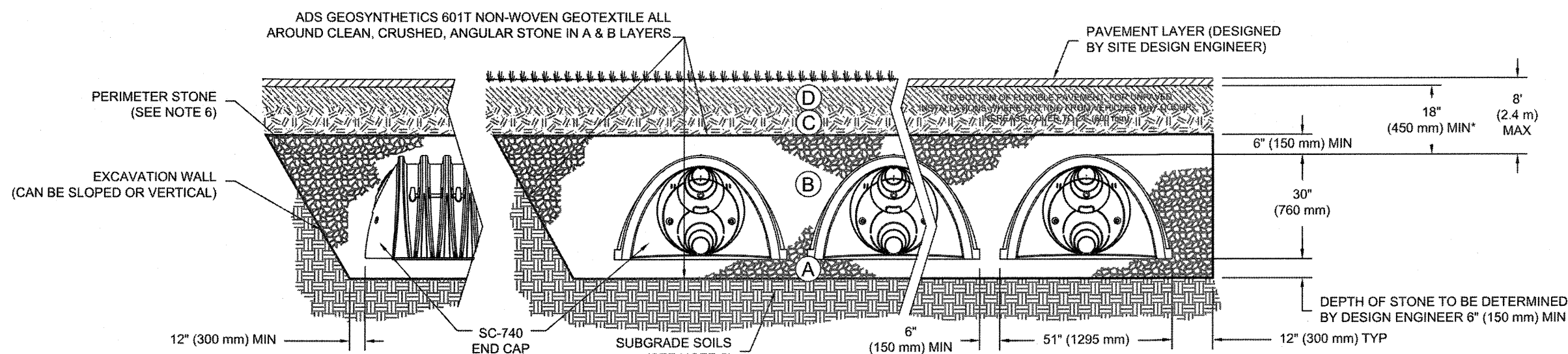
SCALE: N.T.S.



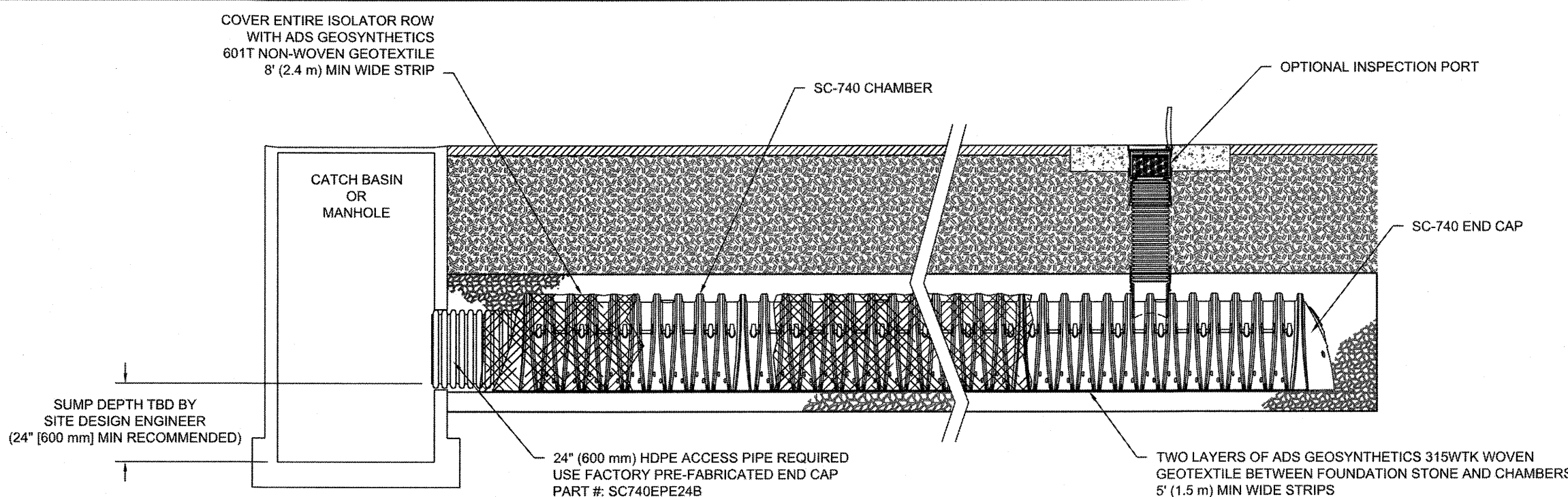
	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'C' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M45 ¹ A-1, A-2, A-3 OR AASHTO M31 ³ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 8, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 LBS (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 LBS (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH (20-50 mm)	AASHTO M31 ³ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH (20-50 mm)	AASHTO M31 ³ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

PLEASE NOTE:

1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR, NO. 4 (AASHTO M43) STONE"
2. STORMTRENCH COMPACTION REQUIREMENTS ARE MET FOR "A" LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) LIFTS USING TWO FULL COVERSAGES WITH A VIBRATORY COMPACTOR.
3. STORMTRENCH COMPACTION REQUIREMENTS ARE NOT MET FOR "B" LOCATION MATERIALS. THE STONE MUST BE DESIGNED AND CONDITIONS, A LAYER (MAX) MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTRENCH FOR COMPACTION REQUIREMENTS.



1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL, STORMWATER COLLECTION CHAMBERS" OR ASTM F2992 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTRENCH CHAMBERS FOR THIS PROJECT.
5. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR EXTENSION OF EXPECTED SOIL MOISTURE CONDITIONS.
6. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
7. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT

- A. INSPECTION PORTS (IF PRESENT)
 - A.1. REMOVE/OPEN LID ON NYLON/AST INLINE DRAIN
 - A.2. REMOVE AND CLEAN FLASHLIGHT FORM, IF INSTALLED
 - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
 - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
 - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
 - B.3. IF MIRRORS OR POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 - i) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

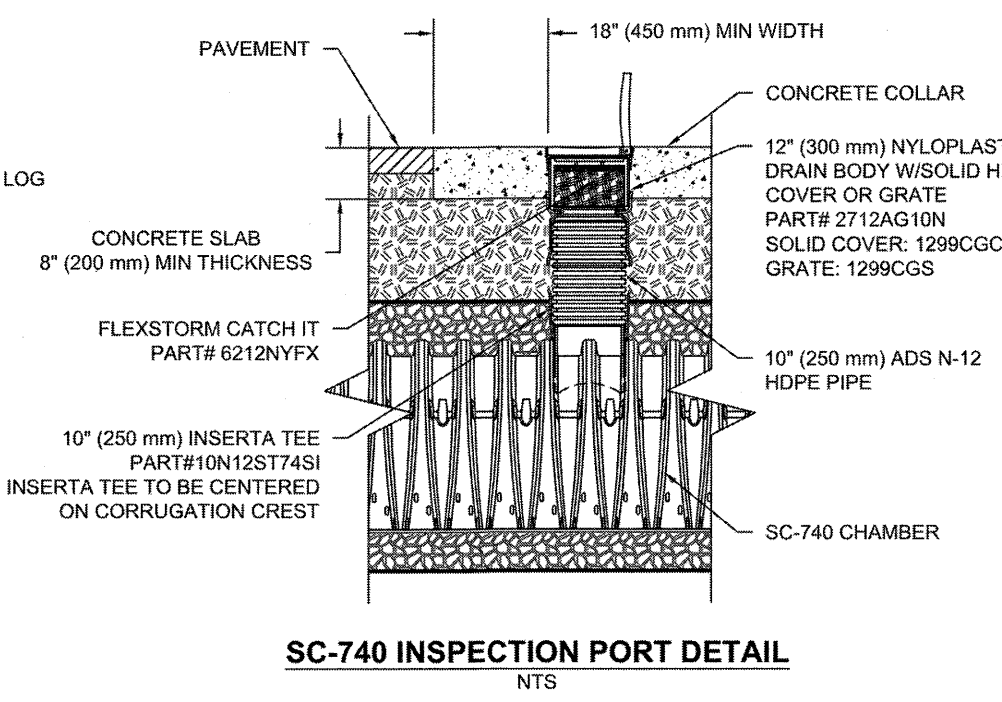
STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS

- A. FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SLUMP AS REQUIRED

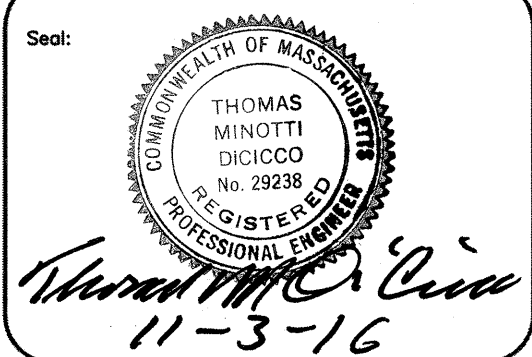
STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



SHE PLAN APPROVAL		11/03/2016	No.	Revision	Date
No.	Revision	Date	No.	Revision	Date
1					



Designed by:	TMD
Drawn by:	MCR
Checked by:	TMD
Scale:	N.T.S.
Date:	05/04/2016

Prepared for:

**PLAZA REALTY
DEVELOPMENT TRUST**

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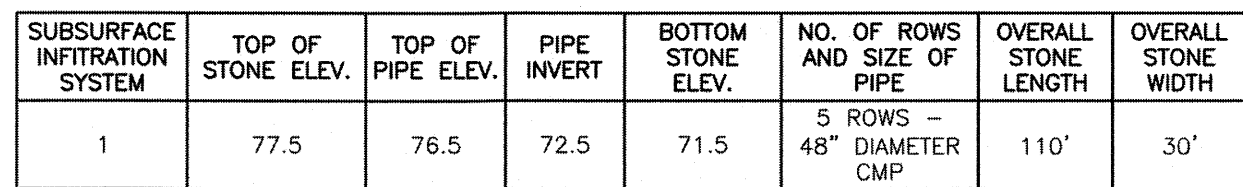
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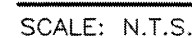
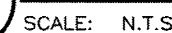
Project Name: **MARKETPLACE SHOPS
NEWBURYPORT, MA**

Drawing Name: **DRAINAGE DETAILS**

rawing No.:
C-6
Project No.: 15099



SCALE: N.T.S.



TYPICAL SANITARY SEWER CLEANOUT DETAIL
SCALE: N.T.S.

PIPE CONNECTIONS TO SEWER MANHOLE DETAIL
SCALE: N.T.S.

TYPICAL DRAINAGE TRENCH DETAIL
SCALE: N.T.S.

NOTES:

1. MATERIALS, METHOD OF INSTALLATION SHALL CONFORM TO THE TOWN'S SPECIFICATIONS

TYPICAL BRICK INVERT SECTION FOR SEWER & DRAIN MANHOLE
SCALE: N.T.S.

NOTE:
WHERE MORE STRINGENT, CONTRACTOR
SHALL COMPLY WITH LOCAL REQUIREMENTS.

NOTE:

1. METHODS OF INSTALLATION MUST MEET OR EXCEED THE TOWN'S SEWER DEPARTMENT AND PIPE MANUFACTURER'S SPECIFICATION'S.
2. PROVIDE AT LEAST ONE IMPERVIOUS DAM IN GRAVEL BEDDING BETWEEN EACH MANHOLE OR EVERY 300' WHICHEVER IS LESS.
3. ALL BUILDING SEWERS AND SEWER LINES SHALL HAVE A METALLIC TRACE TAPE IN THE TRENCH ONE FOOT BELOW FINISHED GRADE.

TYPICAL SEWER TRENCH DETAIL
SCALE: N.T.S.

NOTES:

- MANHOLES AND ALL COMPONENT PARTS SHALL BE OF SIZE, STRENGTH AND CONFIGURATION AS SHOWN EXCEPT THAT TOP SLABS MAY BE SUBSTITUTED FOR ECCENTRIC CONE SECTIONS. MANHOLES SHALL BE OF THE FORM OF A CONCRETE PRECAST CONCRETE BASE RISER SECTIONS PER ASTM C478 OR MONOLITHICALLY CAST-IN-PLACE REINFORCED CONCRETE. APPROVED MANHOLE STRUCTURE SHALL BE DESIGNED AND CONSTRUCTED TO MEET OR EXCEED H+20 LOADING AND PREVENT LEAKAGE IN EXCESS OF ONE (1) GALLON PER DAY PER VERTICAL FOOT OF MANHOLE.
- MANHOLE STEPS TO BE STEEL REINFORCED, CO-POLYMER, POLY-PROPYLENE PLASTIC CONFORMING TO ASTM D4101. STEEL REINFORCING SHALL BE A DEFORMED 1/2" ROD, GRADE 60, ASTM A615. ALIGN STEPS WITH MANHOLE OPENING.

 PRECAST CONC. SEWER MANHOLE (SMH) WITH BRICK INVERT
SCALE: N.T.S.

CATCH BASIN WITH HOOD
SCALE: N.T.S.

PRECAST CONC. DRAIN MANHOLE (DMH)
SCALE: N.T.S.

MINIMUM THRUST BLOCKING BEARING AREAS IN SQUARE FEET						
PIPE DIA.	TEES/CAP/HYD	90° BEND	45° BEND	22.5° BEND	11.25° BEND	
4"	2	2	2	2	1	
6"	4	5	3	2	1	
8"	6	8	5	2	1	
10"	9	13	7	3	2	
12"	13	18	10	4	3	
14"	18	25	14	6	4	
16"	23	32	18	8	6	

TYPICAL THRUST BLOCK DETAIL
SCALE: N.T.S.

NOTES:

1. HORIZONTAL JOINTS BETWEEN PRECAST CONCRETE MANHOLE SECTIONS SHALL BE OF A TYPE APPROVED BY THE ENGINEER. JOINTS SHALL BE MADE WATERTIGHT WITH A BUTYL RUBBER O-RING PER ASTM C443 OR A DOUBLE ROW OF BUTYL RESIN JOINT SEALANT IN ROPE FORM CONFORMING TO AASHTO 198 B/ASTM C990.
2. ALL GASKETS AND SEALANTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY.
4. MATERIALS AND METHOD OF INSTALLATION SHALL CONFORM TO THE TOWN OF SHREWSBURY'S SPECIFICATIONS.

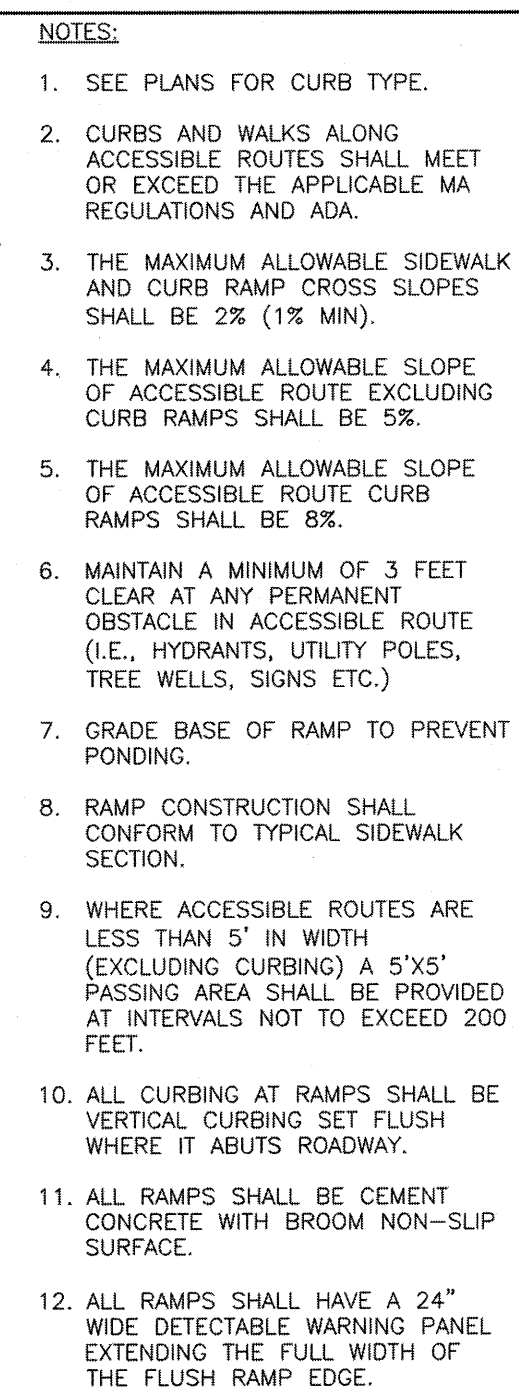
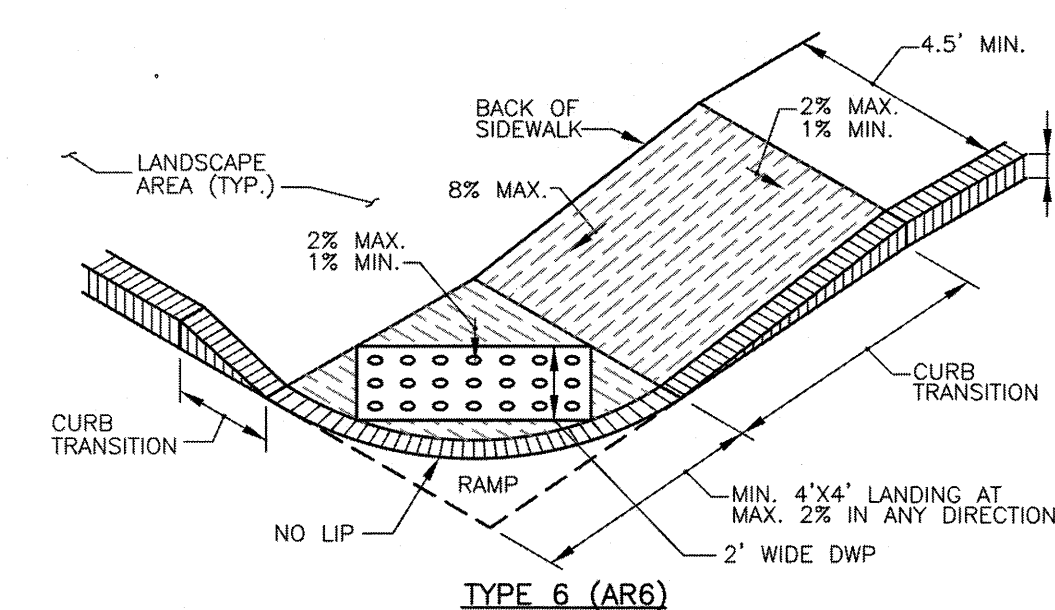
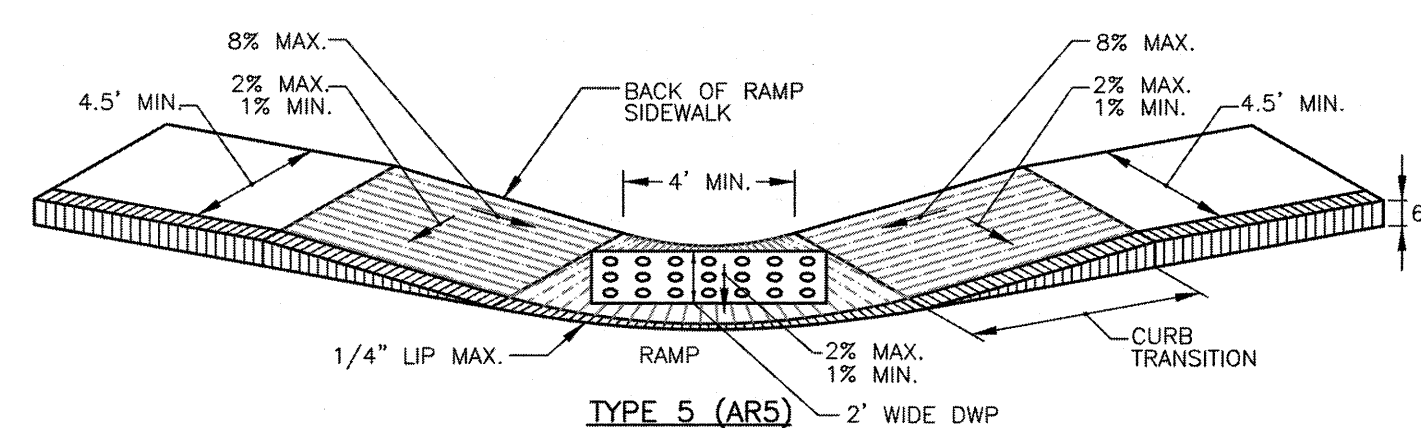
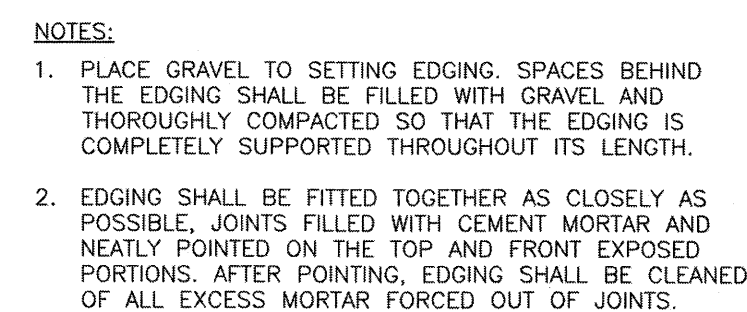
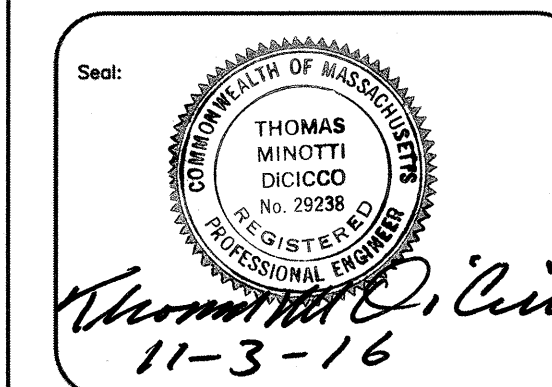
DETAIL 'A' SEWER MANHOLE JOINTING METHODS
SCALE: N.T.S.

NOTE:

1. HYDRANT MATERIALS AND INSTALLATION SHALL MEET OR EXCEED THE TOWN'S WATER AND/OR FIRE DEPARTMENT'S SPECIFICATIONS.
2. HYDRANT TO BE PAINTED RED WITH SILVER CAPS AND BONNETS.
3. HYDRANTS SHALL BE INSTALLED NOT LESS THAN 34 INCHES FROM GROUND AND NOT MORE THAN 40 INCHES HIGH.

TYPICAL FIRE HYDRANT CONNECTION DETAIL
SCALE: N.T.S.

PRECAST CONCRETE SEWER MANHOLE (SMH) CASTING DETAIL
SCALE: N.T.S.

[illegible]

Designed by:	TMD
Drawn by:	MCR
Checked by:	TMD
Scale:	N.T.S.
Date:	05/04/2016

Prepared for:

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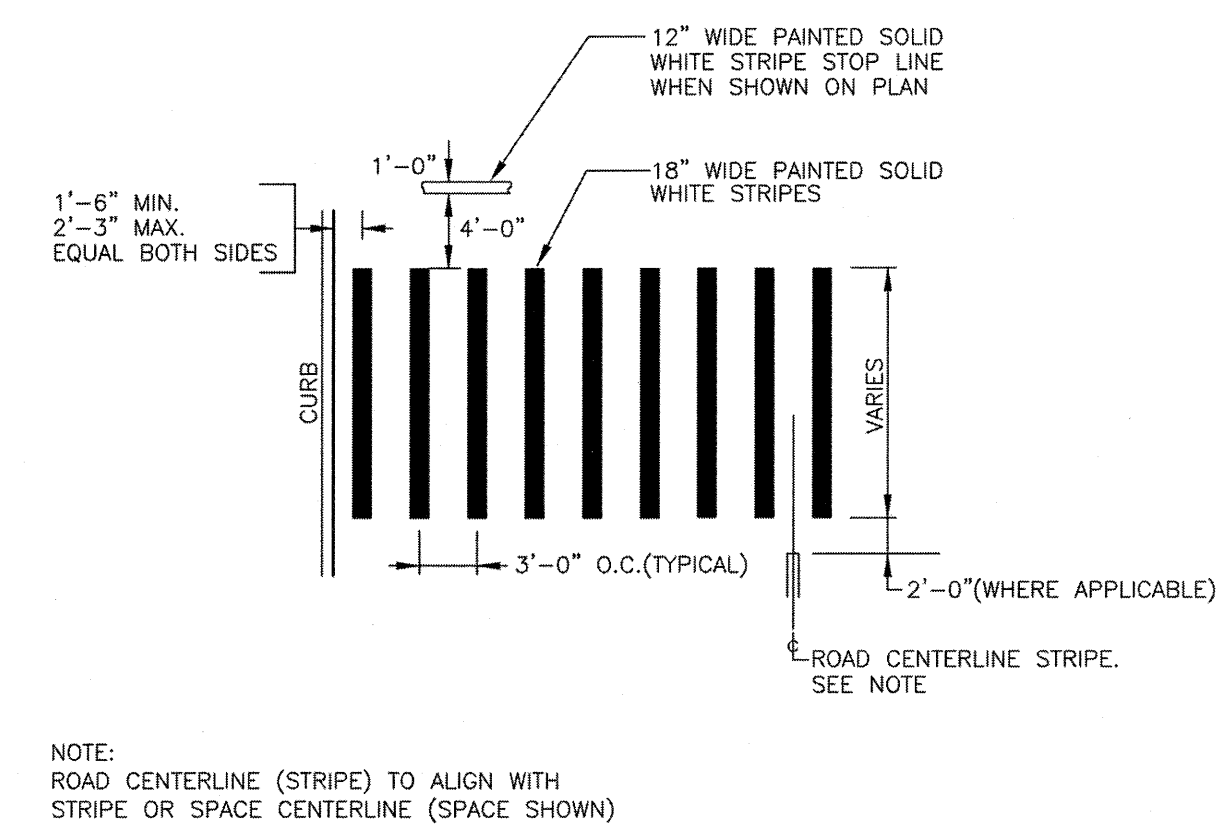
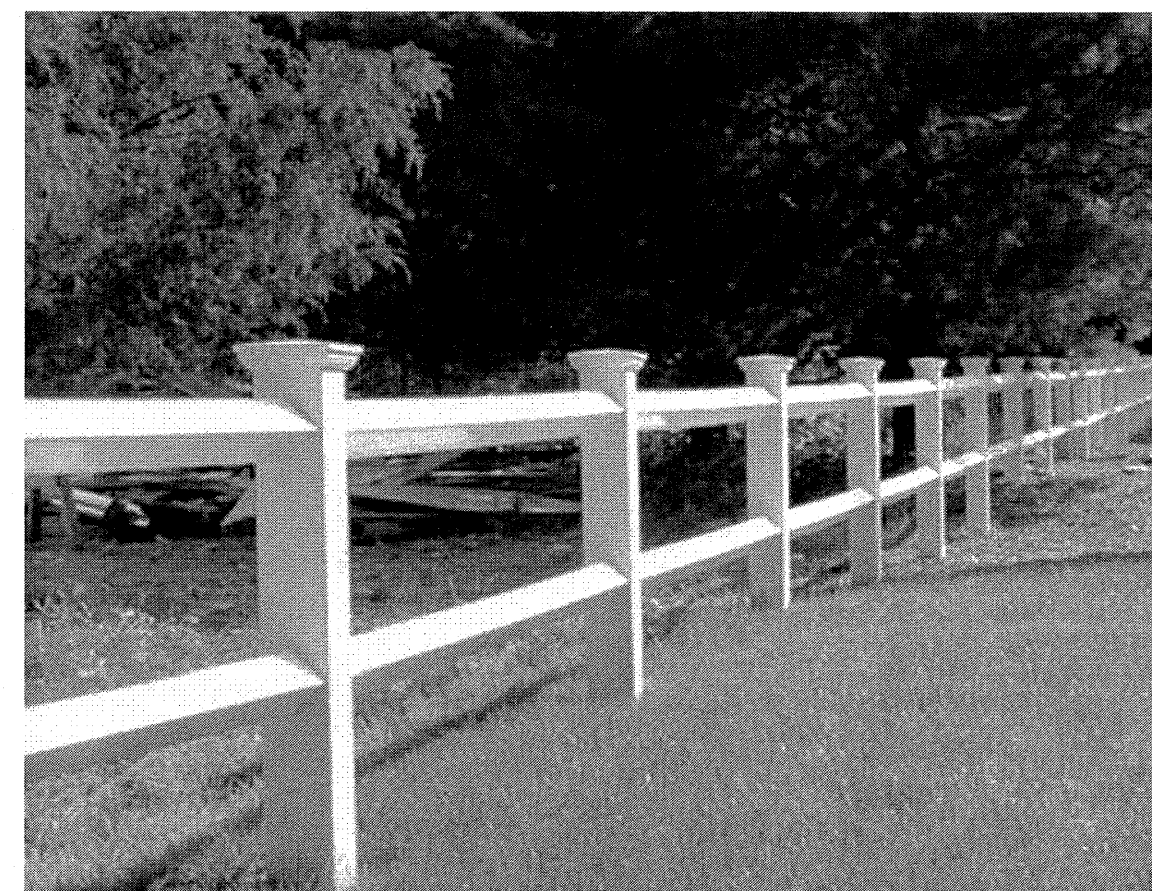
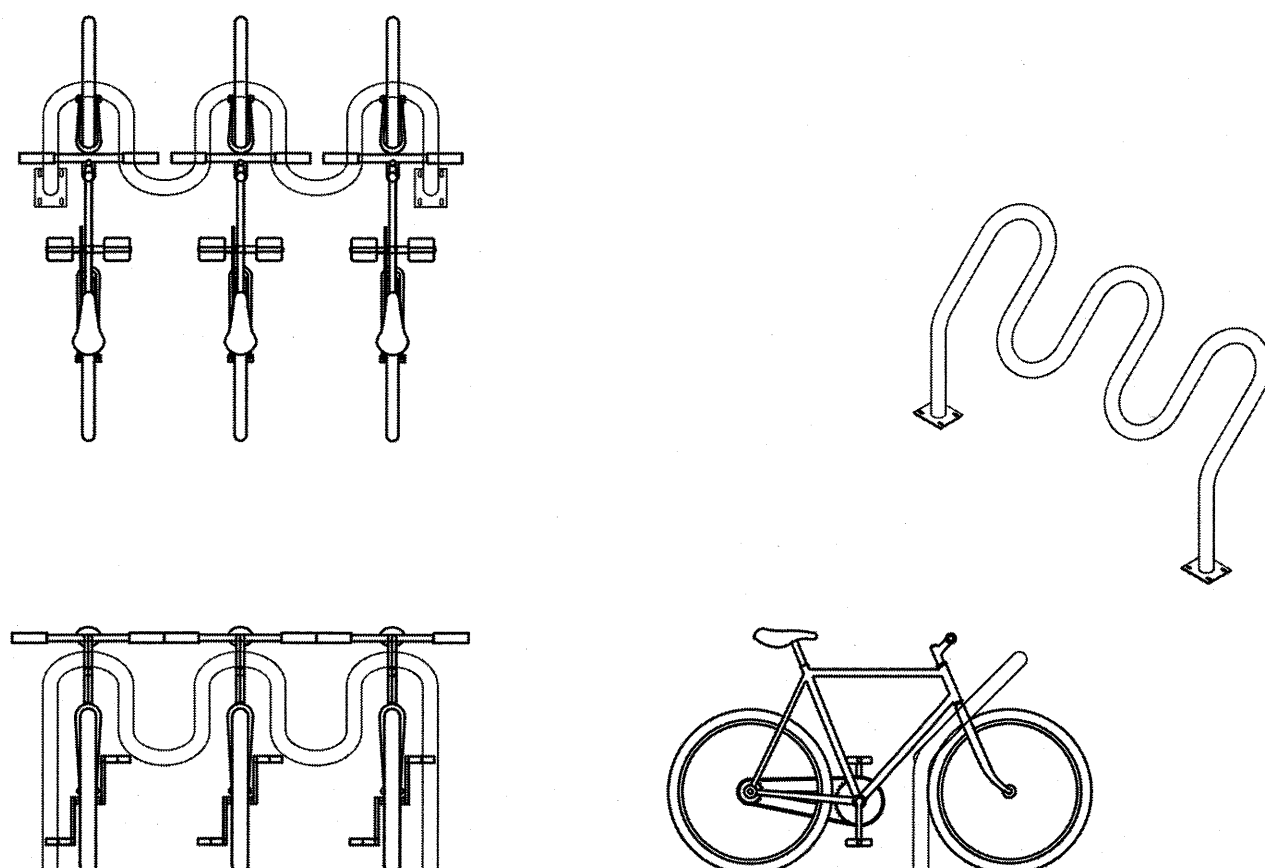
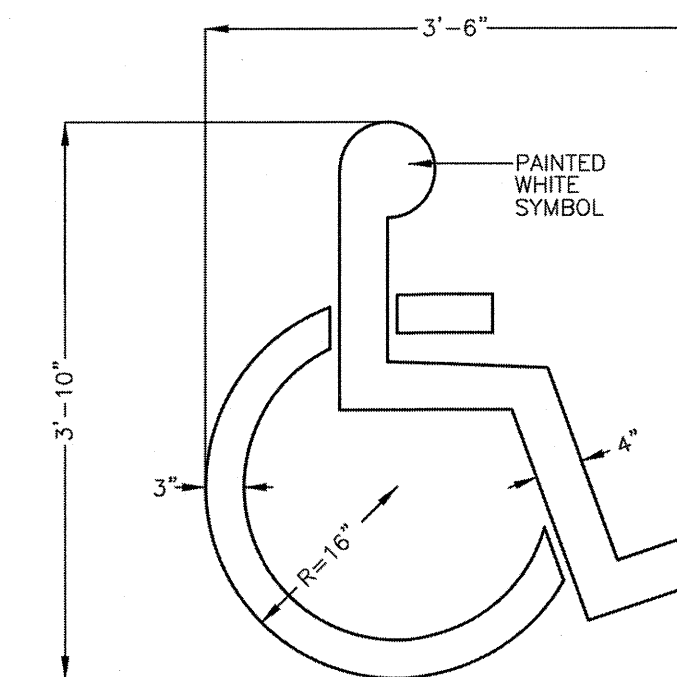
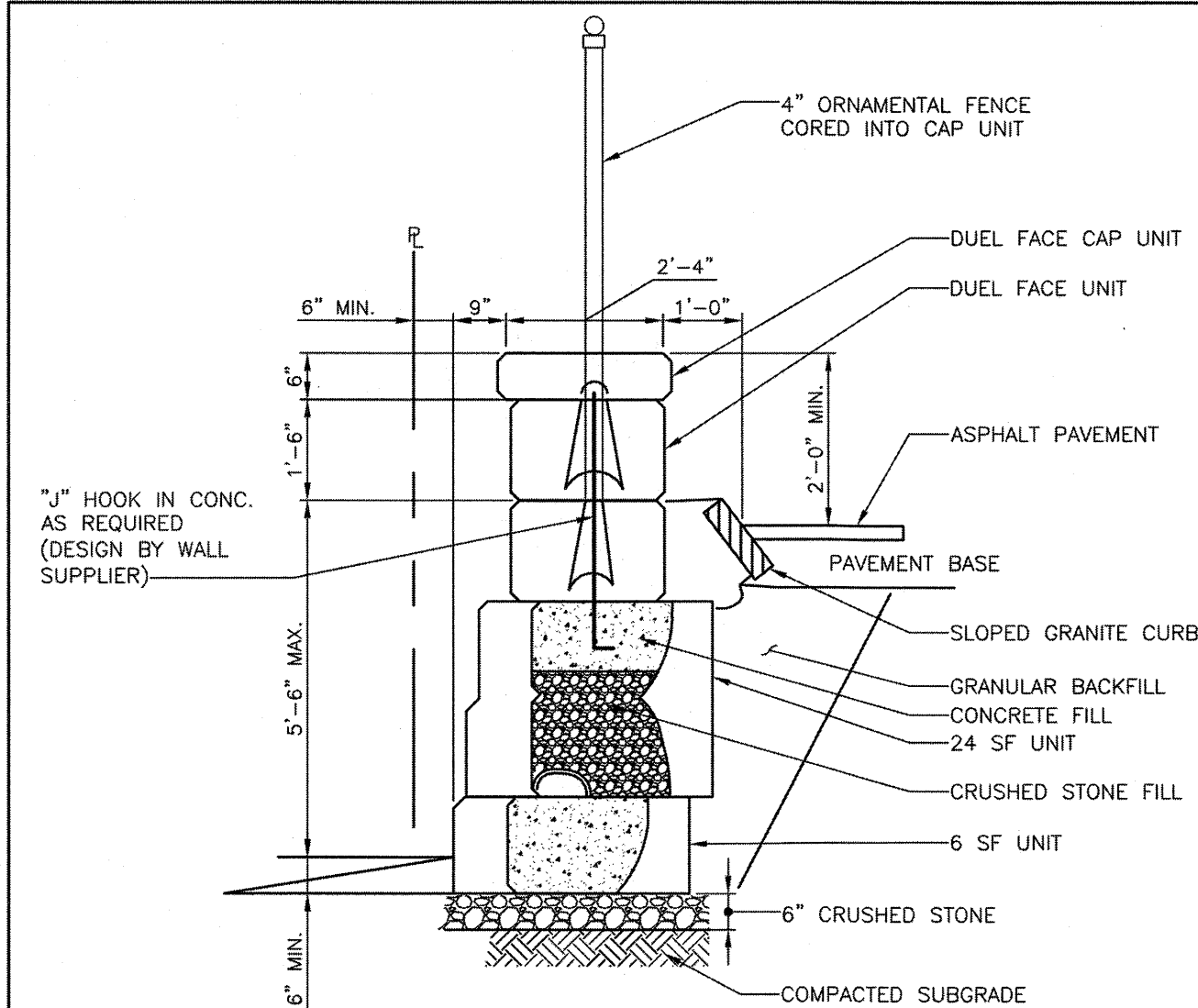
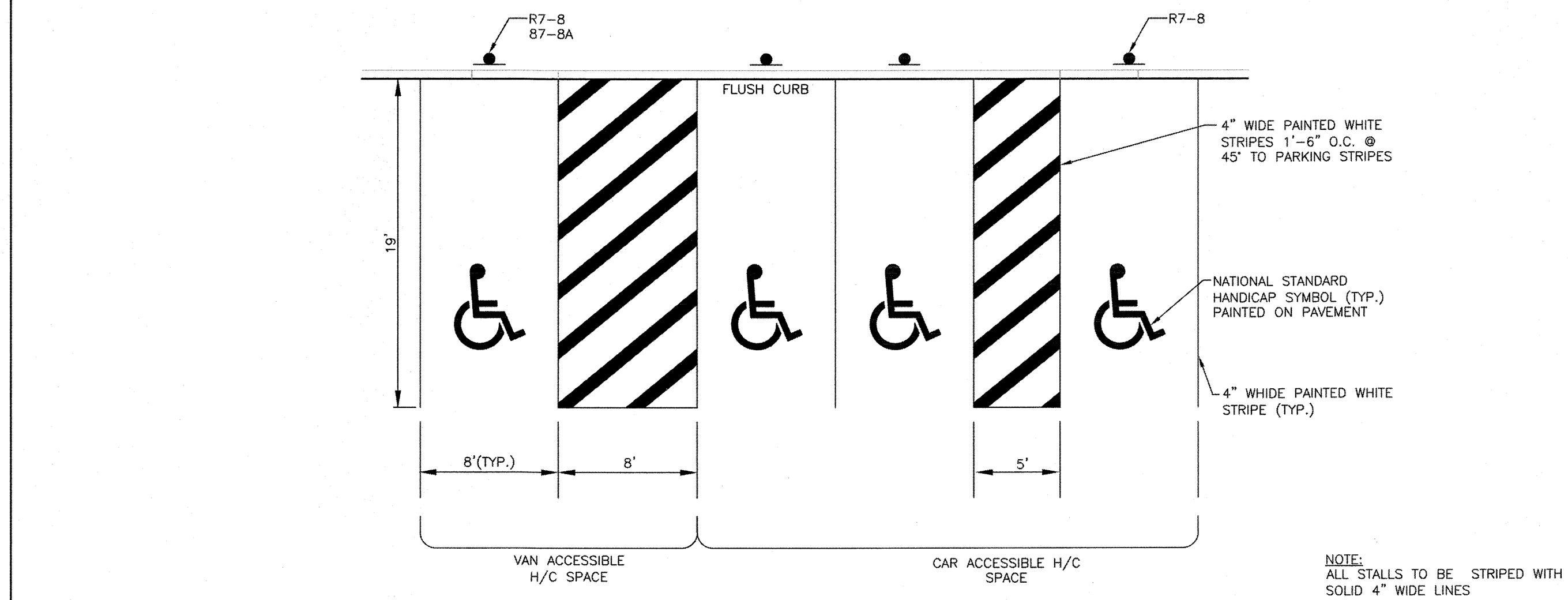
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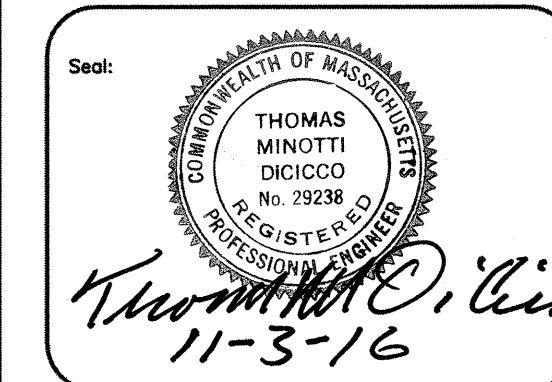
Project Name:
**MARKETPLACE SHOPS
NEWBURYPORT, MA**

Drawing Name:
**PARKING AND
TRAFFIC CONTROL
DETAILS - 1**

Drawing No.: **C-9**
Project No.: 15099



	SITE PLAN APPROVAL	11/03/2016	Revised	No.	Date:
				Project No.	Date:



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Drawn by:	MCR
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Scale:	N.T.S.
Date:	05/04/2016

Prepared for:

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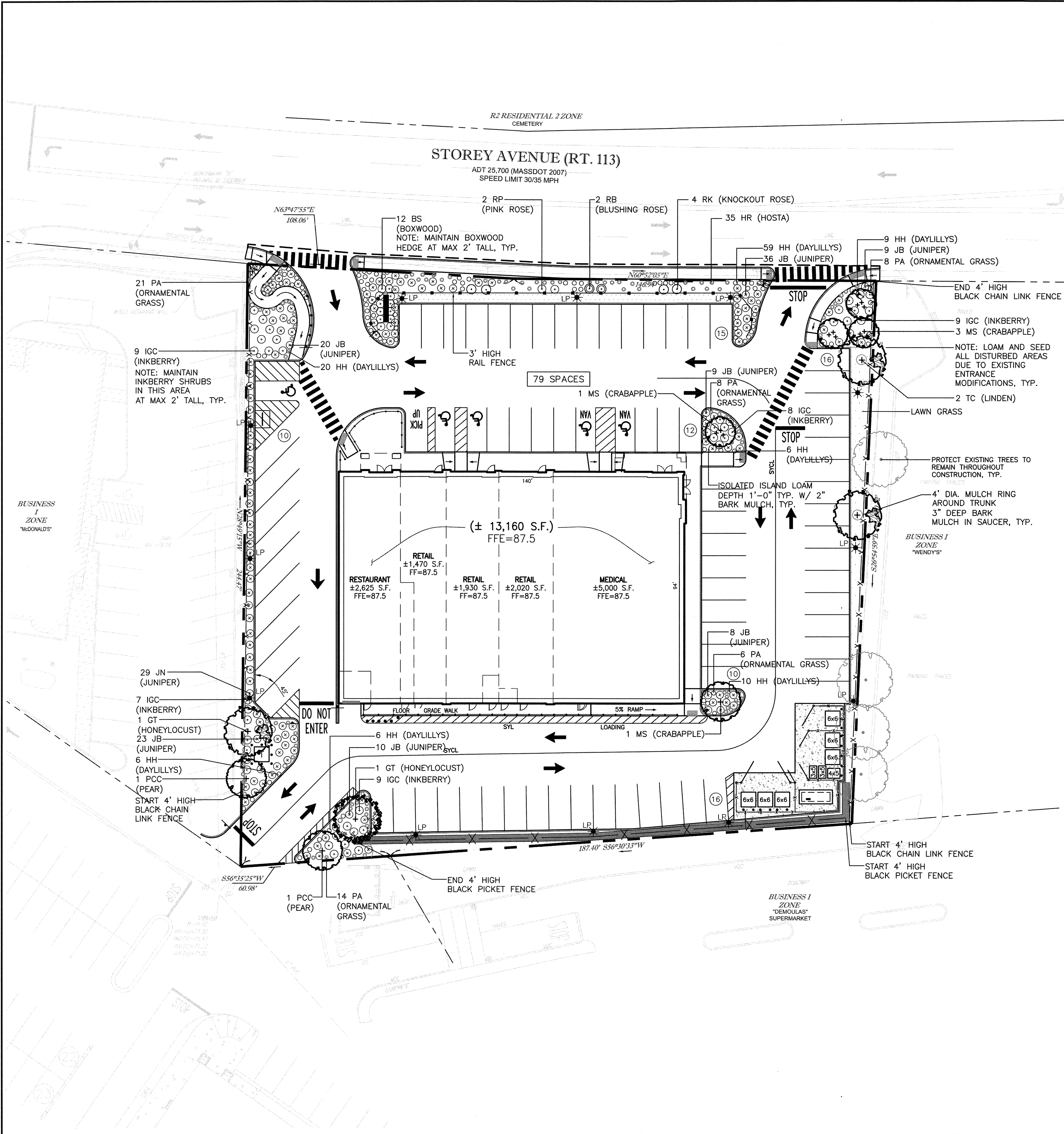
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Project Name: **MARKETPLACE SHOPS
NEWBURYPORT, MA**

Drawing Name: **PARKING AND
TRAFFIC CONTROL
DETAILS - 2**

Drawing No.:
C-10
Project No.: 15099



PLANT MATERIAL LIST — MARKETPLACE SHOPS; STOREY AVE. NEWBURYPORT, MA.						
SYM.	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
DECIDUOUS AND ORNAMENTAL TREES						
PCC	2	PIRUS CALLERYANA 'CHANTICLEER'	CHANTICLEER PEAR	2 - 2 1/2"	B&B	6' HIGH BRANCHING
TC	3	TILIA CORDATA	LITTLELEAF LINDEN	2 - 2 1/2"	B&B	6' HIGH BRANCHING
MS	5	MALUS SARSENTII	FLOWERING CRABAPPLE	2 - 2 1/2"	B&B	SPECIMEN-STRAIGHT SINGLE STEM
GT	1	GLEDTISIA TRIACANTHOS 'SKYLINE'	SKYLINE HONEYLOCUST	2 - 2 1/2"	B&B	6' HIGH BRANCHING
SHRUBS						
JB	115	JUNIPERUS H. 'BAR HARBOR'	BAR HARBOR JUNIPER	18-24"	CAN	
JN	29	JUNIPERUS PROCEMBENS 'NANA'	PROCEMBENS JUNIPER	18-24"	CAN	
BS	12	BUXUS SEMPERVIRENS 'NEWPORT BLUE'	NEWPORT BLUE BOXWOOD	2 - 2 1/2"	CAN	CLIP TO HEDGE
IGC	42	ILEX G. 'COMPACTA'	DWARF INKBERRY	#3	CAN	
RK	4	ROSA 'KNOCKOUT'	KNOCKOUT ROSE	#3	CAN	
RB	2	ROSA 'BLUSHING'	BLUSHING ROSE	#3	CAN	
RP	2	ROSA 'PINK'	PINK ROSE	#3	CAN	
PERENNIALS AND ORNAMENTAL GRASSES						
HH	116	HEMEROCALLIS 'HAPPY RETURNS'	HAPPY RETURNS DAYLILIES	1 GAL	GAL	YELLOW
HR	35	HOSTA 'ROYAL STANDARD'	ROYAL STANDARD HOSTA	1 GAL	CAN	GREEN
PA	57	PENNESETUM ALOPECUROIDES 'HADELIN'	DWARF FOUNTAIN GRASS	#1	POT	GREEN

GRAPHIC LEGEND

- PROTECT EXISTING TREES TO REMAIN, TYP.
- DECIDUOUS SHADE TREES (DRIP OR MIST HEAD IRRIGATION)
- ORNAMENTAL & FLOWERING TREES (DRIP OR MIST HEAD IRRIGATION)
- EVERGREEN SHRUBS (DRIP OR MIST HEAD IRRIGATION)
- DECIDUOUS SHRUBS (DRIP OR MIST HEAD IRRIGATION)
- PERENNIALS / ORNAMENTAL GRASSES (DRIP OR MIST HEAD IRRIGATION)
- SEEDED LAWN (SPRAY-HEAD IRRIGATION)
- 3' HIGH SPLIT RAIL FENCE
- 4' HIGH BLACK PICKET FENCE
- 4' HIGH BLACK CHAIN LINK FENCE

LANDSCAPE NOTES:

LOAM DEPTHS SHALL BE AS FOLLOWS:

- A. LAWN AREAS - 6" ROLLED THICKNESS
- B. PLANT BEDS - 1'-0" LOAM DEPTH IN THE PLANTED AREA WITH 2" MULCH.
- C. ISOLATED PLANTED ISLANDS - 1'-0" LOAM DEPTH

LAWN GRASS
(VALLEY GREEN SEED, LTD. WILMINGTON, MA.)
LANDSCAPE/UTILITY MIXTURE FOR SUN/SHADE:
ENCHANTED PERENNIAL RYEGRASS
CREEPING RED FESCUE
GOLDRUSH KENTUCKY BLUEGRASS

- GENERAL NOTES:**
- CONTRACTOR SHALL MAKE A SITE VISIT PRIOR TO BIDDING TO EXAMINE EXISTING CONDITIONS FOR THEMSELVES. CONTRACTOR TO FAMILIARIZE THEMSELVES W/ DESIGN DOCUMENTS NOTES & DETAILS AND THE MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, CURRENT EDITION.
 - CONTRACTOR SHALL NOTIFY COORDINATE WITH THE CITY OF NEWBURYPORT (48) HOURS (MIN.) PRIOR TO PLANT MATERIAL INSTALLATION.
 - CONTRACTOR SHALL COORDINATE WITH THE CITY OF NEWBURYPORT.
 - PRIOR TO THE PRE-CONSTRUCTION MEETING THE CONTRACTOR SHALL CONTACT DIG SAFE @ 1-888-344-7233 TO HAVE THE EXISTING UTILITIES MARKED.
 - All contractors shall inspect site prior to bidding to verify existing conditions for themselves.
 - The Contractor shall supply all plant material in quantities sufficient to complete the planting shown on the drawings. See specification.
 - All plant material shall conform to the guidelines established by "The American Standard for Nursery Stock", published by the American Association of Nurserymen, Inc. ANSI Z60.1-Current Edition.
 - All plants to be balled in burlap or container grown. No plastic burlap. No container grown trees.
 - All plants to be approved by the Landscape Architect.
 - Stake location of all proposed plant material for approval of Landscape Architect prior to commencement of planting.
 - The landscape contractor shall guarantee all plant materials for one (1) full year from date of acceptance.
 - Heal all construction scars with naturalized grass, lawn or mulch as indicated by drawings and/or as directed by Landscape Architect.
 - "Dry Roots" shall be added to all new tree planting pits. All new loam shall be tested and amended as stated in the loam report. Provided by loam supplier.
 - Landscape Contractor shall submit a watering schedule program for the (60) day maintenance period for review by the Landscape Architect & to Owner for all proposed plant material.
 - Protect existing plant material within construction limits. Provide watering program for all proposed plant material during construction.

- GENERAL IRRIGATION NOTES:**
- The design/build irrigation sub-contractor shall provide a complete system for the irrigation areas shown on the plan, which includes new and existing transplanted plant materials. Shop drawings shall be provided at a suitable scale to illustrate that the designated plant materials will be irrigated by either spray heads, mist heads or drip irrigation tubing.
 - Irrigation to be coordinated with General Contractor to locate the necessary PVC sleeving to complete irrigation program.
 - All lawn areas shall be spray head irrigated. The heads shall be located for head to head coverage with absolutely no over spray onto the pavement.
 - All trees, shrubs and ground cover shall be drip irrigated / irrigated with shrub mist heads.
 - The irrigation layout and all of the components shall conform to the specifications. The specifications call for shop drawings to be submitted for approval, as well as conformance to the materials specified.
 - The Contractor shall be extremely careful during the installation process not to disturb new or existing plant materials. The Contractor is to coordinate his work with other sub-contractors. Sleeving under pavements must be available and in the proper location prior to paving.
 - The Irrigation Contractor shall conform to any local codes or ordinances that may be required to complete the work.
 - This irrigation alternate shall include the cost of connecting to either the building water mains down stream of the back flow preventer of the irrigation well.
 - The irrigation contractor shall test water source for water quality including minerals that may cause staining of concrete and granite pavement and curbs.
 - Irrigation Contractor shall coordinate with the City of Newburyport for sewer abatement meter requirements, model type and locations prior to shop drawing preparation.

11/03/16 Date

SITE PLAN APPROVAL

Revision

No.

Seal:

Designed by: WFF

Drawn by: WFF

Checked by: WJF

Scale: 1"=20'

Date: 05/04/2016

Prepared for:

PLAZA REALTY DEVELOPMENT TRUST

ECHO BRIDGE OFFICE PARK
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NEWTON, MA 02464-1130

Prepared by:

WILLIAM FLEMING ASSOCIATES

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80 MONTVALE AVE
STONEHAM, MA 02180
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Project Name:

**MARKETPLACE SHOPS
NEWBURYPORT, MA**

Drawing Name:

**LANDSCAPE
PLAN**

Drawing No.:

L-1

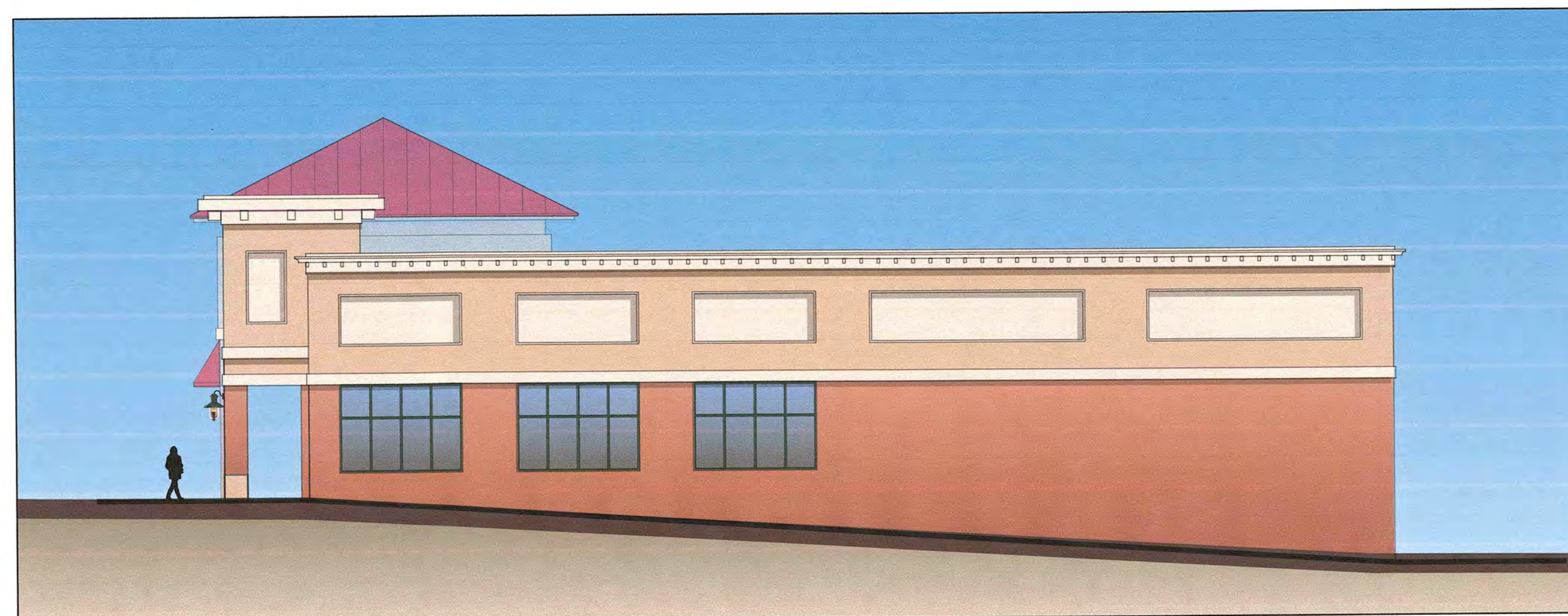
Project No.: 15099



○ FRONT ELEVATION WITH FENCE (COLOR RENDERING)



○ REAR ELEVATIONS (COLOR RENDERING)



○ RIGHT SIDE ELEVATION (COLOR RENDERING)



○ LEFT SIDE ELEVATION (COLOR RENDERING)

