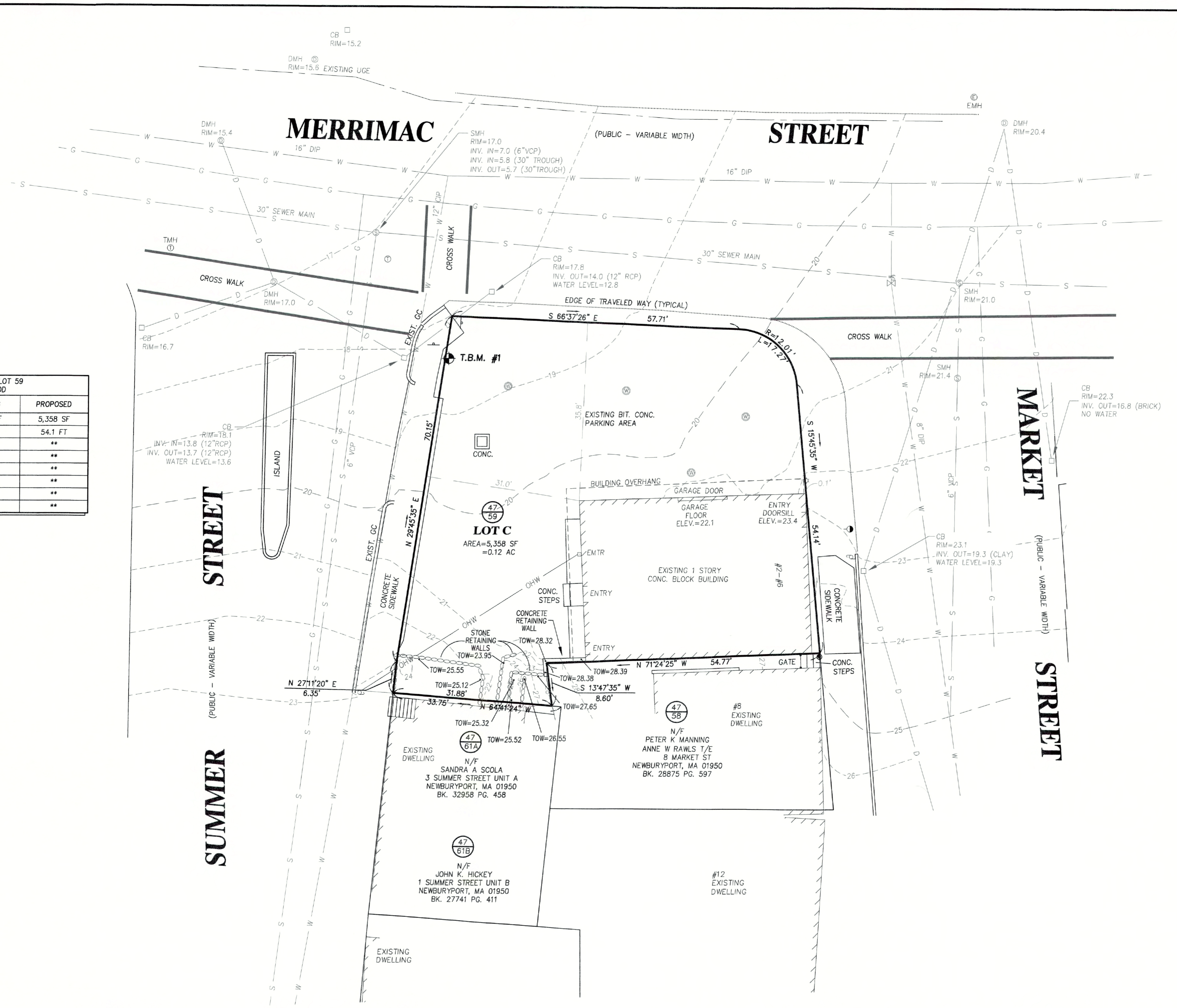


ZONING TABLE
ADDRESS - ASSESSORS MAP 47 LOT 59
ZONING DISTRICT: B-2 DCOD

	REQUIRED	EXISTING	PROPOSED
LOT AREA:	5,000 SF	5,358 SF	5,358 SF
LOT FRONTAGE:	60 FT	54.1 FT	54.1 FT
FRONT SETBACK:	0 FT	0.1 FT	**
SIDE SETBACK:	0 FT	0.0 FT	**
REAR SETBACK:	0 FT	31.0 FT	**
LOT COVERAGE:	100%	27%	**
OPEN SPACE:	N/A	1.4%	**
BLDG HEIGHT:	40 FT	12.9'	**

LEGEND

FND.	FOUND
N/F	NOW/FORMERLY
TOW	TOP OF WALL
EMTR	ELECTRIC METER
⊙	MONITORING WELL
⊙	LIGHT POLE
GC	GRANITE CURB
□ CB	CATCH BASIN
⊙ DMH	DRAIN MANHOLE
⊙ SMH	SEWER MANHOLE
⊙ EMH	ELECTRIC MANHOLE
⊙ TMH	TELEPHONE MANHOLE
○ MH	MANHOLE
⊙	WATER VALVE
BIT. CONC.	BITUMINOUS CONCRETE
—	SIGN
⊙	UTILITY POLE
—	GUY
-20-	EXISTING CONTOUR ELEVATION
⊙	ASSESSORS MAP#
⊙	PARCEL#

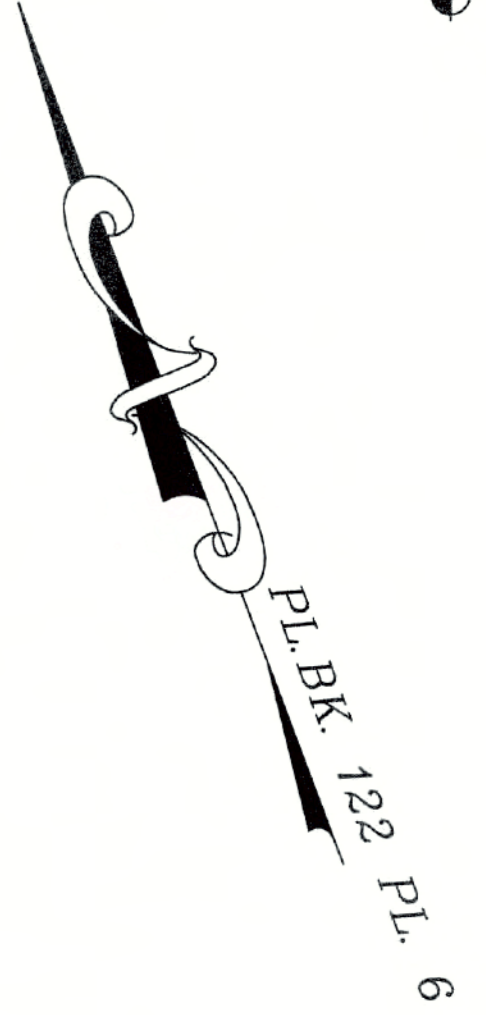


BASIS OF BEARINGS
PLAN BK. 122, PLAN 6

OWNER OF RECORD
STEPHEN J. AND
NANCY C. WHITE, TRUSTEES
2-6 MARKET STREET
NEWBURYPORT, MA
BK. 31262 PG. 553

PLAN REFERENCES
PLAN BK. 122 PLAN 6
PLAN BK. 124 PLAN 64

VERTICAL DATUM
N.A.V.D. 1988
⊙ T.B.M. #1
MAG NAIL
ELEV. = 18.69



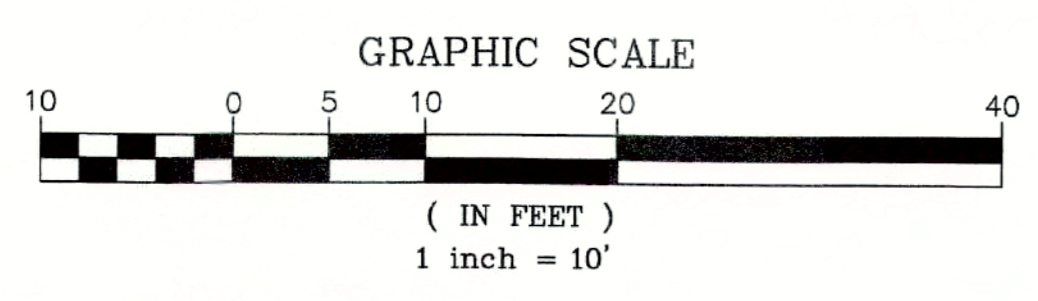
NOTES:

THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT, VISIBLE USES OF THE LAND; HOWEVER, THIS DOES NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.

RECORD UTILITY INFORMATION HAS NOT BEEN OBTAINED FOR LOCUS. VISIBLE SURFACE STRUCTURES HAVE BEEN LOCATED AND ARE SHOWN HEREON HOWEVER, SUBSURFACE UTILITY LINES ARE NOT SHOWN.

THE CERTIFICATIONS SHOWN HEREON ARE NOT INTENDED AS CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT CITY OF NEWBURYPORT ASSESSORS RECORDS.

I CERTIFY: THAT THIS ACTUAL SURVEY WAS MADE ON THE GROUND BETWEEN SEPTEMBER 5 AND DECEMBER 11, 2019, AND THAT THE STRUCTURES AND PHYSICAL FEATURES ARE LOCATED AS SHOWN TO THE BEST OF MY ABILITY AND BELIEF.



PREPARED FOR
STEVEN LEWIS
11 WINDWARD DRIVE
NEWBURYPORT, MA 01950

NO.	DATE	DESCRIPTION	BY
3	12-10-19	ADD UTILITY INFORMATION	PDB
2	11-20-19	ADD UTILITY INFORMATION	ZTJ
1	11-4-19	ADD RET WALL ELEVATIONS	DRB

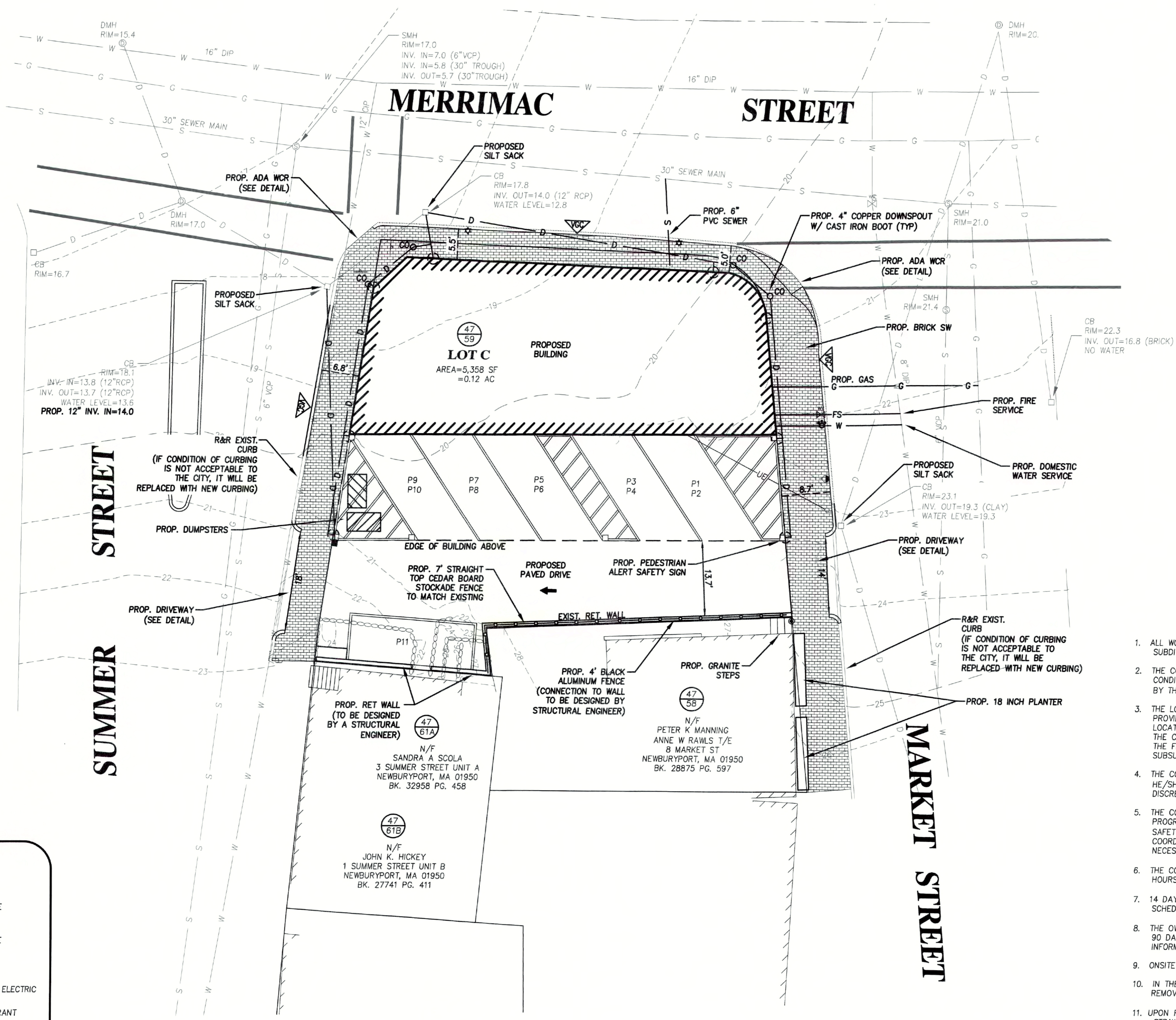
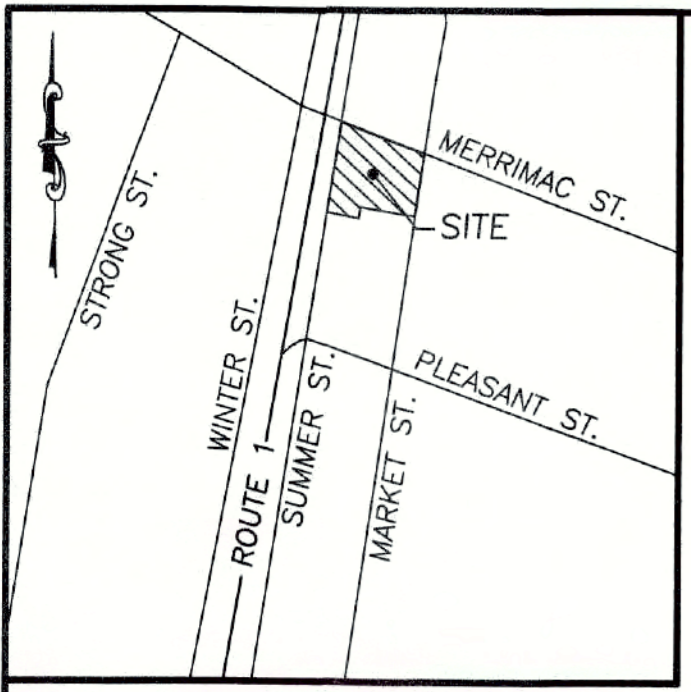
MEI **MILLENNIUM ENGINEERING, INC.**
ENGINEERING AND LAND SURVEYING
62 ELM ST. SALISBURY, MA 01952 (978) 463-8980
13 HAMPTON RD. EXETER, NH 03833 (603) 778-0528

SCALE: 1"=10'
DATE: OCT. 23, 2019
CALC. BY: D.R.B.
CHKD. BY: J.S.H.
PROJECT: M193613

PLAN OF LAND
IN
NEWBURYPORT, MA
SHOWING
PROPOSED SITE IMPROVEMENTS
AT
2-6 MARKET STREET
(MAP 47 - LOT 59)

EXISTING CONDITIONS
SHEET: C-1

ZONING TABLE			
ADDRESS - ASSESSORS MAP 47 LOT 59			
ZONING DISTRICT: B-2 DC00			
	REQUIRED	EXISTING	PROPOSED
LOT AREA:	5,000 SF	5,358 SF	5,358 SF
LOT FRONTAGE:	60 FT	54.1 FT	54.1 FT
FRONT SETBACK:	0 FT	0.1'	0.0 FT
SIDE SETBACK:	0 FT	0.1 FT	0.0 FT, 14.04 FT
REAR SETBACK:	0 FT	NA	0.0 FT
LOT COVERAGE:	100%	27%	69.7%
OPEN SPACE:	N/A	1.4%	4% +/-
BLDG HEIGHT:	40 FT	12.9'	39.5'

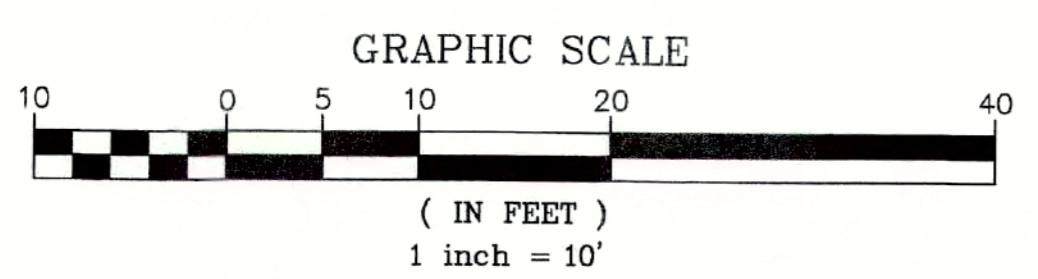


LEGEND

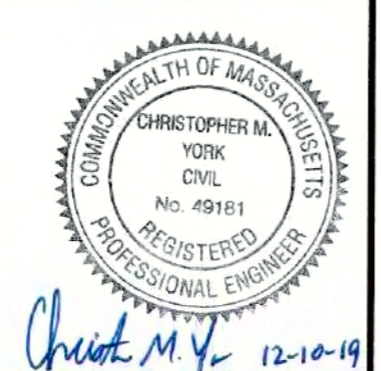
— W —	EXISTING WATER MAIN	— S —	EXISTING SEWER MAIN
— W —	PROPOSED WATER SERVICE	— S —	PROPOSED SEWER MAIN
— SS —	PROPOSED SEWER SERVICE	— G —	PROPOSED GAS MAIN
— GS —	PROPOSED GAS SERVICE	— UE —	PROPOSED UNDERGROUND ELECTRIC
▽	PROP. VERTICAL GRAN. CURB	⊕	EXISTING FIRE HYDRANT
⊗	PROPOSED WATER GATE	⊕	PROPOSED WATER SHUTOFF
★	PROPOSED STREET LIGHT	○	PROPOSED SEWER SERVICE

GENERAL NOTES

- ALL WORK SHALL CONFORM TO: THE NEWBURYPORT PLANNING BOARD RULES AND REGULATIONS GOVERNING THE SUBDIVISION OF LAND, AND THESE PLANS.
- THE CONTRACTOR SHALL REPORT TO THE OWNER AND ENGINEER ANY SIGNIFICANT VARIATIONS IN EXISTING SITE CONDITIONS. ANY PROPOSED REVISIONS TO THE WORK SHALL NOT BE UNDERTAKEN UNTIL REVIEWED AND APPROVED BY THE OWNER AND REGULATING MUNICIPAL AND/OR STATE AGENCIES.
- THE LOCATION OF ALL UTILITIES, AS SHOWN ON THESE PLANS, ARE BASED UPON PLANS AND RECORD INFORMATION PROVIDED BY MUNICIPAL AND PRIVATE UTILITY COMPANIES AND ARE CONSIDERED APPROXIMATE BOTH AS TO SIZE AND LOCATION. NO WARRANTY IS MADE TO THE ACCURACY OF THESE LOCATIONS OR THAT ALL UTILITIES ARE SHOWN. THE CONTRACTOR SHALL NOT RELY ON THESE PLANS FOR SUCH INFORMATION AND SHALL MAKE EXAMINATIONS IN THE FIELD BY VARIOUS AVAILABLE RECORDS, UTILITY COMPANIES AND INDIVIDUALS, AS TO THE LOCATION OF ALL SUBSURFACE STRUCTURES.
- THE CONTRACTOR SHALL FIELD CHECK ALL DIMENSIONS AND ELEVATIONS BEFORE PROCEEDING WITH THE NEW WORK. HE/SHE SHALL EXCAVATE TO VERIFY PERTINENT DRAINAGE INVERTS AND POTENTIAL UTILITY CONFLICTS. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER IMMEDIATELY.
- THE CONTRACTOR IS RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF THE PUBLIC, EMPLOYEES, AND ALL OTHER PERSONS ASSOCIATED WITH THE PROJECT. HE/SHE SHALL COORDINATE AND BE RESPONSIBLE FOR ALL SAFETY SIGNING, BARRIERS AND TEMPORARY PAVEMENT MARKINGS NECESSARY TO PROVIDE A SMOOTH AND PROPER TRANSITION FOR TRAFFIC FLOW.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES BY CONTACTING "DIG-SAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION. DIG-SAFE TELEPHONE NUMBER: 1-888-344-7233.
- 14 DAYS PRIOR TO COMMENCING CONSTRUCTION, THE OWNER/DEVELOPER SHALL PRESENT A CONSTRUCTION SCHEDULE TO THE PLANNING DEPARTMENT.
- THE OWNER/DEVELOPER SHALL SUBMIT TWO HARD COPIES OF AS-BUILT DRAWINGS TO THE PLANNING BOARD WITHIN 90 DAYS OF ISSUANCE OF OCCUPANCY PERMIT. AS-BUILTS SHALL INCLUDE ALL LANDBASE AND UTILITIES INFORMATION.
- ONSITE BURIAL OF STUMPS OR ANY OTHER DEBRIS IS PROHIBITED.
- IN THE EVENT EXCESSIVE SNOWFALL OCCURS, ALL PLOWED SNOW THAT CANNOT BE CONTAINED ON SITE SHALL BE REMOVED FROM THE SITE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
- UPON REMOVAL OF THE EXISTING BUILDING, THE EXPOSED SOIL SHALL BE STABILIZED WITH A 2" THICK LAYER OF STRAW MULCH.
- REFERENCE SHALL BE MADE TO THE ARCHITECTURAL PLANS FOR PARKING LIGHTING.
- THE PROPERTY DOES NOT LIE WITHIN THE 100-YEAR FLOOD PLAIN ACCORDING TO F.I.R.M. COMMUNITY PANEL NUMBER 25009C0117G.
- ELEVATIONS ARE BASED ON NAVD 1988 DATUM.



PREPARED FOR
STEVEN LEWIS
11 WINDWARD DRIVE
NEWBURYPORT, MA 01950

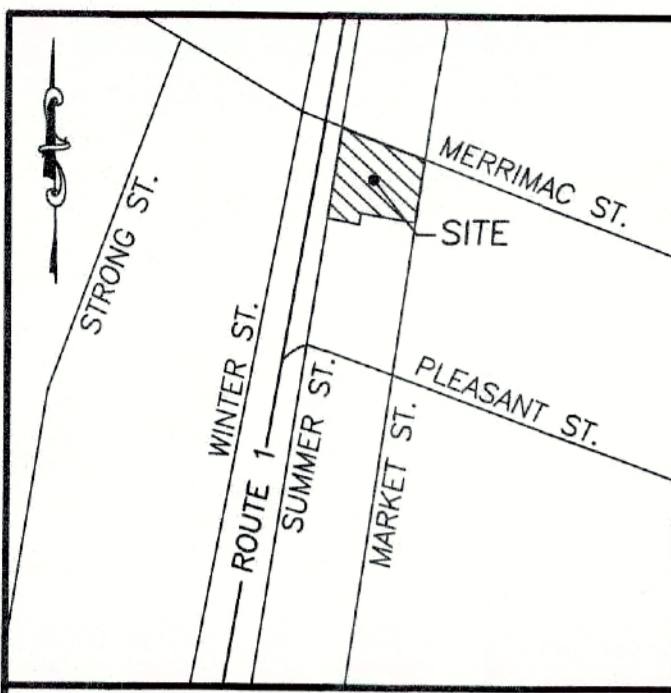


MEI **MILLENNIUM ENGINEERING, INC.**
ENGINEERING AND LAND SURVEYING
62 ELM ST. SALISBURY, MA 01952 (978) 463-8980
13 HAMPTON RD. EXETER, NH 03833 (603) 778-0528

PLAN OF LAND
IN
NEWBURYPORT, MA
SHOWING
PROPOSED SITE IMPROVEMENTS
AT
2-6 MARKET STREET
(MAP 47 - LOT 59)

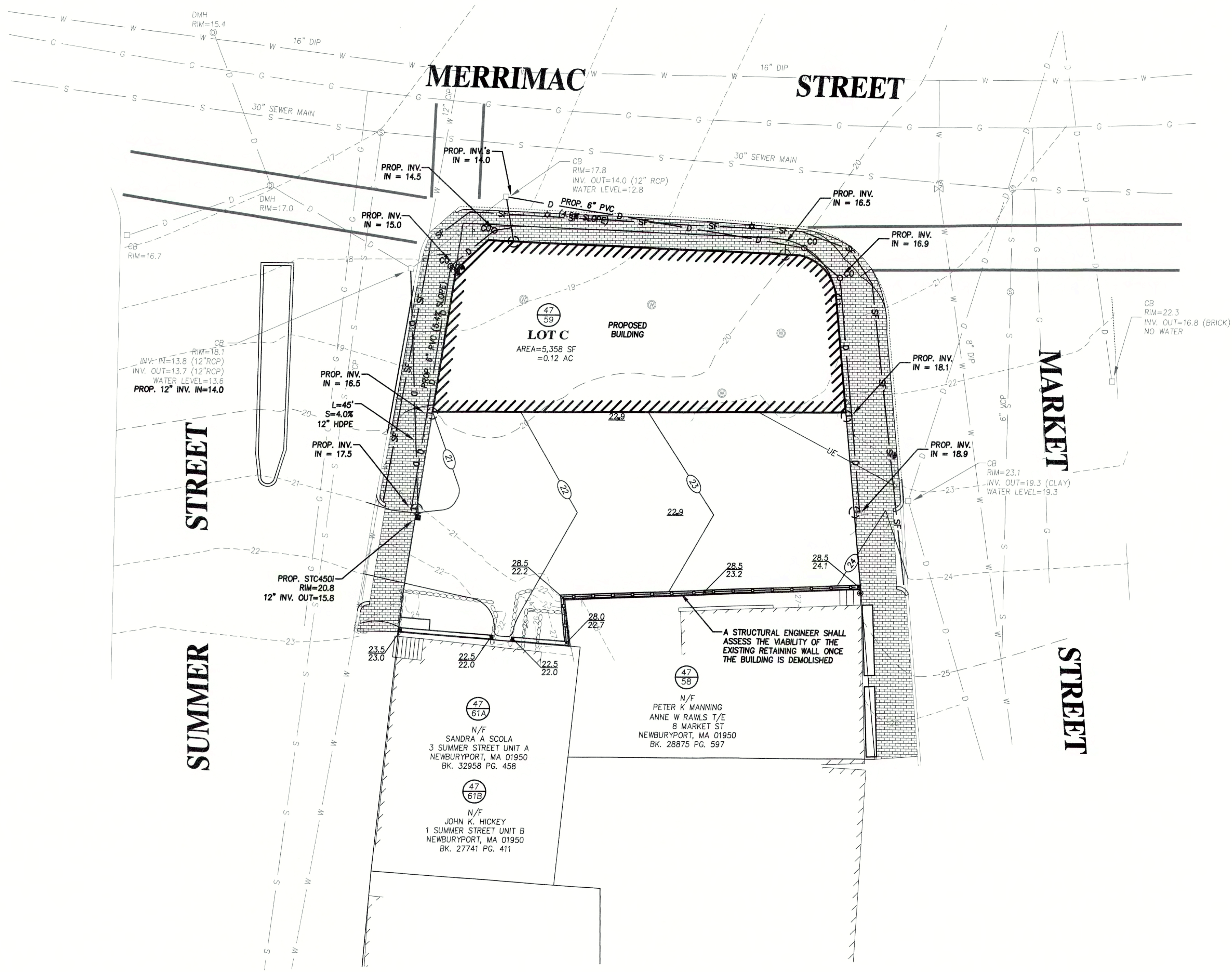
SITE PLAN

NO.	DATE	DESCRIPTION	C.M.Y. BY	SCALE:	CALC. BY:	CHKD. BY:	PROJECT:
1	12/10/19	ADDRESS REVIEWER'S COMMENTS	C.M.Y.	SCALE: 1"=10'	CALC. BY: Z.T.J.	CHKD. BY: E.W.B.	PROJECT: M193613



LOCUS MAP
N.T.S.

T.B.M. #1
MAG NAIL
ELEV. = 18.69

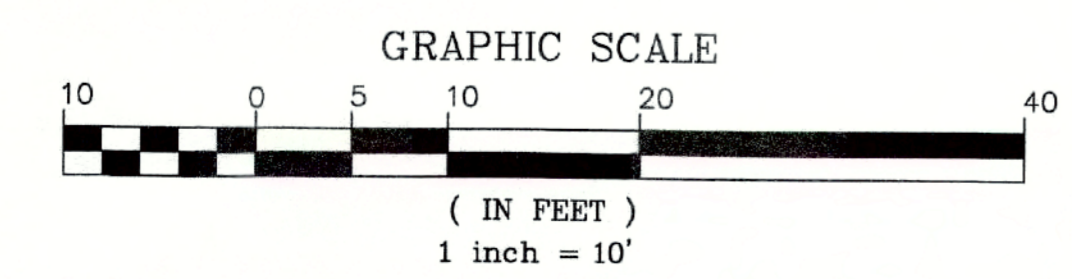


PL. BK. 122 PL. 6

LEGEND

- 28 ——— EXIST. CONTOUR
- (23) ——— PROP. CONTOUR
- SF ——— PROP. SILTATION BARRIER
- ~~~~~ PROP. TREELINE/LIMIT OF WORK
- ▬▬▬ PROP. BRICK SIDEWALK

- PROP. CATCH BASIN
- EXIST. CATCH BASIN
- 22.3 PROP. SPOT GRADE
- EXIST. UTILITY POLE
- PROP. OUTLET STRUCTURE
- ⊕ WETLANDS



PREPARED FOR
STEVEN LEWIS
11 WINDWARD DRIVE
NEWBURYPORT, MA 01950

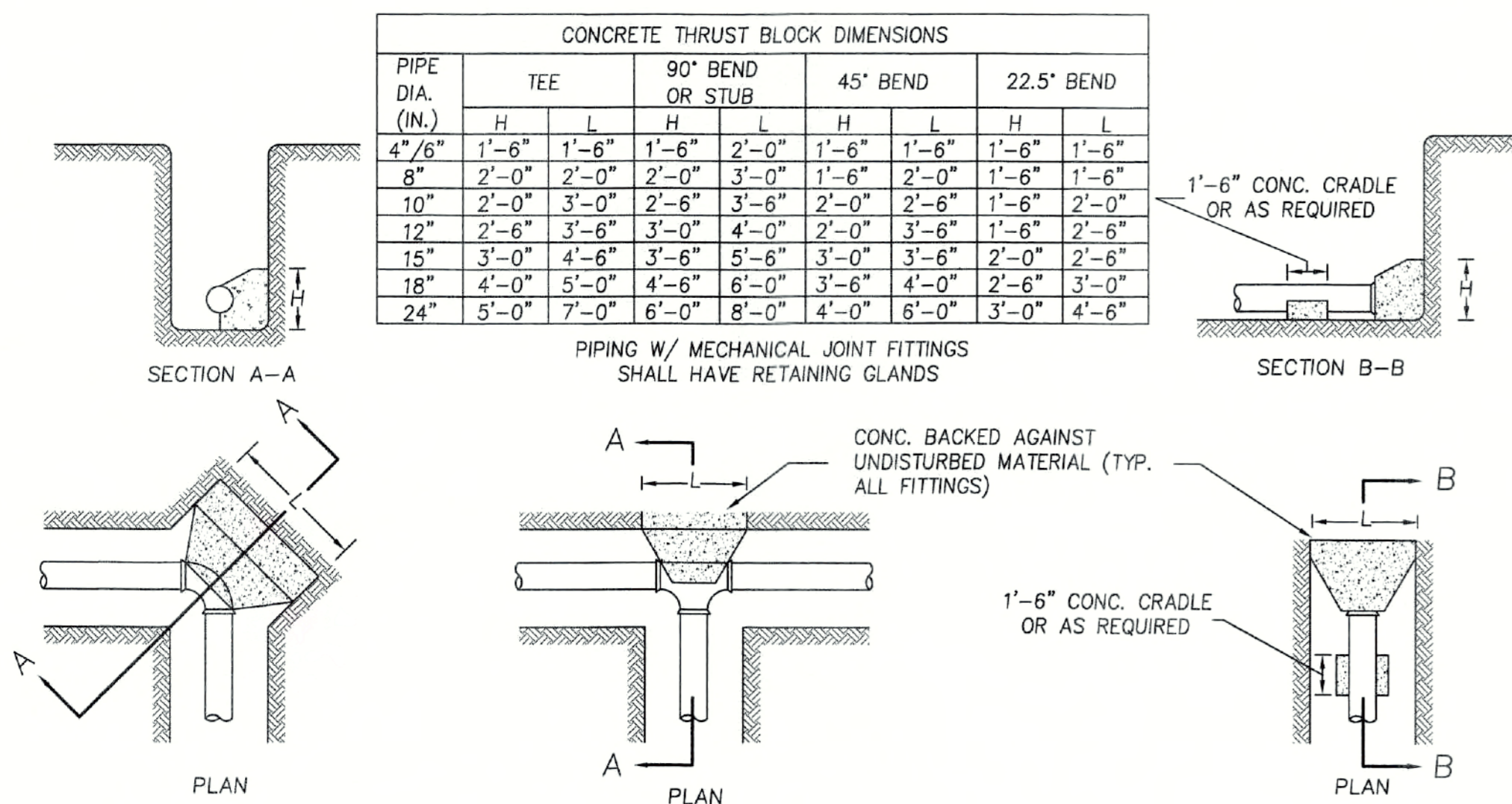
NO.	DATE	DESCRIPTION	C.M.Y.	BY
1	12/10/19	ADDRESS REVIEWER'S COMMENTS		

MEI **MILLENNIUM ENGINEERING, INC.**
ENGINEERING AND LAND SURVEYING
62 ELM ST. SALISBURY, MA 01952 (978) 463-8980
13 HAMPTON RD. EXETER, NH 03833 (603) 778-0528

SCALE: 1"=10'
DATE: NOV. 20, 2019
CALC. BY: Z.T.J.
CHKD. BY: E.W.B.
PROJECT: M193613

PLAN OF LAND
IN
NEWBURYPORT, MA
SHOWING
PROPOSED SITE IMPROVEMENTS
AT
2-6 MARKET STREET
(MAP 47 - LOT 59)

GRADING PLAN
SHEET: C-3

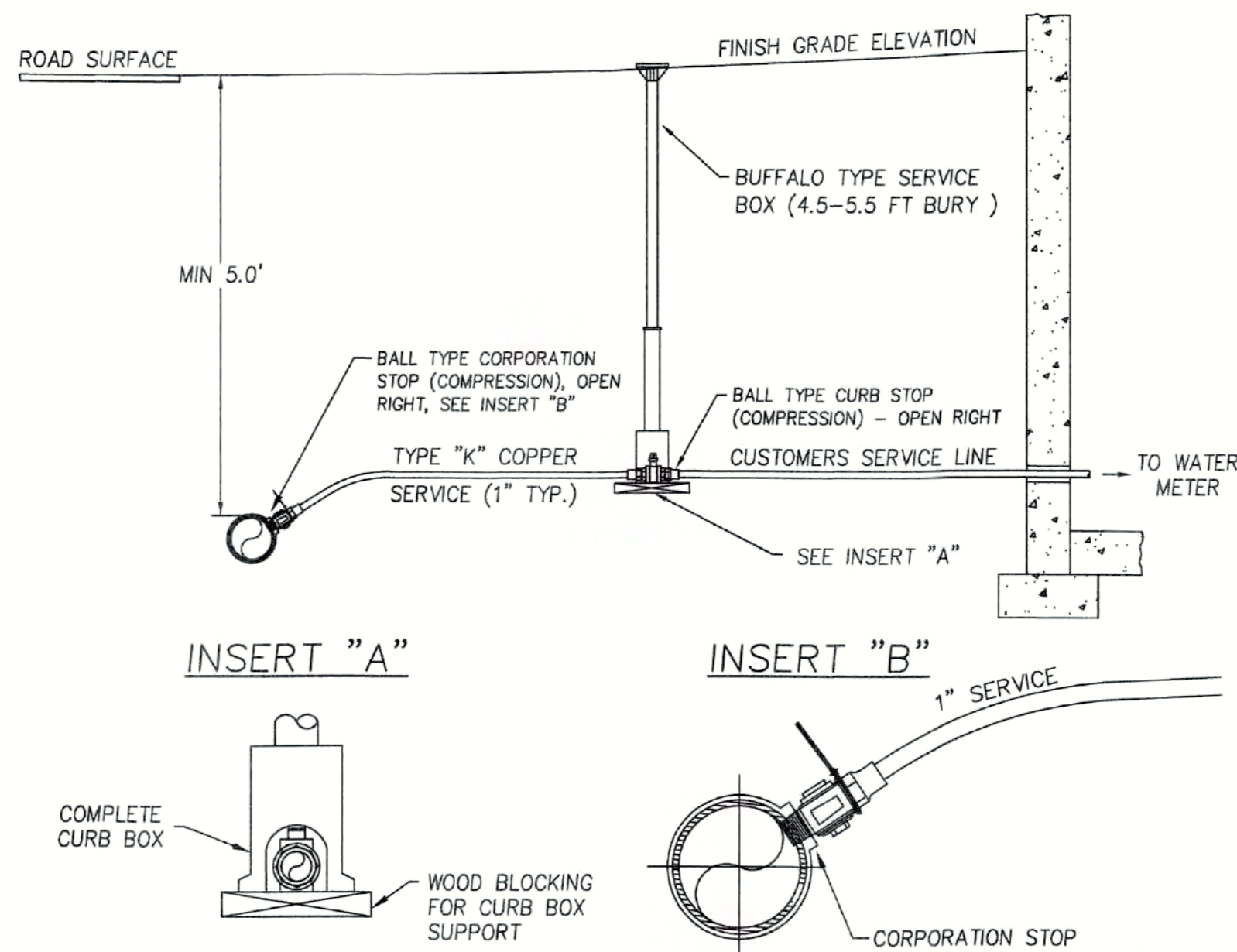


NOTES

- VALUES SHOWN ARE FOR TEST PRESSURE OF 150 PSI WITH A 100 PSI SURGE ALLOWANCE.
- THRUST BLOCKS SHALL NOT BE PLACED AGAINST THE FOLLOWING SOILS: PEAT, ORGANIC SILT AND ORGANIC SOILS, SOFT CLAY, RUBBISH FILL AND OTHER UNSUITABLE ARTIFICIAL FILL, SHATTERED SHALE, INORGANIC SILT AND VERY FINE SANDS.
- POURED CONCRETE THRUST BLOCKS SHALL NOT COVER ANY JOINTS, CLAMPS, NUTS, BOLTS, ETC.

THRUST BLOCK DETAILS

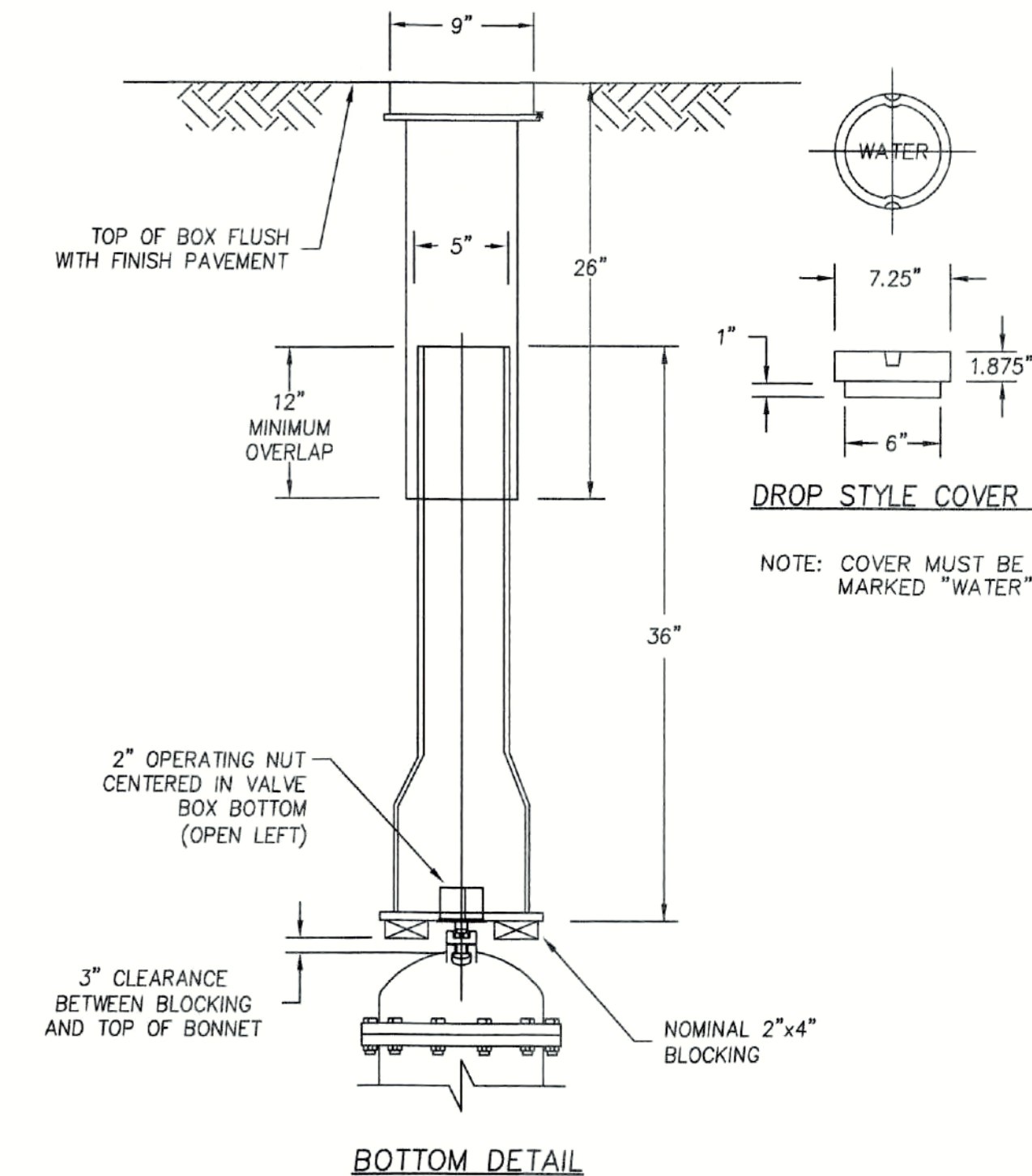
N.T.S.



- CORPORATION AND CURB STOPS SHALL BE BRASS & MEET ALL APPLICABLE DEP STANDARDS.

TYPICAL COPPER SERVICE CONNECTION

N.T.S.

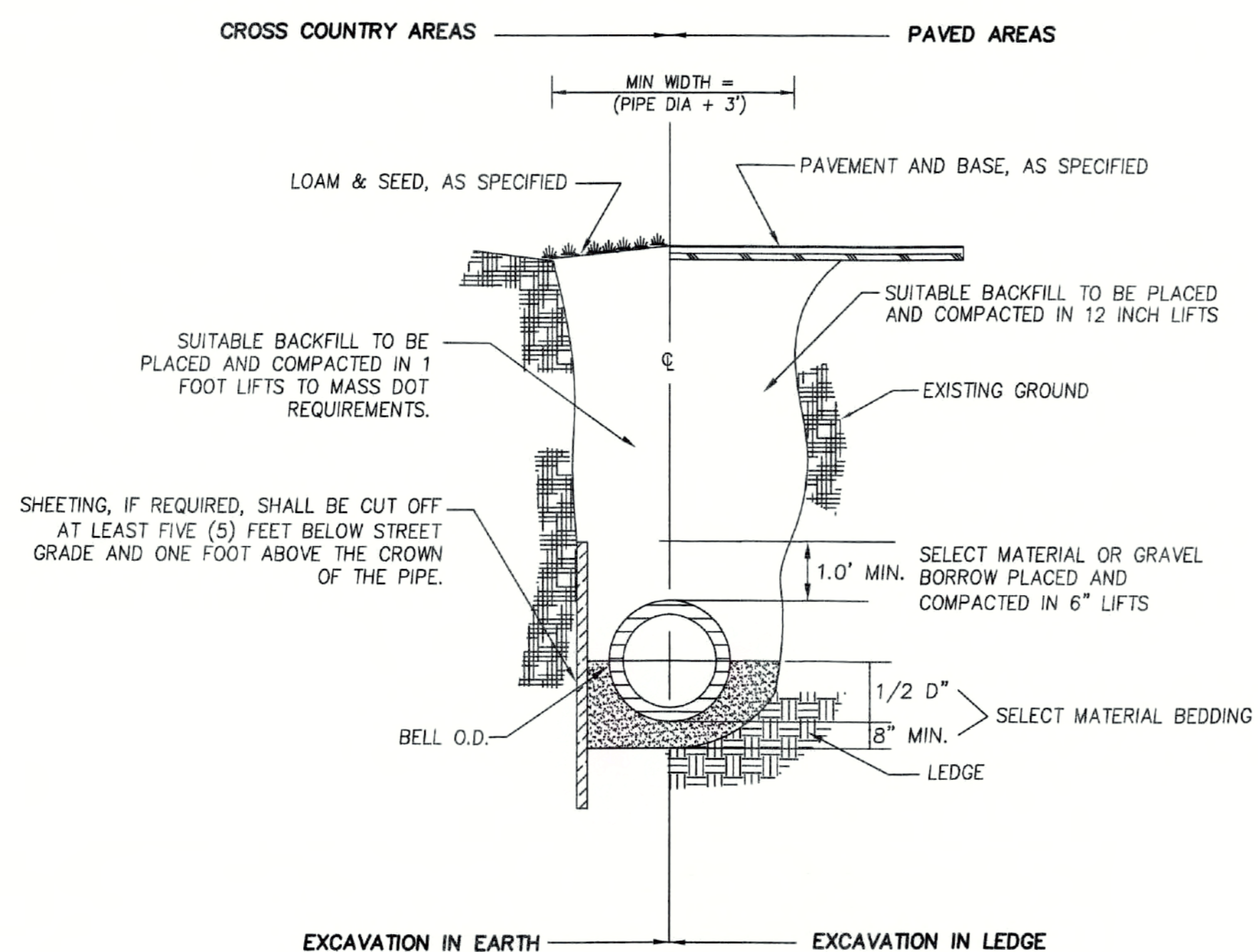


TYPICAL VALVE BOX DETAIL

N.T.S.

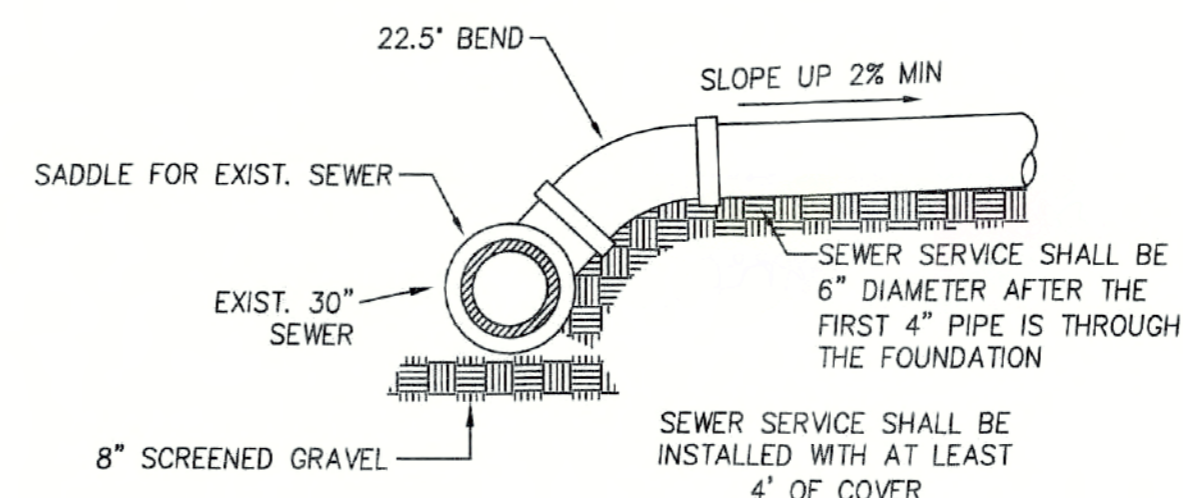
WATER NOTES:

- ALL WATER MAIN AND SERVICE COMPONENTS SHALL MEET AWWA STANDARDS.
- ALL MECHANICAL JOINT COMPONENTS SHALL BE INSTALLED USING APPROVED RETAINING GLANDS (GRIP RING, MEGA LUG, STAR GRIP).
- METAL WEDGES SHALL BE USED AT ALL BELL JOINTS TO ENSURE CONTINUITY FOR TRACING.
- GATE VALVES SHALL BE DUCTILE IRON EPOXY COATED (AWWA C550), WITH O-RING SEALS, URETHANE COATED WEDGE, STAINLESS STEEL NUTS AND BOLTS, AND ANTIROTATION SEATS TO PREVENT T-BOLTS FROM TURNING. VALVES SHALL OPEN RIGHT USING 2-INCH OPERATING NUT WITH ARROW CAST IN THE METAL.
- WATER MAINS SHALL BE PRESSURE TESTED TO 150 PSI AND WITNESSED BY THE NEWBURYPORT WATER WORKS CONSTRUCTION FOREMAN OR HIS DESIGNEE. ALL INSTALLATIONS MUST BE INSPECTED BY THE CONSTRUCTION FOREMAN OR HIS DESIGNEE.
- CHLORINATION SHALL MEET AWWA STANDARDS (ANSI/AWWA C651-05). BACTERIA SAMPLES SHALL BE TESTED BY AN APPROVED LAB WITH RESULTS SENT DIRECTLY TO NEWBURYPORT WATER WORKS THROUGH CERTIFIED MAIL, AND RECEIVED WITHIN 5 WORKING DAYS OR RESAMPLING MUST BE DONE. IF BACTERIA TEST IS POSITIVE THE WATER MAIN SHALL BE FLUSHED AND RECHLORINATED PRIOR TO RESAMPLING.
- NEWBURYPORT WATER WORKS PERSONNEL SHALL OPERATE ALL GATE VALVES AND HYDRANTS AND SHALL WITNESS AND INSPECT THE WATER MAIN AND APPURTENANCES PRIOR TO BURIAL. THEY SHALL ALSO PERFORM ALL TAPS UNLESS OTHERWISE APPROVED BY THE CONSTRUCTION FOREMAN. IF CONSENT IS GIVEN, AN APPROVED CONTRACTOR MUST DO THE TAPPING, AND THE CITY'S CONSTRUCTION FOREMAN OR HIS DESIGNEE MUST BE PRESENT DURING THE TAP.
- WATER MAINS AND SERVICES SHALL HAVE A MINIMUM 6" CLEARANCE FROM UNDERGROUND ROCK/LEDGE.
- NO WATER SHALL BE SUPPLIED TO THE CONTRACTOR OR BUILDER THROUGH A WATER SERVICE THAT HAS NOT BEEN PLACED "IN-SERVICE" BY THE NEWBURYPORT WATER DEPT.
- ALL WATERMANS, VALVES, AND EXPOSED IRON SHALL BE ENCASED IN POLYETHYLENE FOR CORROSION RESISTANCE. A MIN. 4 MIL THICK EPOXY LAYER SHALL BE APPLIED IN ACCORDANCE WITH ANSI/AWWA C105/A21.5
- ALL BOLTS USED FOR INSTALLATION OF THE WATERMANS, HYDRANTS, WATER GATES, WATER SHUTOFFS, AND OTHER WATER ASSOCIATED STRUCTURES SHALL BE STAINLESS STEEL.



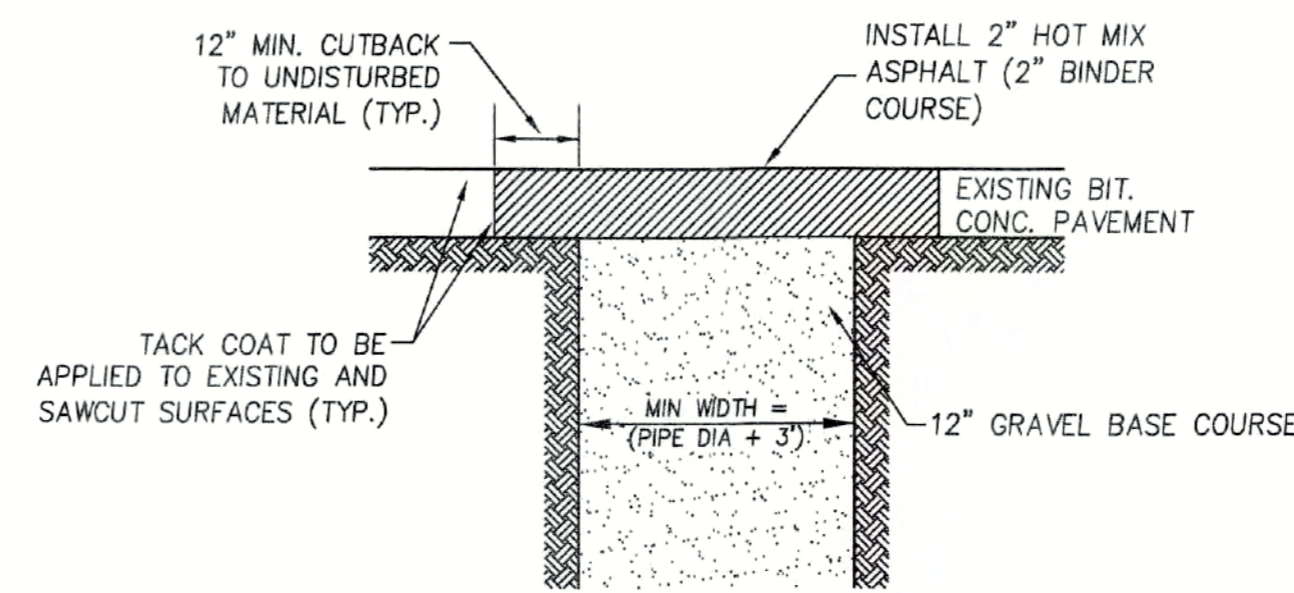
TYPICAL TRENCH DETAIL

N.T.S.



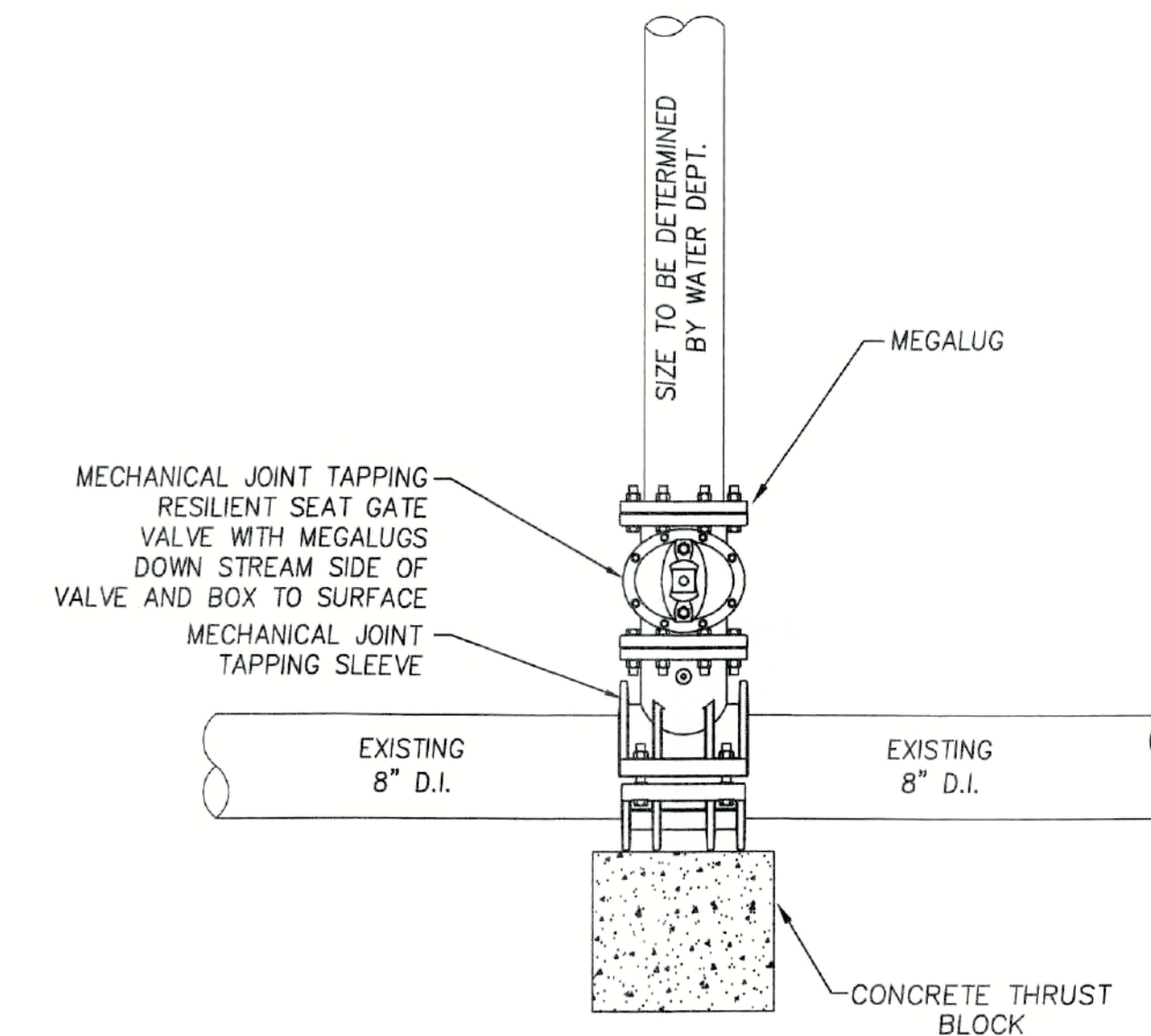
SEWER SERVICE DETAIL

N.T.S.



TRENCH PATCH DETAIL (IF REQ'D)

N.T.S.



TAPPING SLEEVE DETAIL

N.T.S.



PREPARED FOR
STEVEN LEWIS
11 WINDWARD DRIVE
NEWBURYPORT, MA 01950

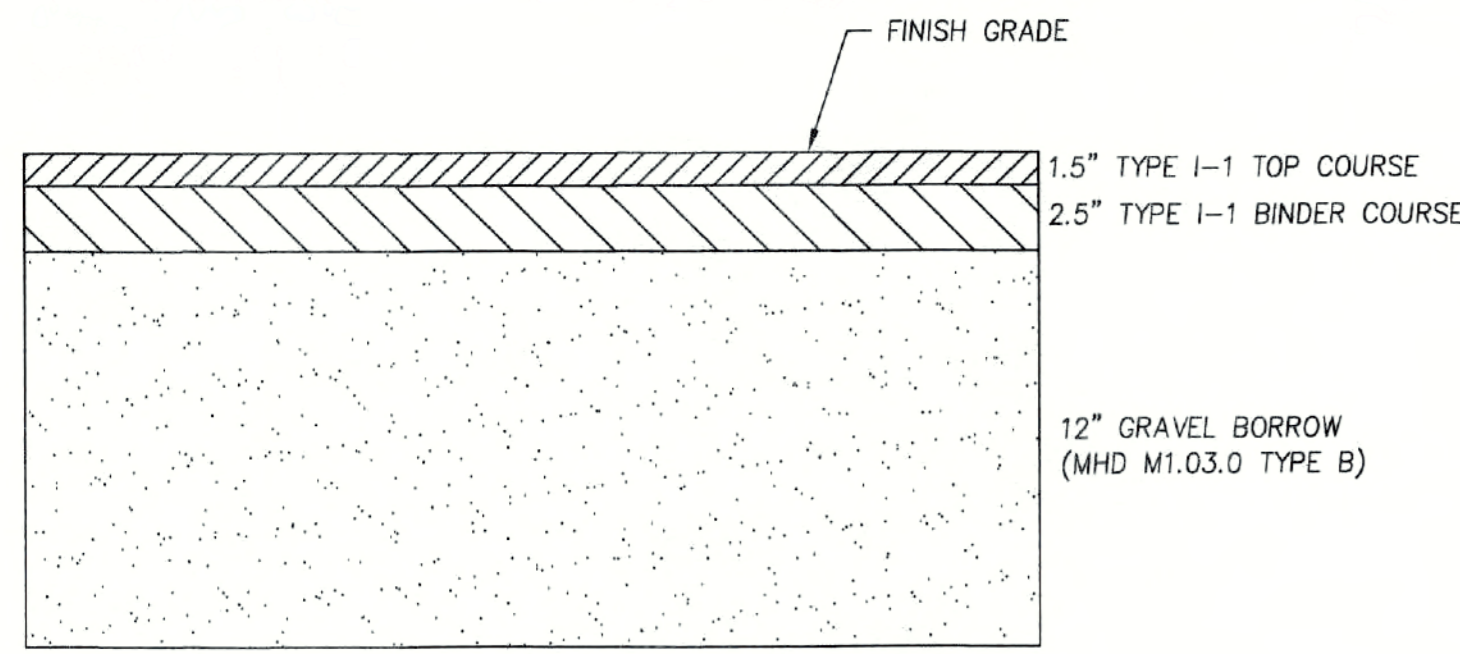
MILLENNIUM ENGINEERING, INC.
ENGINEERING AND LAND SURVEYING
62 ELM ST. SALISBURY, MA 01952 (978) 463-8980
13 HAMPTON RD. EXETER, NH 03833 (603) 778-0528

PLAN OF LAND
IN
NEWBURYPORT, MA
SHOWING
PROPOSED SITE IMPROVEMENTS
AT
2-6 MARKET STREET
(MAP 47 - LOT 59)

WATER AND SEWER DETAILS

SHEET: C-4

NO.	DATE	ADDRESS REVIEWER'S COMMENTS	C.M.Y. BY	SCALE: AS NOTED	CALC. BY: Z.T.J.	PROJECT: M193613
1	12/10/19			DATE: NOV. 20, 2019	CHKD. BY: E.W.B.	

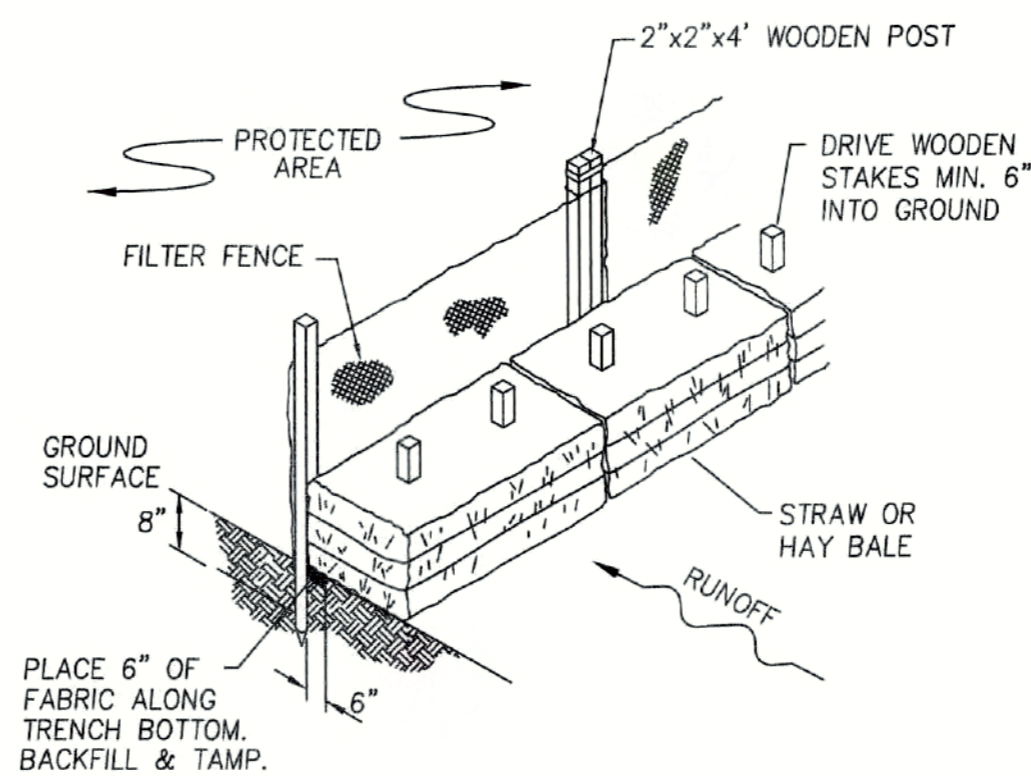


**PAVED PARKING
LOT DETAIL**

N.T.S.

PAVEMENT NOTES

- 1.) ALL STUMPS, ROCKS AND LEDGE WITHIN THE LIMITS OF THE PROPOSED PAVED WAY SHALL BE REMOVED. ALL LEDGE SHALL BE REMOVED TO A MINIMUM DEPTH OF 2' BELOW FINISHED PAVEMENT GRADE.
- 2.) ROADWAY SHALL NOT BE CONSTRUCTED DURING FREEZING WEATHER OR ON WET OR FROZEN SUBGRADE.
- 3.) GRADING AND ROLLING SHALL BE REQUIRED TO PROVIDE A SMOOTH, EVEN, AND UNIFORM COMPACTED BASE WHICH IS COMPACTED TO A MINIMUM DRY DENSITY OF 95 PERCENT.
- 4.) ALL UNSUITABLE MATERIAL SHALL BE EXCAVATED AND REPLACED WITH SATISFACTORY MATERIAL AND BROUGHT UP TO GRADE WITH GRAVEL BORROW CONTAINING NO STONES GREATER THAN 6" DIAMETER.
- 5.) AT ALL TIMES DURING CONSTRUCTION, THE SUB-GRADE AND ALL DITCHES SHALL BE CONSTRUCTED AND MAINTAINED SO THAT THE ROADWAY WILL EFFECTIVELY BE DRAINED.
- 6.) THE CONTRACTOR SHALL REFER TO THE NEWBURYPORT RULES AND REGULATIONS GOVERNING THE SUBDIVISION OF LAND SECTION 6 AND APPENDIX I.
- 7.) IF NECESSARY, SNOW WILL BE REMOVED FROM THE SITE.

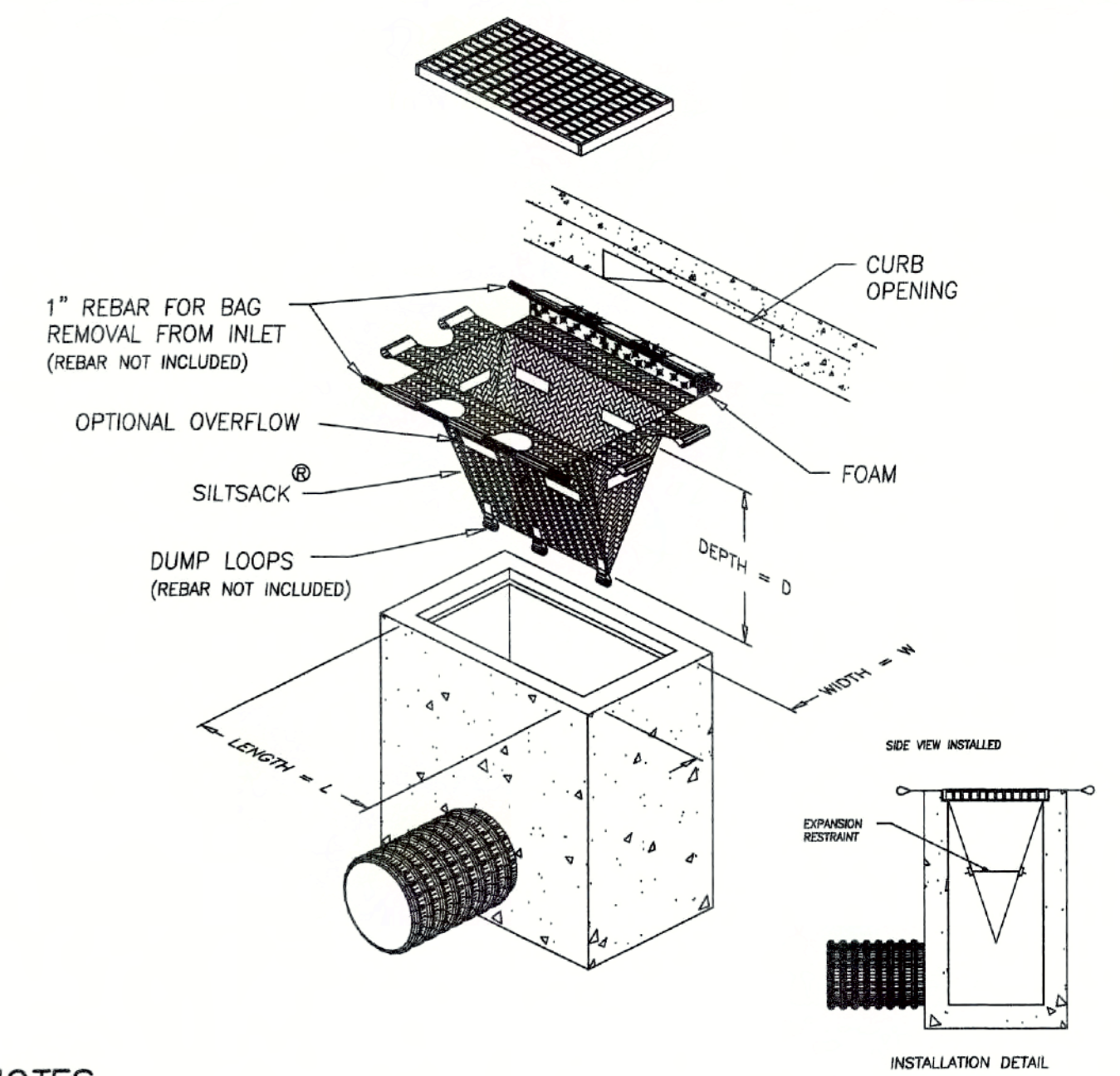


NOTES

1. POSTS SHALL BE DOUBLED AND COUPLED AT FILTER CLOTH SEAMS.
2. FILTER CLOTH TO BE FASTENED SECURELY TO SUPPORT NETTING WITH TIES SPACED EVERY 24" AT TOP, MID SECTION, AND BOTTOM.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED AND STAPLED.

MAINTENANCE

1. SILT FENCE SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
2. IF THE FABRIC ON THE SILT FENCE SHALL DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHALL BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHALL BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

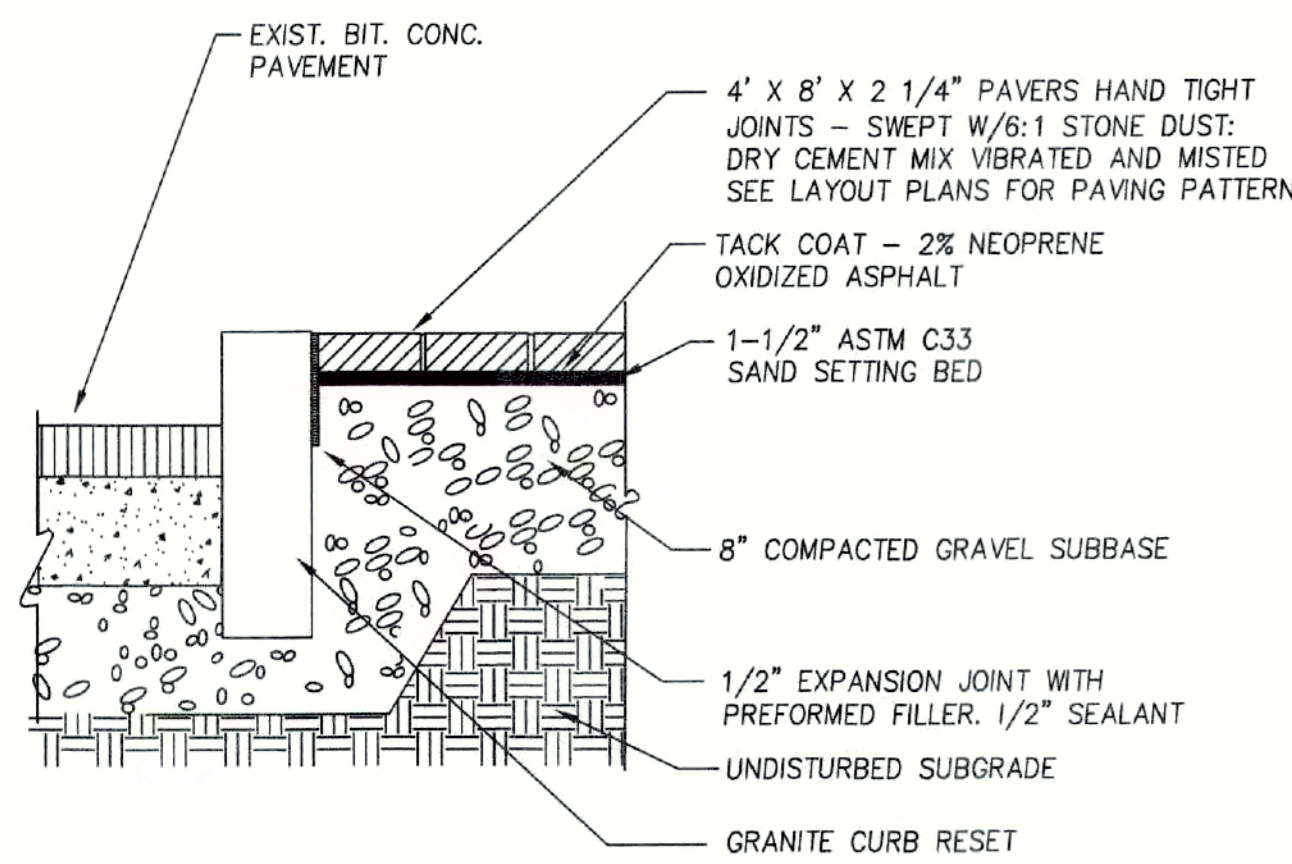


NOTES

1. TO INSTALL SILTSACK IN THE CATCH BASIN, REMOVE THE GRATE AND PLACE THE SACK IN THE OPENING. HOLD APPROXIMATELY SIX INCHES OF THE SACK OUTSIDE THE FRAME. THIS IS THE AREA OF THE LIFTING STRAPS. REPLACE THE GRATE TO HOLD THE SILTSACK IN PLACE.
2. WHEN THE RESTRAINT CORD IS NO LONGER VISIBLE, SILTSACK IS FULL AND SHOULD BE EMPTIED.
3. TO REMOVE SILTSACK, TAKE TWO PIECES OF 1" DIAMETER REBAR AND PLACE THROUGH THE LIFTING LOOPS ON EACH SIDE OF THE SACK TO FACILITATE THE LIFTING AND CARRYING.
4. TO EMPTY SILTSACK, PLACE UNIT WHERE THE CONTENTS WILL BE COLLECTED. PLACE THE REBAR THROUGH THE LIFT STRAPS (CONNECTED TO THE BOTTOM OF THE SACK) AND LIFT. THIS WILL LIFT SILTSACK FROM THE BOTTOM AND EMPTY THE CONTENTS. CLEAN OUT AND RINSE. RETURN SILTSACK TO ITS ORIGINAL SHAPE AND PLACE BACK IN THE BASIN.
5. SILTSACK IS REUSABLE. ONCE THE CONSTRUCTION CYCLE IS COMPLETE, REMOVE SILTSACK FROM THE BASIN AND CLEAN. SILTSACK SHOULD BE STORED OUT OF SUNLIGHT UNTIL NEXT USE.

**SILT SACK
DETAIL**

N.T.S.

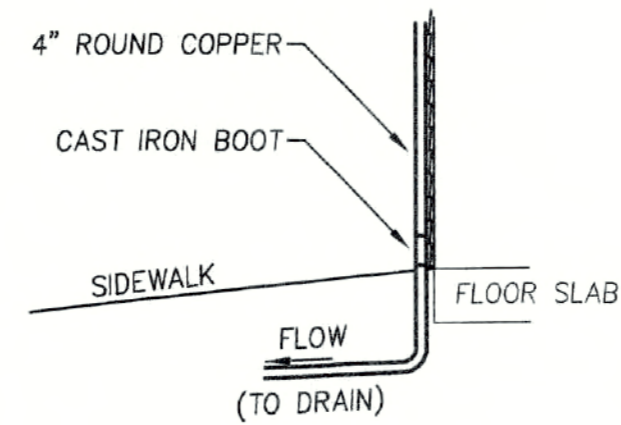


**BRICK
SIDEWALK DETAIL**

N.T.S.

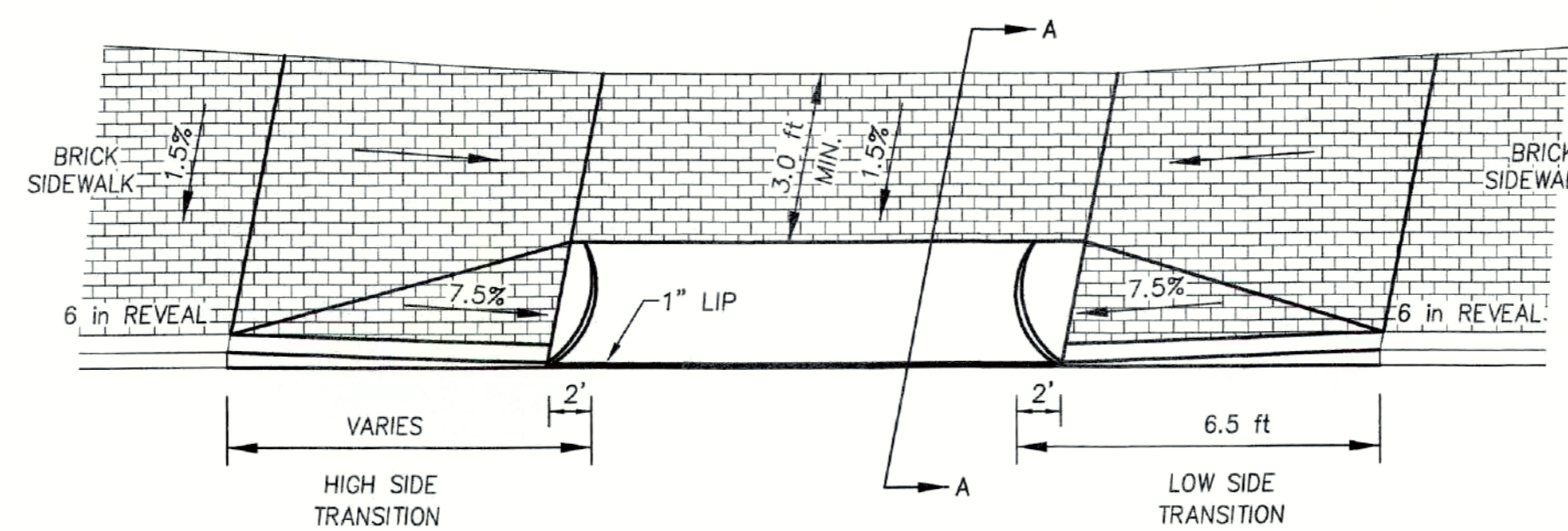
**GUTTER DOWN
SPOUT DETAIL**

N.T.S.



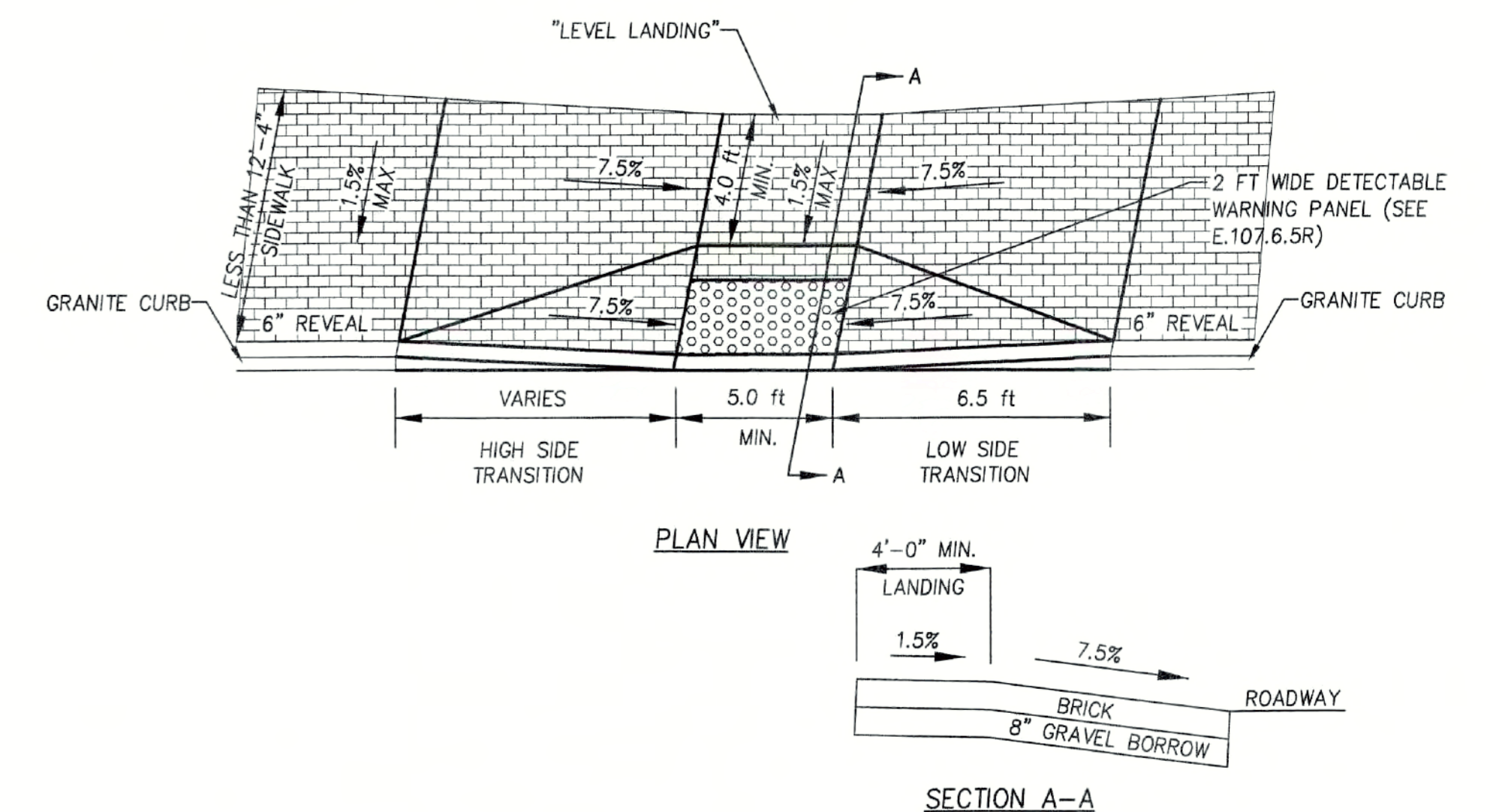
**SILT FENCE/HAYBALE
INSTALLATION**

N.T.S.



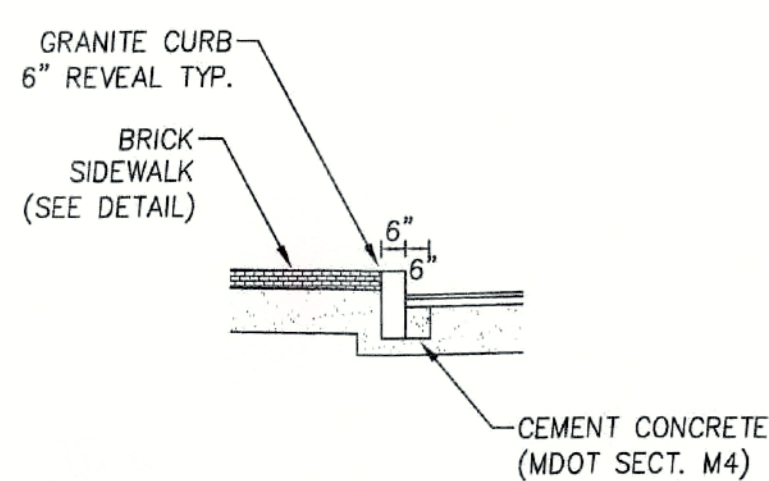
**BRICK/CONC. DRIVEWAY
RAMP DETAIL**

N.T.S.



**BRICK WHEELCHAIR
RAMP DETAIL**

N.T.S.



**TYPICAL GRANITE
CURB INSTALLATION**

N.T.S.



PREPARED FOR
STEVEN LEWIS
11 WINDWARD DRIVE
NEWBURYPORT, MA 01950

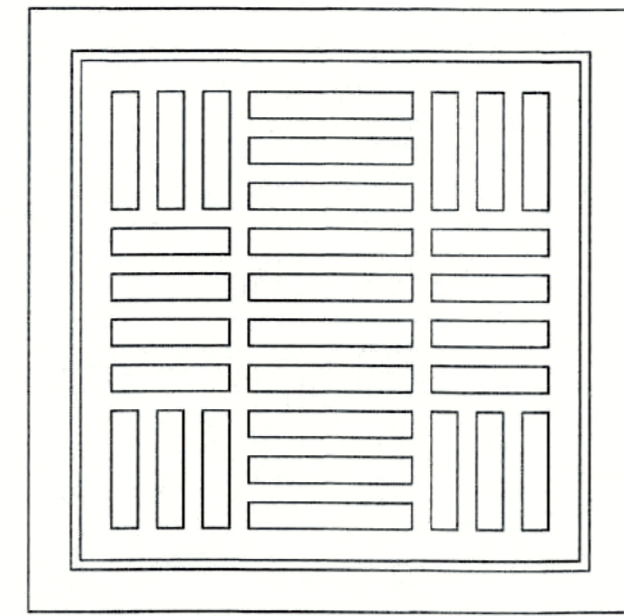
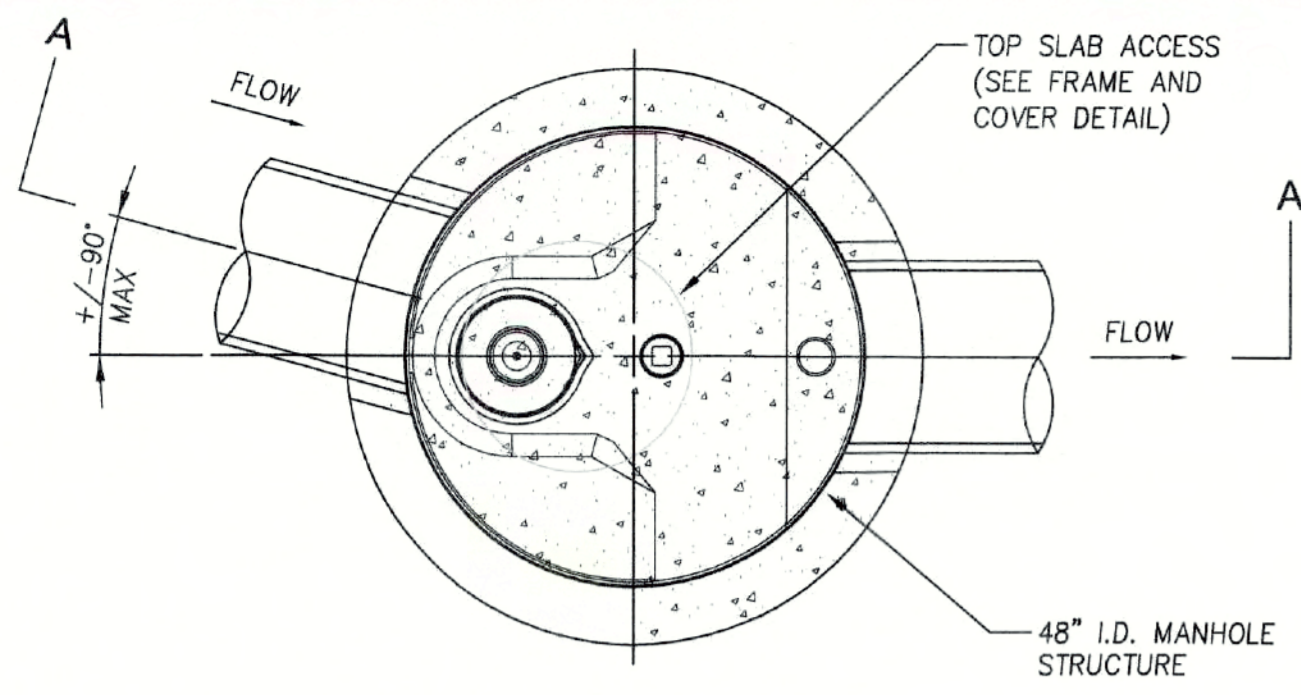
MILLENNIUM ENGINEERING, INC.
ENGINEERING AND LAND SURVEYING
62 ELM ST. SALISBURY, MA 01952 (978) 463-8980
13 HAMPTON RD. EXETER, NH 03833 (603) 778-0528

NO.	DATE	DESCRIPTION	BY	C.M.Y.	SCALE: AS NOTED	DATE: NOV. 20, 2019	CALC. BY: Z.T.J.	CHKD. BY: E.W.B.	PROJECT: M193613
1	12/10/19	ADDRESS REVIEWER'S COMMENTS							

PLAN OF LAND
IN
NEWBURYPORT, MA
SHOWING
PROPOSED SITE IMPROVEMENTS
AT
2-6 MARKET STREET
(MAP 47 - LOT 59)

**ROADWAY
AND
DRAINAGE
DETAILS**

SHEET: C-5

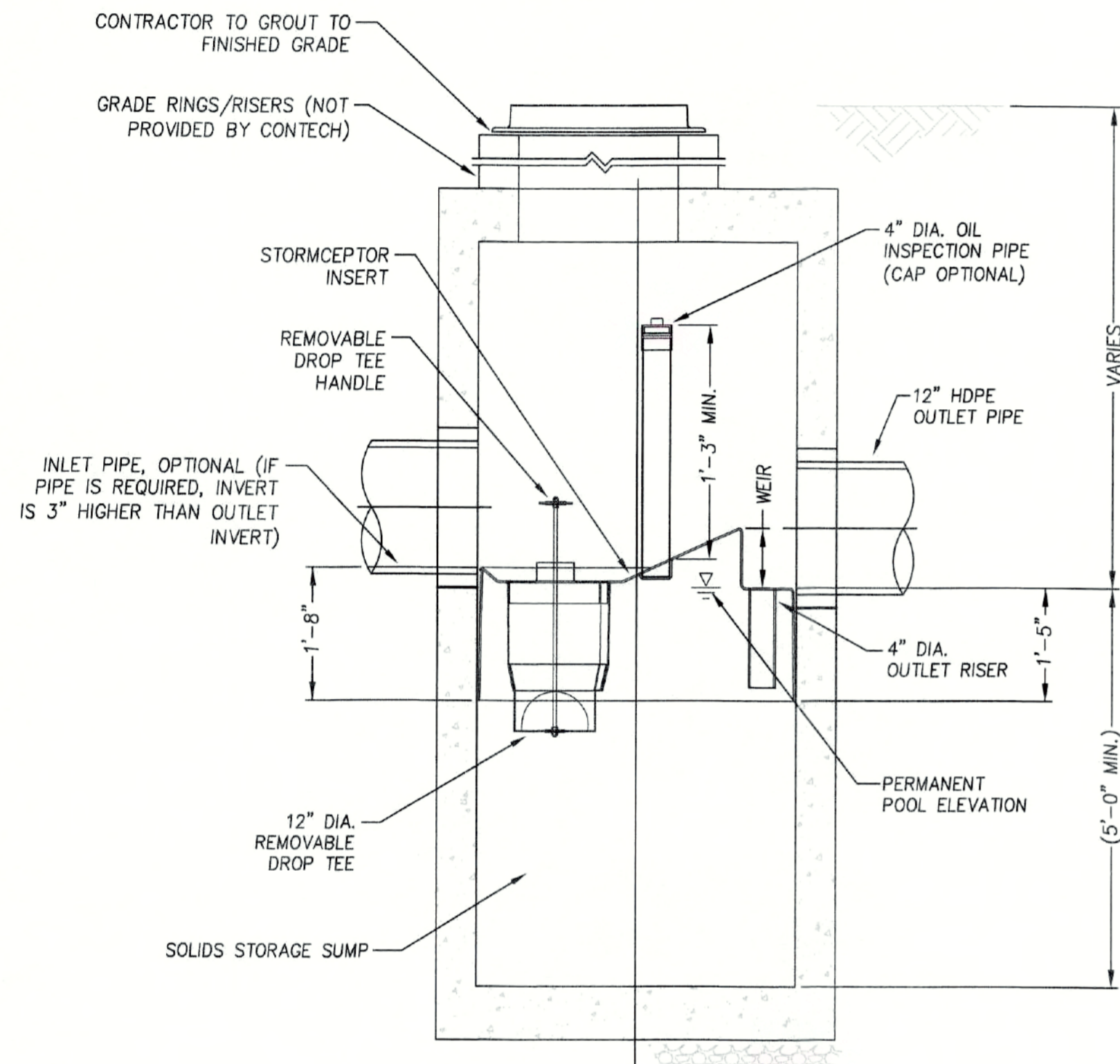


GENERAL NOTES

1. CONTECH SHALL PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT. STORMCEPTOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610] AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
3. STORMCEPTOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.

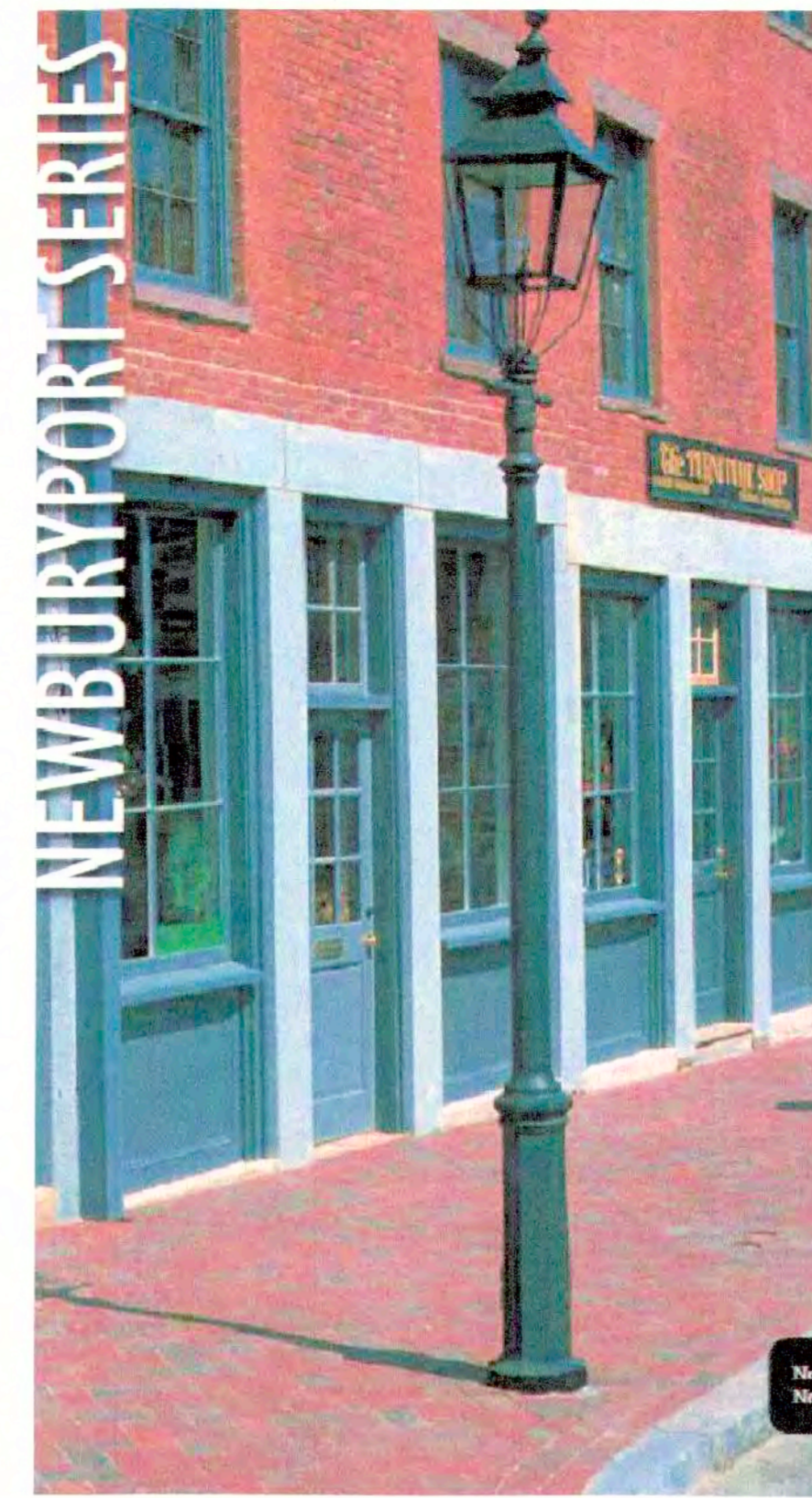
INSTALLATION NOTES

1. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
2. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMCEPTOR MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
3. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
4. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
5. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.



**STC450i STORMCEPTOR
DETAIL**

N.T.S.



**STREET LIGHT
DETAIL**

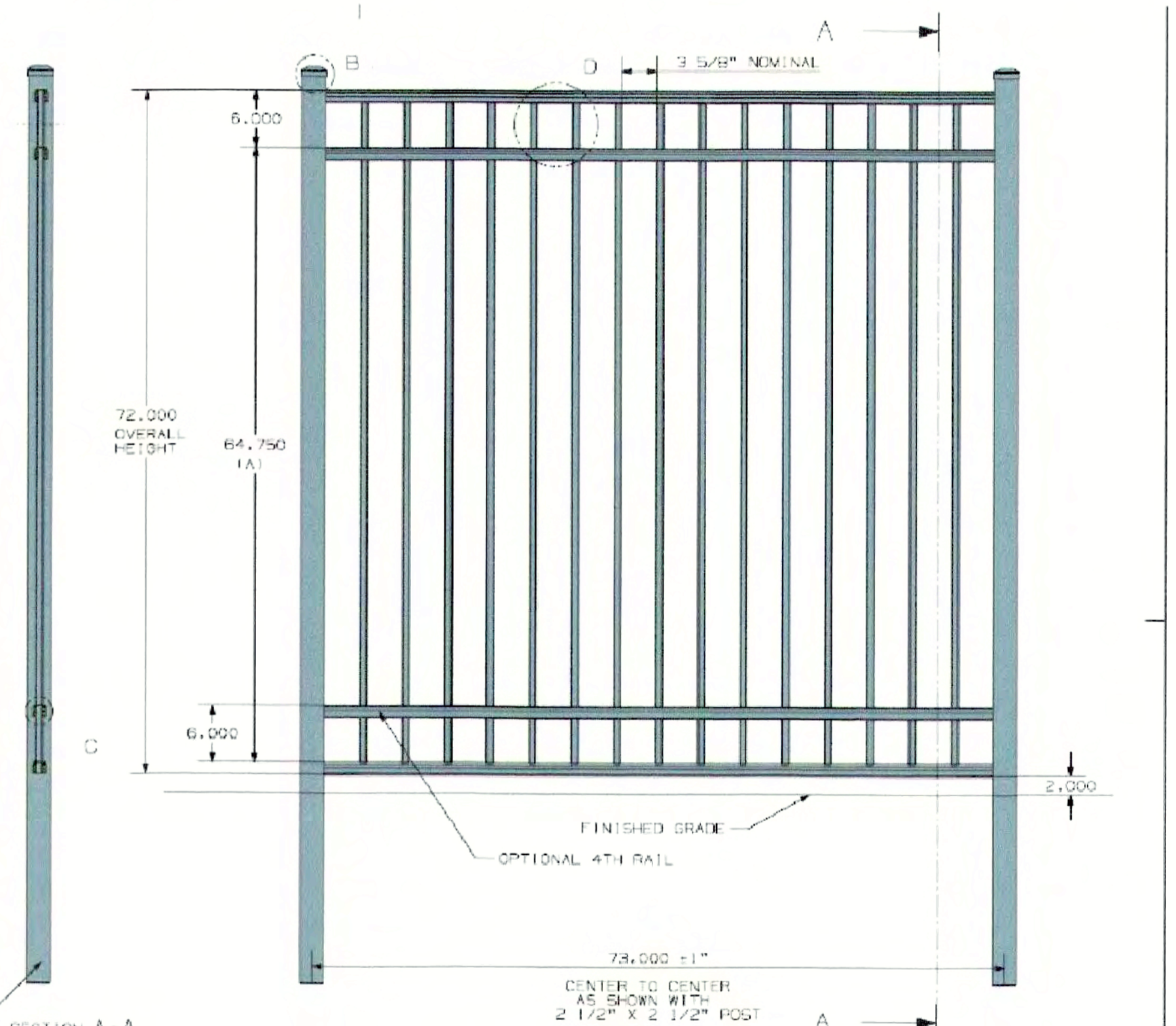
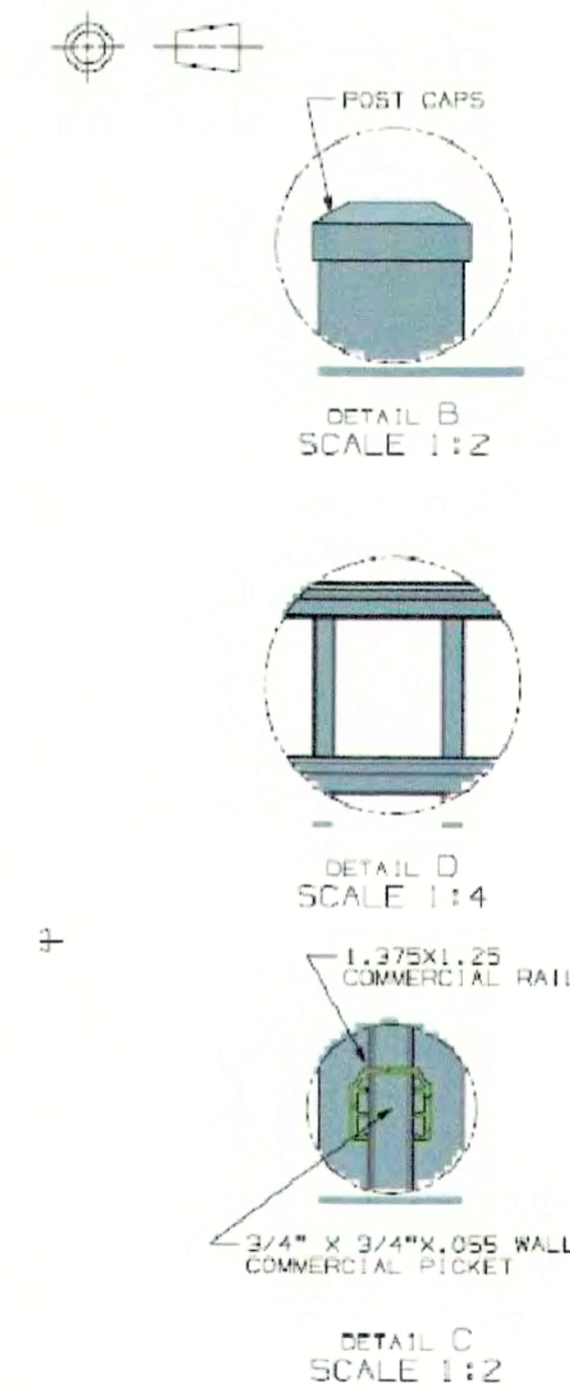
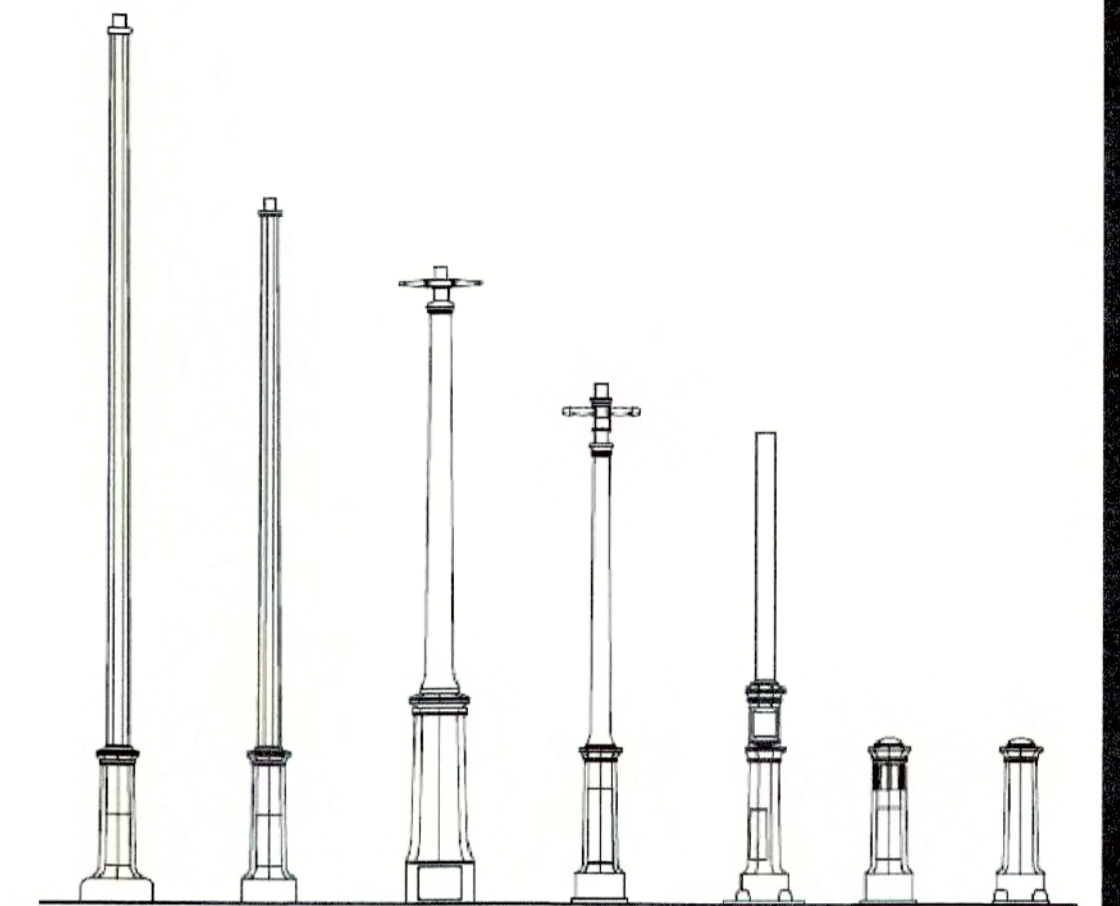
N.T.S.

ONE-PIECE CAST		BI-METAL	
Base Diam.	Height	Base Diam.	Max. Height
13"	9' 3"	13"	18'
16"	12' 13"	17"	18'
18 1/2"	9' 2"		

Material: Ductile Iron, Gray Iron, Aluminum

HISTORY

The Newburyport was first installed as a gas light pole in the 1850s. Since then, the design has become popular throughout New England. The Newburyport lamppost is distinguished by its octagonal middle and upper base sections and its round column and pedestal sections.

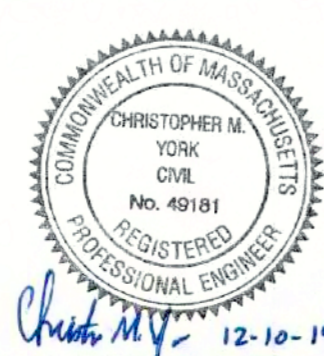


HEIGHT	A
3'	28 3/4"
3 1/2'	34 3/4"
4'	40 3/4"
4 1/2'	46 3/4"
5'	52 3/4"
6'	64 2/4"

3D CAD MASTER PART NAME:

**ALUMINUM FENCE
DETAIL**

N.T.S.



PREPARED FOR
STEVEN LEWIS
11 WINDWARD DRIVE
NEWBURYPORT, MA 01950



MILLENNIUM ENGINEERING, INC.
ENGINEERING AND LAND SURVEYING
62 ELM ST. SALISBURY, MA 01952 (978) 463-8980
13 HAMPTON RD. EXETER, NH 03833 (603) 778-0528

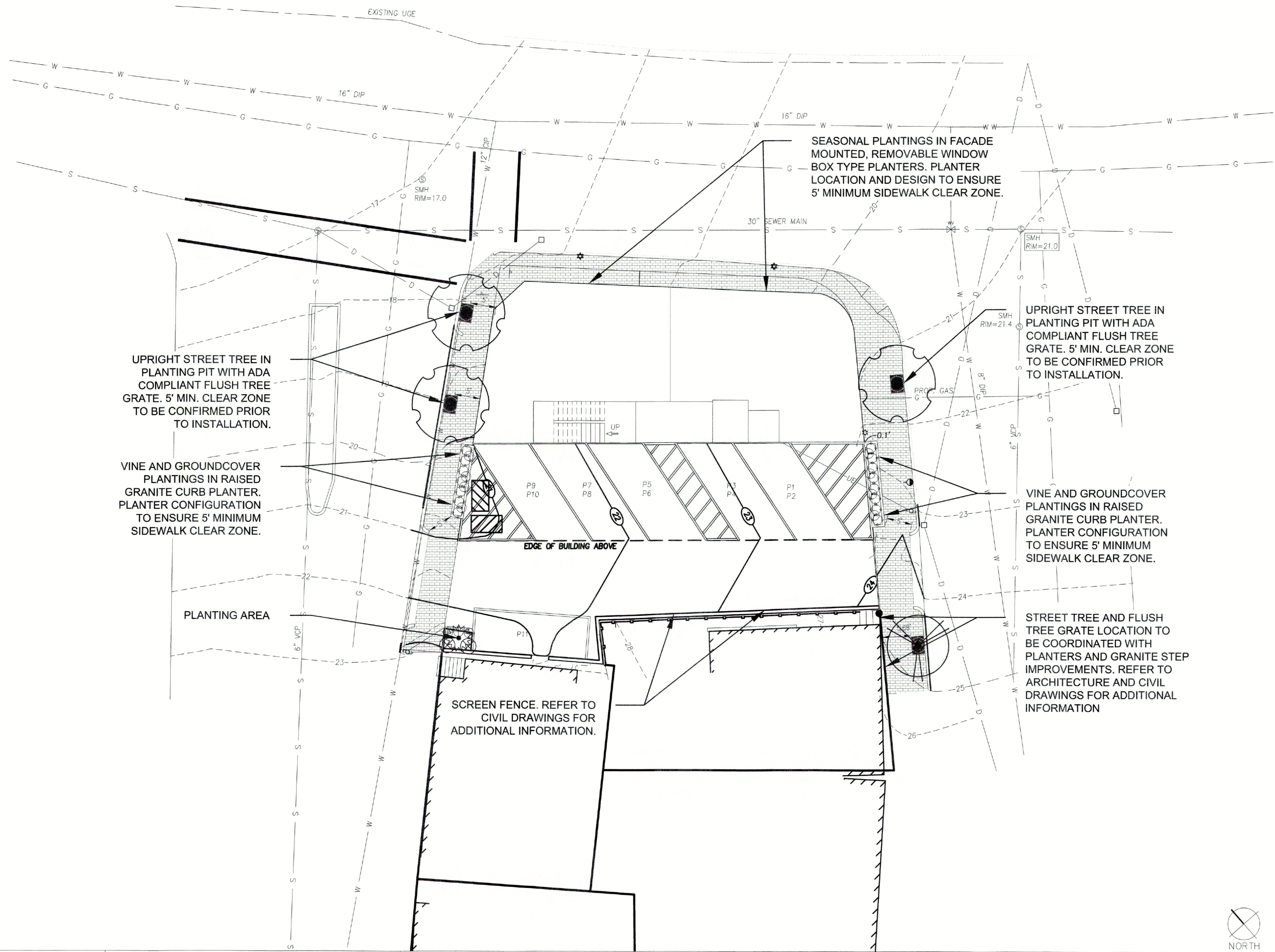
**PLAN OF LAND
IN
NEWBURYPORT, MA**

SHOWING
PROPOSED SITE IMPROVEMENTS
AT
2-6 MARKET STREET
(MAP 47 - LOT 59)

**ROADWAY
AND
DRAINAGE
DETAILS**

SHEET: C-6

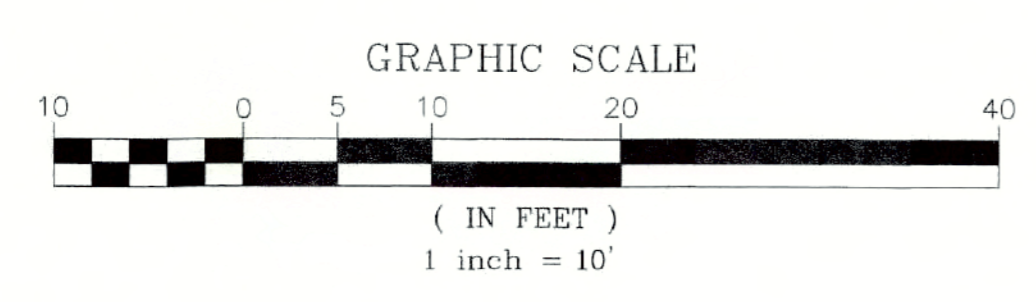
NO.	DATE	DESCRIPTION	C.M.Y.	BY	SCALE: AS NOTED	CALC. BY: Z.T.J.	PROJECT: M193613
1	12/10/19	ADDRESS REVIEWER'S COMMENTS			DATE: NOV. 20, 2019	CHKD. BY: E.W.B.	



PLANT MATERIAL LEGEND

SYMB.	SPECIES	ZONE	SIZE	QTY.
DECIDUOUS TREE				
	<i>Quercus robur</i> f. 'fastigiata' Fastigate English Oak	5	2' - 3" Cal.	3
	<i>Carpinus betulus</i> 'fastigiata' Fastigate Common Hornbeam	4	2' - 3" Cal.	1
EVERGREEN SHRUB				
	<i>Ilex opaca</i> 'Clarendon' American Holly - Clarendon variety	5	#2 Container	1
DECIDUOUS SHRUBS				
	<i>Clethra alnifolia</i> Sweet Pepperbush	3	#2 Container	2
WILDFLOWERS				
	<i>Aquilegia canadensis</i> Wild Columbine	3	#SP3	3
	<i>Muhlenbergia capillaris</i> Pink Muhlygrass	5	#SP3	15
VINES				
	<i>Hedera helix</i> English Ivy	4	#SP3	8
LANDSCAPE MATERIALS				
	Organic Mulch (All planting beds) Shredded tree bark, dark brown, 3" depth			150 s.f.

NOTES:
1. Not all plant material may be used and some may be added prior to final review and approval by jurisdictional agencies.



PREPARED FOR
STEVEN LEWIS
11 WINDWARD DRIVE
NEWBURYPORT, MA 01950

NO.	DATE	DESCRIPTION	BY

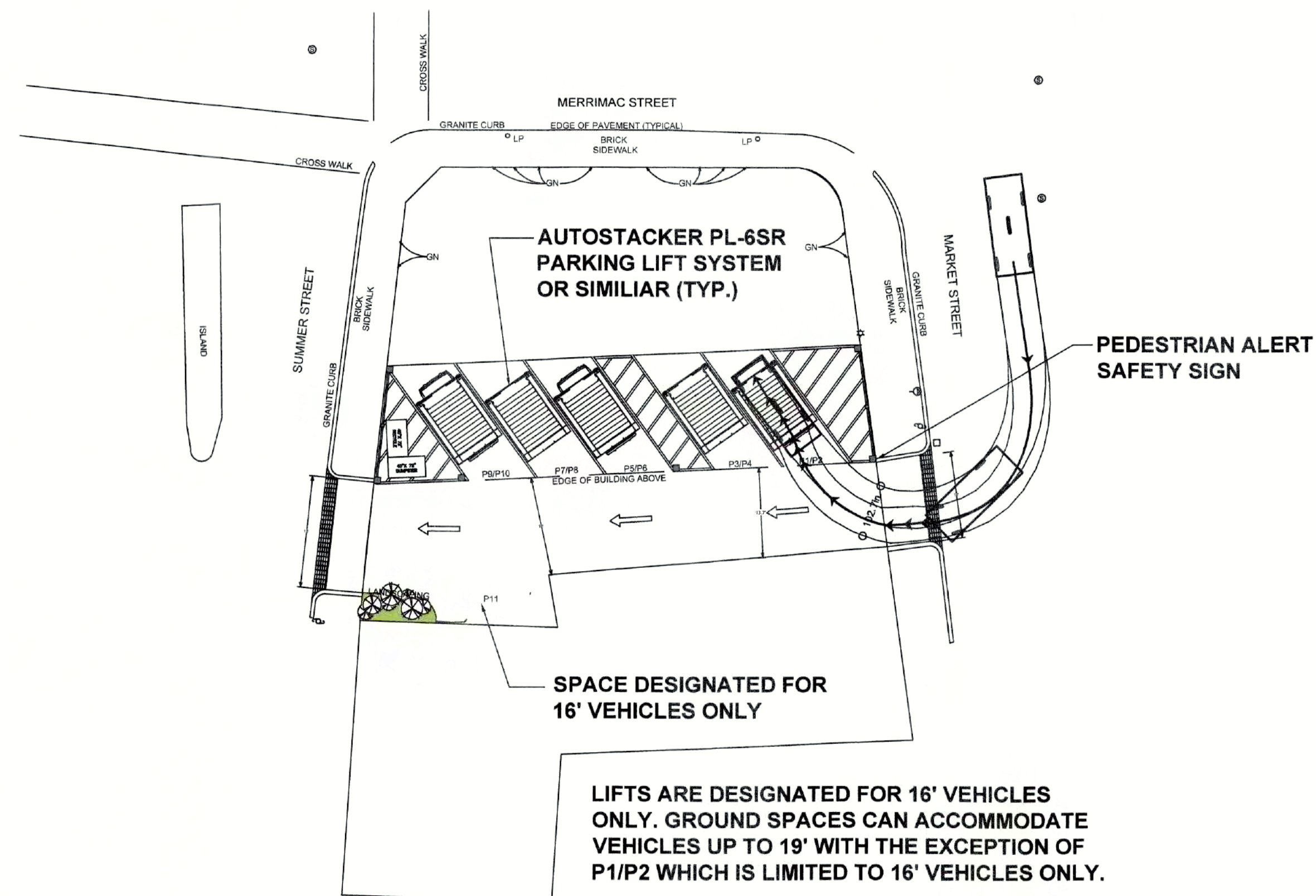
MEI **MILLENNIUM ENGINEERING, INC.**
ENGINEERING AND LAND SURVEYING
62 ELM ST. SALISBURY, MA 01952 (978) 463-8980
13 HAMPTON RD. EXETER, NH 03833 (603) 778-0528

SCALE: 1"=10'
DATE: DEC. 10, 2019
CALC. BY: H.A.S.
CHKD. BY:
PROJECT: M193613

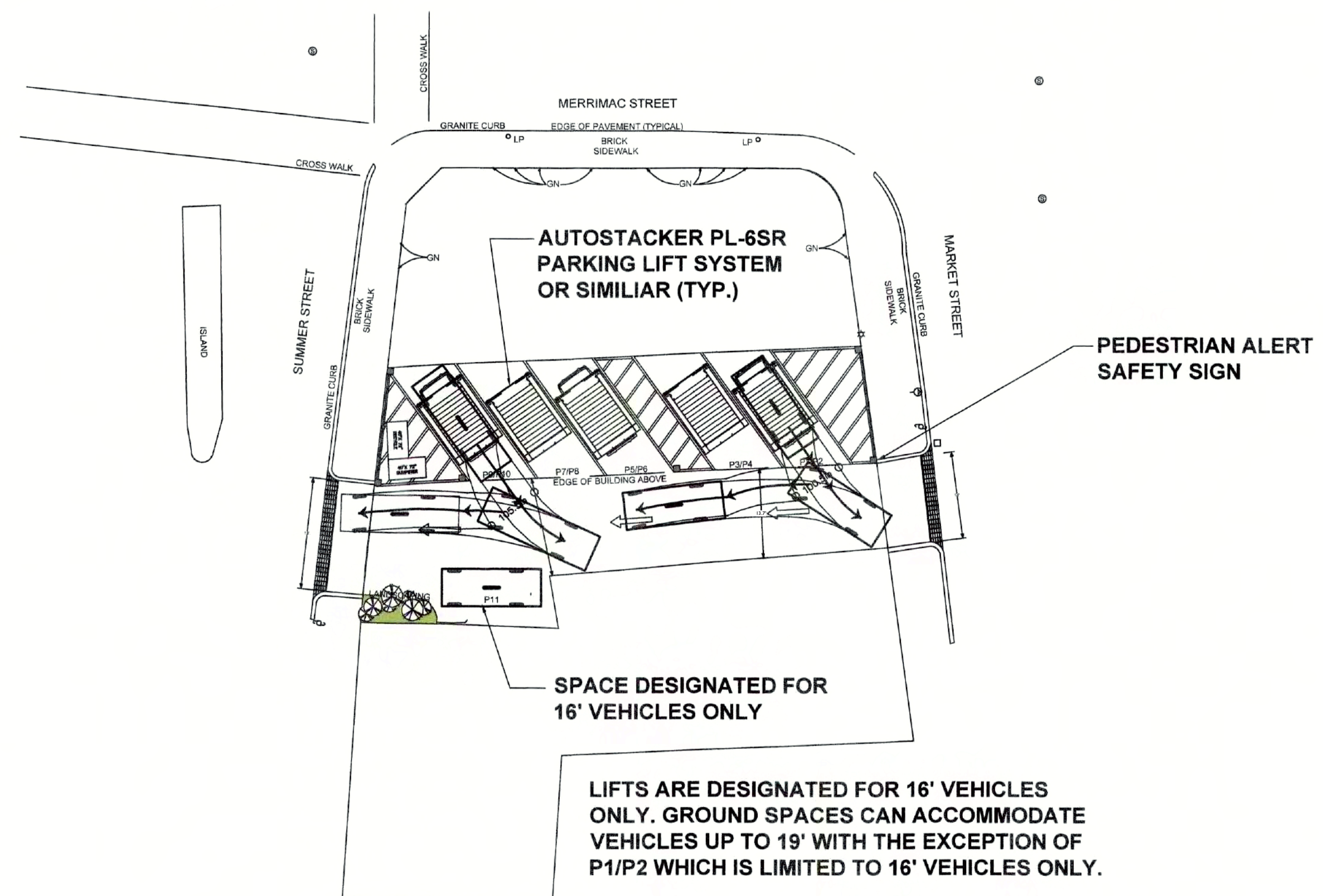
PLAN OF LAND
IN
NEWBURYPORT, MA
SHOWING
PROPOSED SITE IMPROVEMENTS
AT
2-6 MARKET STREET
(MAP 47 - LOT 59)

LANDSCAPE
PLANTING
PLAN
SHEET: L-1

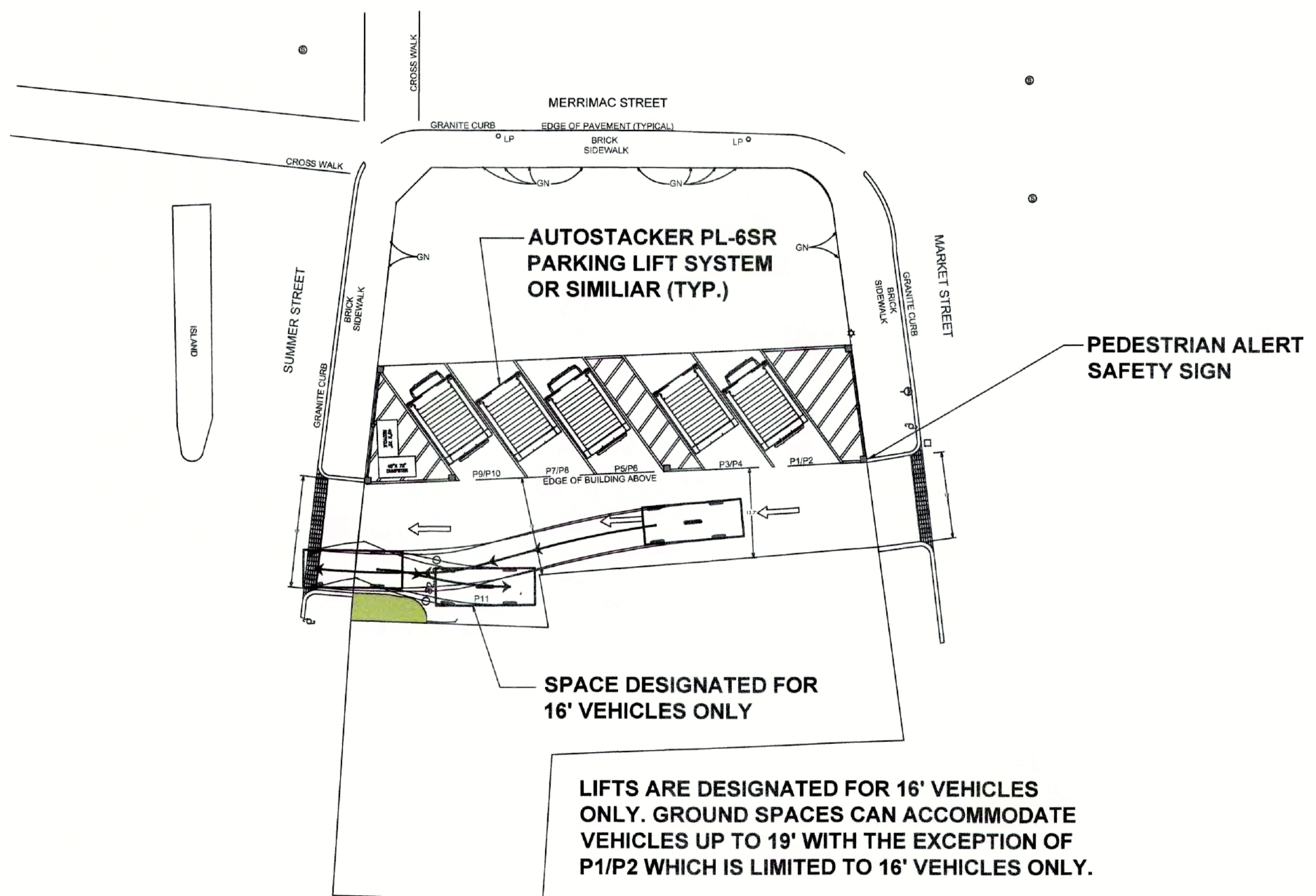




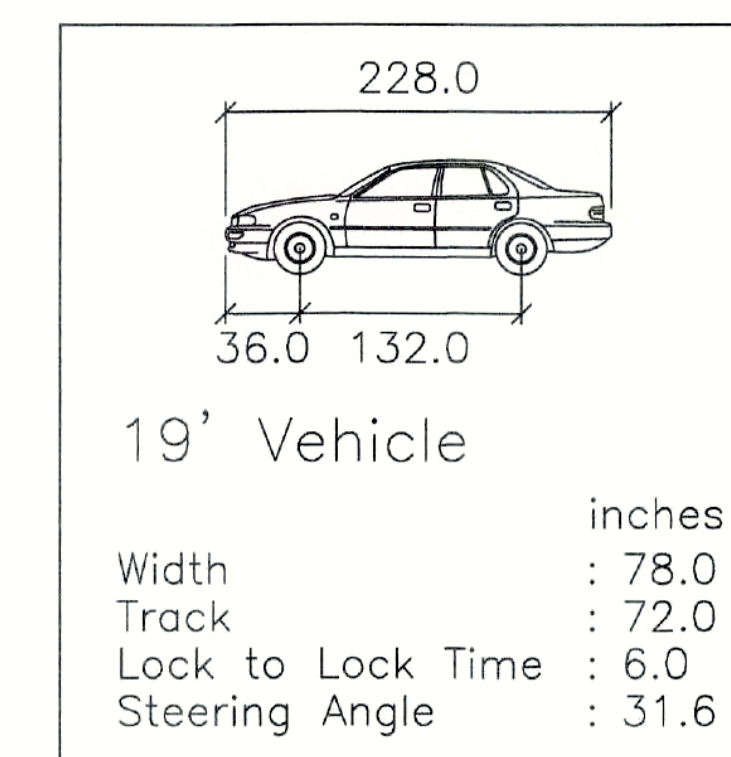
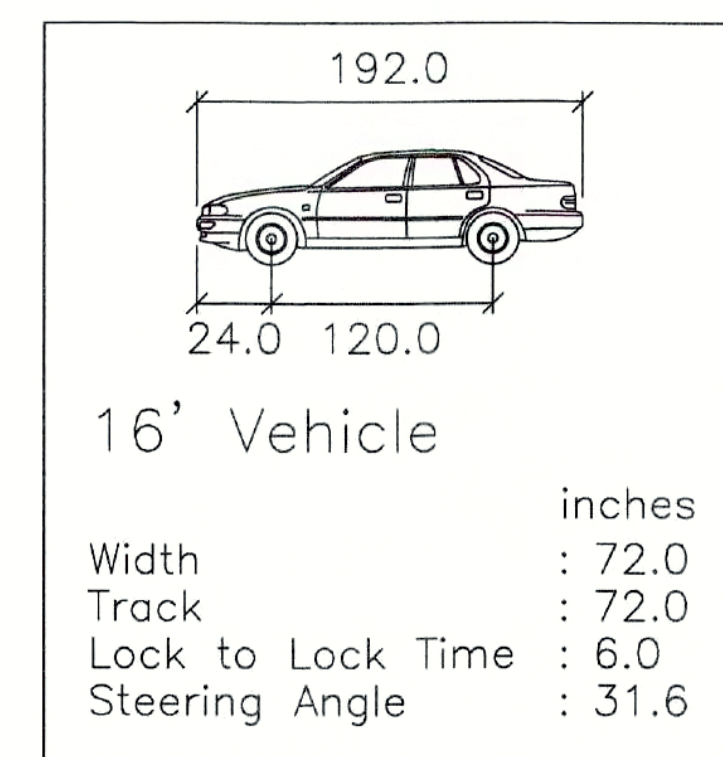
16' VEHICLE ENTERING P1-P2 SPACE



16' VEHICLE EXITING P1-P2 AND 19' VEHICLE EXITING P9-10 SPACES

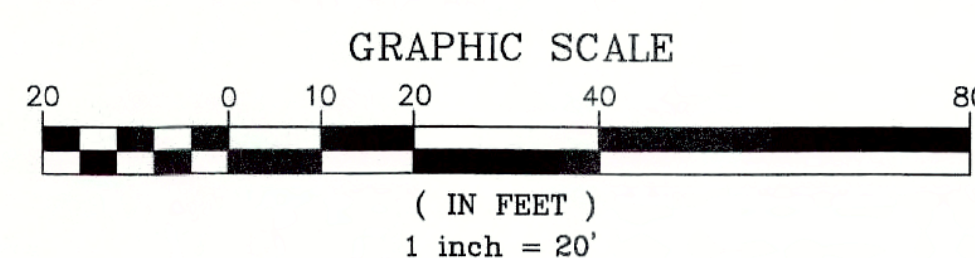


16' VEHICLE ENTERING P11 SPACE



VEHICLE PROFILES

PREPARED BY VANASSE & ASSOCIATES, INC.



PREPARED FOR
STEVEN LEWIS
11 WINDWARD DRIVE
NEWBURYPORT, MA 01950

MILLENNIUM ENGINEERING, INC.
ENGINEERING AND LAND SURVEYING
62 ELM ST. SALISBURY, MA 01952 (978) 463-8980
13 HAMPTON RD. EXETER, NH 03833 (603) 778-0528

PLAN OF LAND
IN
NEWBURYPORT, MA
SHOWING
PROPOSED SITE IMPROVEMENTS
AT
2-6 MARKET STREET
(MAP 47 - LOT 59)

TURNING MOVEMENTS

SHEET: TM-1

NO.	DATE	DESCRIPTION	BY
	DATE: DEC. 10, 2019	SCALE: 1"=20'	CALC. BY: Z.T.J.
		CHKD. BY: J.S.H.	PROJECT: M193613



MILLENNIUM ENGINEERING, INC.
Land Surveyors and Civil Engineers

December 10, 2019

Newburyport Planning Board
City Hall
60 Pleasant Street
Newburyport, MA 01950

Attn: Andy Port
City Planner

Subject: 2-6 Market Street Response to Engineering Review Comments

Dear Andy:

In response to design review comments provided by Phil Christiansen and Jon-Eric White, we have prepared the following responses. Please note these address outstanding issues. All previously addressed issues are not included.

Phil Christiansen Comments

Stormwater Management

The applicant has submitted a stormwater HydroCAD analysis of the site not a Stormwater Management Plan as stated in the letter. The conclusion of the analysis is that there isn't any increase in volume or rate of flow stormwater from the property. While the analysis is flawed the end result of the design is that less stormwater will flow in the streets because the roof drains are proposed to be directly tied to the street drainage piping system in Merrimac Street and as a result the project will lessen potential flooding in the streets.

Under existing conditions all of the runoff water from the 6150 square feet of the site flows onto the streets. Under proposed conditions the runoff from 3650 square feet (roof area) of the site will flow directly into the drainage piping system in Merrimac Street. This design is an overall improvement to Stormwater Management at this busy intersection.

See attached review of HydroCAD analysis for additional detailed comments.

Response: We agree that the design will result in an overall improvement to the Stormwater Management at the Merrimac Street intersection.

Traffic Impacts

The elimination of the uncontrolled driveway on Merrimac Street that serves the existing business is a great improvement to the flow of traffic on Merrimac Street. The design of the driveway entering from Market Street and exiting onto Summer Street is good and the proposal to install a warning sign and tone at the Market Street entrance is an improvement.

Response: We agree that the proposed design results in an overall improvement to the traffic flow in the Merrimac St/Market St/and Summer St area. Based on the redesign the intrusion of vehicles backing out of P1/P2 onto the sidewalk will be minimal.



MILLENNIUM ENGINEERING, INC.
Land Surveyors and Civil Engineers

Parking Configuration

As stated in the letter from Vanasse & Associates the “parking angle has been established at 60degrees” but the angle measured from the plans is 63-degrees. The parking angle on the plans should be adjusted to comply with the Vanasse report. It is further discussed in the letter that 13.5 feet aisle width is needed behind a parking space at a 60-degree angle. References I have seen show a requirement of 16 to 18 feet of aisle with behind a 60-degree parking space. Vanasse should provide the reference for the 13.5 feet of aisle width requirement. The engineering plans for the project show a minimum of 13.7 feet for aisle width, the architectural plans show 14.6 feet in drawing AO.1 and I scale the distance from the engineering plans at 13.4 feet. The aisle width should be checked, and the same width should appear on all plans.

Response: The plans have been updated accordingly. The angle of the parking spaces has been changed to 57 degrees. The 13.5-foot aisle width remains. The 14'-6" dimension shown on the architectural plans is to the property line.

The limited isle width coupled with the use of the Autostscker PL-6SR Parking Lift Platforms make entering and exiting P1/P2 and possibly P3/P4 problematic. The platform width is approximately seven feet. An individual would have to back out straight until the front wheels were clear of the raised metal on each side of the platform. See attached pdf with a car shown in blue. Vanasse should provide turning movement diagrams for vehicles entering and exiting P1 and P3 using the proper aisle width and specifying the type or size of car used.

Response: 2 parking spaces have been eliminated and the parking layout has been revised. Vanasse has provided turning templates for the revised parking layout.

Retaining Walls

There aren't any retaining wall details in the submitted plans. The applicant should specify if the wall is proposed to be on the applicant's property or on the property of the abutter on Summer Street. If easements are necessary for the construction of the wall they should be submitted to the Board prior to construction.

Response: The wall is shown to be built on the applicant's property. A note has been added to the plans stating that the wall shall be designed by others.

Roadway Improvements

The wording of the engineer is that the driveway is “designed” yet designs of the drives are not in the plans. They should be included in the plan set.

Response: The driveway design has been updated to include spot grades and a typical cross section as shown on plan sheet C-5.

Utilities

The proposed utilities locations have been added to the plans. The existing utilities shown on the plans may be incorrect.



MILLENNIUM ENGINEERING, INC.
Land Surveyors and Civil Engineers

Response: The existing utilities have been updated. They were incorrectly labeled on the previous plans.

Architectural Elevations

As stated, additions have been made to the architectural elevations. Windows in the commercial area are not detailed.

Response: The architectural plans have been updated in the commercial portion of the building.

Soil Conditions

The Mass Contingency Plan is not included in the revised submittal

Response: The Mass Contingency Plan has been included in the resubmittal.

Snow Removal

Has the applicant made provisions for snow removal for “significant snowfall events”? Considering the limited aisle width, it would seem snow removal to an offsite location is necessary for all snowfall events.

Response: A note has been added to the plans stating that snow will be removed from site in accordance with all local, state, and federal regulations (see note 10, sheet C-2).

Demolition and Erosion Control

A plan has been submitted entitled GRADING, EROSION AND SEDIMENT CONTROL PLAN. See specific comments below

Response: See responses below.

Construction Sequencing

The applicant proposes to submit a Construction Management Plan to the City in advance of commencing construction. The Board should consider requiring the Plan as condition of approval for review and approval of the Board prior to commence of work or if the plan should be submitted prior to approval of the Site Plan.

Response: It is our understanding that the board will require this plan be submitted to the city as part of a conditional approval

Review of Vanasse & Associates letter of November 18, 2019

See comments provided under Traffic Impacts and Parking Configuration

Response: See responses below.



MILLENNIUM ENGINEERING, INC.
Land Surveyors and Civil Engineers

Existing Conditions Plan

As stated by the engineer spot grades and utilities have been added to the plan. The catch basins in Merrimac and Summer Streets are shown to connect into a sewer junction that is within the cross walk of Summer Street. A sewer manhole is shown within Merrimac Street northeast of the cross walk labeled SMH, Rim = 17.0. The engineer should clarify if the SMH is misplaced and should be located within the cross walk or if its location is correct and the sewer shown in Merrimac Street should be tied into it.

Response: As mentioned above, the existing utilities have been updated. They were incorrectly labeled on the previous plans.

Site Plan

Sewer, water, drain and gas proposed locations are shown on the revised plan. Electric is not shown. Will it be overhead or underground?

Response: Underground electric has been added to the plans (see sheet C-2).

Connecting the roof drainage to the City's drainage system keeps the water off the streets and lessens potential flooding during major storms. However, the drainage system as shown ties into the sewer system which means inflow is being added to the sewer system. Jamie Tuccolo of the DPS sewer Division should be consulted about the proposed connection. There are several manholes within the intersection of Summer and Merrimac Streets that are not shown on the plan

Response: As previously mentioned, the existing utilities have been updated. The SMH located within the crosswalk is in fact a DMH, so the drainage system does not drain into the sewer system.

The plan should specify if all of the curbing shown on the plan is proposed to be new or if existing curb is to be left in placed or reset.

Response: It is the intention to reuse all of the existing curbing which has now been labeled as remove and reset (R & R). However, if it is found that the condition of the existing granite is not acceptable to the City, it will be replaced with new curbing.

Ramps for Handicapped access should be shown.

Response: Ramps have been added to the plan (see sheet C-2).

The brick sidewalk should be shown.

Response: Brick sidewalks have been added to the site plans (see sheet C-2).

The paved areas on site should be labeled.

Response: The paved areas have been labelled (see sheet C-2).



MILLENNIUM ENGINEERING, INC.
Land Surveyors and Civil Engineers

The lamp posts locations should be shown.

Response: Lamp post locations have been added to the plans (see sheet C-2).

The wall elevations are on the Grading Plan not the Site Plan.

Response: We typically show retaining wall grades on the grading plan only.

The downspout locations are shown but the invert elevations are not.

Response: Inverts have been added to plans (see sheet C-3).

A fence line has been added to the site plan, but details are not provided. If the fence is to be placed on the abutter's property an easement document should be submitted to the Board.

Response: The fence will be located on top of the retaining wall. A note has been added to the plan that the attachment will have to be designed by a professional structural engineer.

The snow removal note is not on sheet 5.

Response: The note has been added to the plans stating that snow will be removed from site in accordance with all local, state, and federal regulations (see note 10, sheet C-2).

Erosion and Sedimentation Control

The location of proposed erosion control has been placed on the plan sheet entitled GRADING EROSION AND SEDIMENTATION CONTROL PLAN Sheet 3 of 5. There is a note on that plan specifying a 2" thick layer of straw mulch is to be placed over the soil after the existing building is removed. Catch basin inlet protection has been added to the detail sheet but should be referenced at the three catch basins shown on sheet 3 of 5.

Response: Silt sack labels have been added to the catch basins (see sheet C-2).

Demolition and construction on a small site within a City are difficult and need to be properly planned. An erosion control plan should work in conjunction with a demolition phasing plan and a construction phasing plan. The staked silt fence and haybales shown in the details cannot be installed until after the asphalt is removed and does not encompass the entire work area. See comments regarding a sequencing plan below.

Response: See responses below.

Detail Sheet

The following details were not added to the plan

Retaining wall detail
Granite curb transition detail



MILLENNIUM ENGINEERING, INC.
Land Surveyors and Civil Engineers

Driveway apron detail
Fence detail

Response: The appropriate details have been added to the plans.

A concrete sidewalk detail was added to the detail sheets, but it appears from the architects plans that the sidewalk will be brick.

Response: The plans have been revised accordingly (see sheet C-2).

Comments on Text Presentation

The engineering and architectural drawings have been modified to both show angled parking and the lift system has been changed from a Model No 2LP to an Autostacker model PI-6SR. The plans show 12 angled parking spaces and one parallel space. See comments above concerning the accessibility of the parking spaces.

Response: See above response.

The engineer suggests the rear wall of the existing building will be part of the retaining wall along the southerly property line. The remainder of the wall will be designed by a structural engineer. Plans of the design and phasing of demolition and construction will be submitted to the building inspector prior to the commencement of work.

Response: No response required.

The demolition of the building and the wall construction are critical in determining the number of parking spaces on site. If the rear wall of the existing building cannot be used and a new wall needs to be built it will most likely encroach on the parking aisle width thereby reducing the number of available parking spaces. If that is the case the applicant will need additional spaces in the parking garage and require a larger payment to ITIF.

Response: See above response.

The engineer proposes to submit a demolition plan and sequence when the demolition application permit request is submitted to the building inspector and the construction plan and sequence will be submitted to the building inspector at the time of the submittal of the building permit.

Response: No response required.

Stormwater Calculations

As previously stated, the proposed drainage design is an improvement over the existing conditions. While the analysis has flaws as noted below it is not necessary that it be rerun.

The rainfall rates that should be used for the analysis as most recently approved by Jon-Eric White, City Engineer are

2-year

10-year

100 year



MILLENNIUM ENGINEERING, INC.
Land Surveyors and Civil Engineers

2.63 inches

4.83 inches

8.94 inches

These rates should be used in future work.

Using a 6-minute time of concentration is not appropriate for such a small and intensely developed parcel and the times of concentration which can be calculated within the HydroCAD program should be used.

The proposed roof area as shown in the calculations as 2270 square feet when it scales from the plans to be 3650 square feet.

Response: We appreciate the engineer's feedback. He is correct regarding the roof area shown in the calculations. It should've been shown as 3,685 s.f. The pavement area would then be reduced to 2,340 s.f., resulting in the same impervious footprint of 6,025 s.f.

Architectural Plans

The aisle width shown on Plan AO.1 do not agree with the aisle width shown on the engineering plans.

Response: The 14'-6" dimension shown on the architectural plans is to the property line.

The architectural plans clearly show a brick sidewalk and granite curbing not shown on the engineering plan.

Response: The plans have been revised accordingly to show brick sidewalk and curbing on the plans.

Jon-Eric White Comments

1. In general, there simply is not enough design data to understand how it will be built. I assume that these are "Permit-Level" drawings and, by definition, they lack details. However, this site is so small that it will be all about the details. I am not convinced that this design will work as currently shown.

Response: The architectural plans and engineering plans have been updated. Between the two sets, we believe there is enough information shown for a contractor to build the site.

2. The driveway entrance and parking spaces are too tight. The peer review comments regarding the car lifts sticking out is critical. I am very concerned with – and do not like the idea of – backing out onto a sidewalk. This is very risky and can easily result in serious injury, even with all the bells and whistles. Driving forward is one thing. Backing out is another. Kids do not understand those warnings and backing out has more blind spots than driving forward.

Response: 2 parking spaces have been eliminated and the parking layout has been revised. Vanasse has provided turning templates for the revised parking layout. Based on the redesign the intrusion of vehicles backing out of P1/P2 onto the sidewalk will be minimal.

3. I do not object to having the parking spaces be paved with asphalt and graded to drain out, towards the driveway. This will prevent the need for an internal catch basin that will then have to be connected to the



MILLENNIUM ENGINEERING, INC.
Land Surveyors and Civil Engineers

sanitary sewer system. In my opinion, because of the open front, this is nothing more than an outdoor parking lot. However, this is a Plumbing Code issue and must be reviewed by the Plumbing Inspector. If it is decided to install an internal catch basin, gas trap, and connected to sanitary sewer, then it has to be carefully looked at with an open front because we do not want an influx (I/I) of stormwater entering the sewer system.

Response: No response required.

4. There needs to be a means to capture the majority of the driveway runoff and treating it prior to spilling onto the sidewalk and into the gutter.

Response: The plans have been revised accordingly to show a Stormceptor onsite to capture and treat the driveway runoff before discharging into the City's drainage system.

5. The grading is important to review at this phase even if it's conceptual. Especially the proposed retaining wall, which isn't even shown on the Plans, only in the narrative. The wall design could require a much narrower driveway.

Response: The plans have been revised accordingly to show grading and the proposed walls. The driveway width has remained unchanged.

6. Are these car lifts suitable for outdoor conditions exposed to extreme freeze/thaw conditions of New England? They'll be covered with wind-swept rains, sleet, and snow and that seems dangerous for the average tenant/condo owner to operate. If they don't operate successfully, then they will have to park elsewhere.

Response: It is our understanding these car lifts are suitable for the typical conditions experienced in this area. Please note that the car lifts are located under cover of the building.

We trust this letter and revised plans provide the Board with the necessary information for their review. If you have any questions or concerns, please feel free to contact our office anytime.

Sincerely,

Millennium Engineering, Inc.

Christopher M. York, P.E.
Project Manager

Ref: 8409

December 10, 2019

Mr. Andrew R. Port, AICP
 Director of Planning & Development
 Office of Planning & Development
 City of Newburyport
 60 Pleasant Street
 Newburyport, MA 01950

Re: Proposed Mixed-Use Development
 2-6 Market Street
 Newburyport, Massachusetts

Dear Andy:

Vanasse & Associates, Inc. (VAI) is providing supplemental information in support of the proposed mixed-use development to be located at 2-6 Market Street in Newburyport, Massachusetts (hereafter referred to as the "Project"). This information is responsive to the comments that were received from the Planning Board at the December 4, 2019 hearing pertaining to: i) pedestrian volumes on the sidewalks bounding the Project site; and ii) lines of sight at the Project site driveway intersection with Summer Street. In addition, we have prepared a vehicle turning analysis for the following parking spaces which has been included as a part of the updated Site Plan submission: P1/P2, P9/P10 and P11. This analysis has demonstrated that vehicles are able to enter and exit the proposed parking spaces noting that vehicles assigned to the upper or elevated parking spaces, both vehicles assigned to the P1/P2 parking spaces and vehicles assigned to or using the P11 parking space should not exceed 16-feet in length.

The following summarizes the supplemental information that was requested by the Planning Board.

Pedestrian Volumes

Peak-hour pedestrian volumes were obtained from manual turning movement counts that were conducted in July 2018 for the sidewalk segments along Merrimac Street, Market Street and Summer Street bounding the Project site, and are summarized in Table 1.

**Table 1
 JULY 2018 PEAK-HOUR PEDESTRIAN VOLUMES**

Peak-Hour	No. of Pedestrians		
	Merrimac Street	Summer Street	Market Street
<i>AM Peak-Hour</i>	0	2	1
<i>PM Peak Hour</i>	6	5	0
<i>Saturday Midday Peak-Hour</i>	30	12	1

As can be seen in Table 1, pedestrian activity along the subject sidewalk segments were found to range from 0 to 6 pedestrians during the weekday peak hours and from 1 to 30 pedestrians during the Saturday midday peak-hour, with the largest number of pedestrians using the sidewalk segment along Merrimac Street. Pedestrian activity along the Market Street sidewalk was limited and found to range from 0 to 1 pedestrian.

This data indicates that pedestrian activity across the driveways that will serve the Project site along Market Street (one-way entrance) and Summer Street (one-way exit) is relatively minor, particularly along Market Street, minimizing the potential for conflicts with vehicles entering/exiting the Project site. In conjunction with the Project, the sidewalks along Merrimac Street, Market Street and Summer Street that bound the Project site will be reconstructed and improved. Further, an LED sign (“Watch For Vehicle” or similar) with audible tone will be provided at the Market Street driveway in order to warn pedestrians of the potential for a vehicle exiting the P1/P2 parking spaces that may cross into the driveway and sidewalk area. We note that the revised parking layout for the Project has significantly reduced the vehicle intrusion into the sidewalk area, which is now confined to a portion of the driver-side rear bumper for a vehicle exiting the P1/P2 parking spaces.

Sight Distance Analysis

Sight distance measurements were performed at the Project site driveway intersection with Summer Street in accordance with American Association of State Highway and Transportation Officials (AASHTO)¹ requirements. Both stopping sight distance (SSD) and intersection sight distance (ISD) measurements were performed. In brief, SSD is the distance required by a vehicle traveling at the design speed of a roadway, on wet pavement, to stop prior to striking an object in its travel path. ISD or corner sight distance (CSD) is the sight distance required by a driver entering or crossing an intersecting roadway to perceive an on-coming vehicle and safely complete a turning or crossing maneuver with on-coming traffic. In accordance with AASHTO standards, if the measured ISD is at least equal to the required SSD value for the appropriate design speed, the intersection can operate in a safe manner. Table 2 presents the measured SSD and ISD at the subject intersection.

¹*A Policy on Geometric Design of Highway and Streets*, 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2018.



Table 2
SIGHT DISTANCE MEASUREMENTS^a

Intersection/Sight Distance Measurement	Feet		Measured
	Required Minimum (SSD)	Desirable (ISD) ^b	
<i>Summer Street at the Project Site Driveway</i>			
<i>Stopping Sight Distance:</i>			
Summer Street approaching from the south	250	--	255
<i>Intersection Sight Distance:</i>			
Looking to the south from the Project Site Driveway	250	290	250+ ^c

^aRecommended minimum values obtained from *A Policy on Geometric Design of Highways and Streets*, 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); 2018; and based on a 30 mph approach speed for Summer Street.

^bValues shown are the intersection sight distance for a vehicle turning right exiting a roadway under STOP control such that motorists approaching the intersection on the major street should not need to adjust their travel speed to less than 70 percent of their initial approach speed.

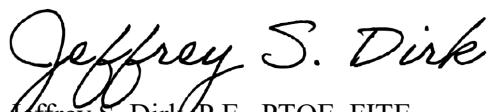
^cSight line that is available with driver positioned 12 feet from the edge of roadway (from within the sidewalk area).

As can be seen in Table 2, the available lines of sight at the Project site driveway intersection with Summer Street were found to meet or exceed the recommended minimum sight distance (SSD) to function in a safe manner based on a 30 mph approach speed along Summer Street (statutory speed limit) and with consideration of the urban environment in which the Project is located.² Consideration should be given to prohibiting parking within 20-feet (approximately one parking space) of the Project site driveway in order to provide the requisite sight lines for a vehicle exiting the Project site.

If you should have any questions regarding the supplemental information, please feel free to contact me.

Sincerely,

VANASSE & ASSOCIATES, INC.



Jeffrey S. Dirk, P.E., PTOE, FITE
 Partner

Professional Engineer in CT, MA, ME, NH, RI and VA

cc: S. Lewis – Newburyport Properties, LLC (via email)
 N. Cracknell (via email)
 File

²In an urban environment with a sidewalk and on-street parking, exiting motorists are assumed to temporarily occupy the sidewalk and the protected area formed by the parking lane in order to observe vehicles on the intersecting roadway.



AUTOSTACKER™

PL-6SR/SRX

6,000-lbs. Capacity / Scissors Parking Lift Platform

The Autostacker is the latest-model parking lift to hit the home and commercial markets. With the strength to handle loads up to 6,000 lbs. and the minimal footprint necessary for a home garage lift, the Autostacker is the perfect garage parking lift for any home or shop owner.

Other mechanical parking systems can appear unsightly in home garages. Plus, most lifts feature four columns that obstruct access around the garage. Autostacker has no posts whatsoever, so it looks like it belongs anywhere you put it. We know that low-profile vehicles often struggle to safely load onto lifts without the help of pricey specialty ramps. Autostacker features a patented, inclined platform that accommodates low-stance vehicles with ease. Solve your car stacking problems with the world's smartest low-profile home parking lift.



6,000-lb. (2,722 kg) Lifting Capacity



AUTOSTACKER SPECIFICATIONS AND FEATURES

There are enough features and cool parking lift tweaks on Autostacker to keep you safer, happier and better cared for than with virtually any parking lift out there. Everything about the Autostacker screams, "Upgrade!" From the impressive lift capacity and superior drive-through clearance to the simple, post-free design that fits in most parking spaces, this is the parking lift you want with all the protection you deserve.

DIMENSIONS

PL-6SR

- Overall Width: 103" (2,620 mm)
- Overall Length: 143" (3,630 mm)
- Platform Length: 124" (3,150 mm)
- Platform Width: 83.75" (2,128 mm)
- Ramp Height (entry): 2" (51 mm)
- Under Clearance on top lock: 80" (2,032 mm)

PL-6SRX (Extra Wide)

- Overall Width: 111" (2,815 mm)
- Platform Width: 91.75" (2,331 mm)

POWER

Standard - Power Unit Console

- Single unit operation
- Motor Voltage: 208-240 VAC / 50/60Hz / 1Ph
- Power Consumption: 1,500 Watts
- Motor Horsepower: 2 HP
- Starting Amps: 25A
- Normal Running Amps: 12-18A

Optional multi-unit power unit console available (Operates up to 12 lifts)

OPTIONAL ACCESS PANEL (51.5" x 30")

SOLD SEPARATELY



WHAT'S INCLUDED

- Right & left side superstructure
- Front wheel trough
- Ramp assembly with logo plate
- Lower front tie-bar
- Galvanized decking sections
- Front tire stops
- Power unit control console
- Complete assembly parts package
- Installation and operators manual

SPEED OF RISE

- **Standard power unit console:** 35 seconds
- **Optional multi-unit power unit console:** 20 seconds



AUTOSTACKER



Saving Lives, Preventing Accidents, Everyday

Minimize Your
Liability!

The Engineering is Done!



- Self-contained
- Timer Control Board
- Flashing letters and amber LEDs
- Voice Alert with speaker and volume control
- Power supply rated for parking facilities
- Ground mounted - steel enclosure
- Optional: Audio cut off timer
- Plays any MP3 audio warning file

Solution

Warns Pedestrians, of a vehicle exiting a facility, with Voice and Flashing LED Alerts

Vehicle Exit Warning Post



Proactive Protection

- Mitigate RISK
- Avoid lawsuits
- Reduce liability
- Protect pedestrians
- Avoid workers comp

**The World is a
Distracted Place**

passigns.com

CAR COMING POST Features

- Works with any parking system, motion detector, access control or as a stand-alone device
- Fully self-contained: No additional parts or enclosures needed
- Integrated full control system with Timers, Volume Control, Relays, MP3 Voice Board, and Speakers



PASS Signs

Pedestrian Alert Safety Signs

Have questions?

We make it easy for you.

480-689-1993

support@passigns.com

Operations

How the System Operates

An output trigger from a traffic control device activates the system when a vehicle is detected exiting a parking facility or blind corner.

(see types of triggers diagram below)

A PASS Control board is integrated inside the Post Enclosure

The trigger is received on INPUT B of the PASS Control. This activates the two alerts - Voice, and Flashing LED

The duration of the alerts is controlled by the Activation Timer (0-60 Seconds)

Specifications

Dimensions

Height: 48"

Dimensions: 48" x 6" x 6"

Material: Steel

Finish

Enclosure: Powdered coated Hammered Copper

Lettering: White LED

LED Colors: Amber Yellow

Electrical

LED lighting 50,000 hrs

Power In: 120VAC or 12VDC 5A

Power Out: 12VDC

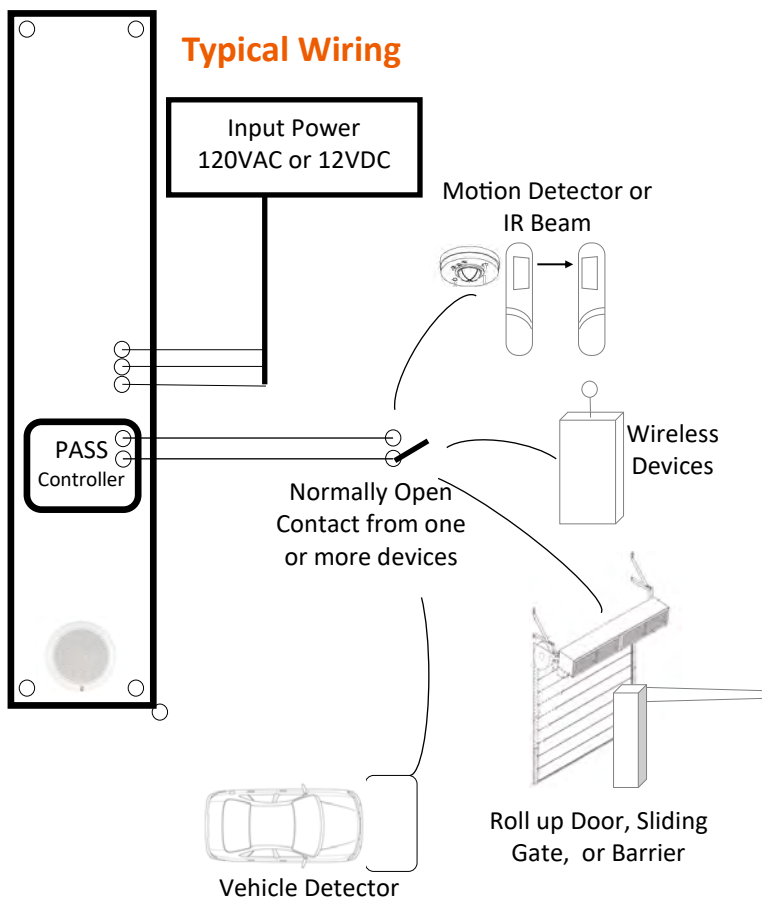
Trigger Input Requirement: Dry Normally Open Waterproof transformer (120V/12V) is integrated inside the sign enclosure

Audio

PASS Signs VM-1 MP3 Board

40 Watt Speaker

Audio Message can be changed easily onsite with laptop and USB to MicroUSB cable (android cable)
Output is 0-90db



PASS Control Board (Integrated)

12VDC Input Power

12VDC Output Power (for motion or detector)

MP3 Voice Board

Activation Timer Dial 0-60 Seconds

Delay before Activation Dial 0-15 Seconds

Volume Dial 0-90dB

Input 1: Activates Sign

Output 1: Steady Output

Output 2: Flashing 1 sec On/Off Output

Speaker Output

Input 1 Test Button

Input 2 Test Button

 **PASS Signs**
Pedestrian Alert Safety Signs

support@passsigns.com

passsigns.com 480-689-1993



VCPG LED Parking Garage



Catalog
Number

Notes

Type

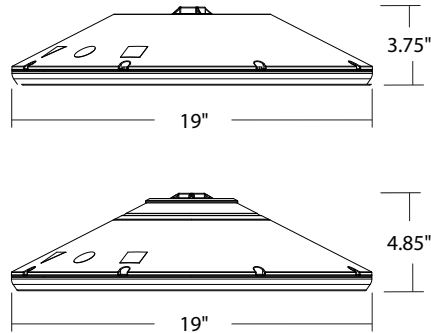
Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Diameter: 19"

Height: 3.75"
(4.85" with Up-Light)

Weight 18 lbs
(max, with
no options):



A+ Capable options indicated
by this color background.

Introduction

The all new VCPG LED (Visually Comfortable Parking Garage) luminaire is designed to bring glare control, optical performance and energy savings into one package. The recessed lens design of VCPG LED minimizes high angle glare, while its precision molded acrylic lens eliminates LED pixilation and delivers the required minimums, verticals and uniformity. The dedicated up-light module option reduces the contrast between the luminaire and the ceiling creating a more visually comfortable environment.

The VCPG LED delivers up to 87% in energy savings when replacing 175W metal halide luminaires. With over 100,000 hour life expectancy (12+ years of 24/7 continuous operation), the VCPG LED luminaire provides significant maintenance savings over traditional luminaires.

Ordering Information

EXAMPLE: VCPG LED V4 P4 40K 70CRI T5M MVOLT SRM DNAXD

VCPG LED									
Series	LED Light Engines	Package	Color temperature	Color Rendering Index	Distribution	Voltage		Mounting	
VCPG LED	V4 ¹ 4 Light Engines	P1 ¹	30K 3000 K	70CRI	T5M Type V, medium	MVOLT	For ordering with fuse		Shipped included
		P2 ¹	35K 3500 K	80CRI	TSR ² Type V, rectangular		347	120	
	V8 ¹ 8 Light Engines	P3 ¹	40K 4000 K			T5W Type V, wide	480	208	SRM Surface mount (24-inch length supply leads)
		P4 ¹	50K 5000 K			T5E Type V entry		240	
		P5 ¹				LANE ² Drive lane		277	
		P6 ¹						347	
		P7 ¹						480	
								YK Yoke/trunnion mount ⁹	

Options		Finish <i>(required)</i>
Shipped installed		DWHXD White DNAXD Natural aluminum DDBXD Dark bronze DBLXD Black
UPL1	Up-Light: 500 lumens	
UPL2	Up-Light: 700 lumens	
E8WC	Emergency battery backup, Certified in CA Title 20 MAEDBS (8W, -20°C min) ^{3,4,5}	
E10WH	Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, 5°C min) ^{3,4,5}	
HA	High ambient (50°C, only P1-P4)	
SF	Single fuse (120V, 277V, 347V)	
DF	Double fuse (208V, 240V, 480V)	
SPD10KV	10KV Surge Pack	
LDS36	36in (3ft) lead length	
LDS72	72in (6ft) lead length	
LDS108	108in (9ft) lead length	
DMG	External 0-10V leads (no controls) ⁶	
Shipped Separately		
WG	Wire Guard	
BDS	Bird Shroud ⁷	
HS	House Side Shield	
Standalone Sensors/Controls²		
PIR	Motion/ambient sensor for 8-15' mounting heights	
PIRH	Motion/ambient sensor for 15-30' mounting heights	
PIR3FC3V	Motion/ambient sensor for 8-15' mounting heights, pre programmed to 3fc and 35% light output	
PIRH3FC3V	Motion/ambient sensor for 15-30' mounting heights, pre programmed to 3fc and 35% light output	
PIR3FC3V924	UL924 Listed motion/ambient sensor for emergency circuit for 8-15' mounting heights, pre programmed to 3fc and 35% light output ¹⁰	
PIRH3FC3V924	UL924 Listed motion/ambient sensor for emergency circuit for 15-30' mounting heights, pre programmed to 3fc and 35% light output ¹⁰	
Networked Sensors/Controls²		
NLTAIR2 PIR	nLIGHT AIR Wireless enabled motion/ambient sensor for 8-15' mounting heights	
NLTAIR2 PIRH	nLIGHT AIR Wireless enabled motion/ambient sensor for 15'-30' mounting heights	
XAD	XPoint™ Wireless enabled ⁸	
XAD924	XPoint™ Wireless enabled, UL 924 Listed for emergency circuit ^{8,10}	
XAD PIR	XPoint™ Wireless enabled motion/ambient sensor for 8-15' mounting heights	
XAD PIRH	XPoint™ Wireless enabled motion/ambient sensor for 15-30' mounting heights	
XAD924 PIR	XPoint™ Wireless enabled, UL 924 Listed motion/ambient sensor for emergency circuits for 8-15' mounting heights ¹⁰	
XAD924 PIRH	XPoint™ Wireless enabled, UL 924 Listed motion/ambient sensor for emergency circuits for 15-30' mounting heights ¹⁰	



Ordering Information Cont.

Accessories

Ordered and shipped separately.

VCPGBDS DWHXD U	Bird shroud for PM (specify finish)
VCPGBDS YK DWHXD U	Bird shroud for YK (specify finish)
VCPGSRM U	Surface mount kit, with no Up-Light
VCPGUSRM U	Surface mount kit, with Up-Light
VCPGWG U	Wire guard
SLVSQ	Quick mount pendant swivel kit, square
SLVRD	Quick mount pendant swivel kit, round
VCPG YK DWHXD U	Yoke mount kit (specify finish)

NOTES

- 1 P1-P6 not available with V8. P7 not available with V4.
- 2 Not available with P7.
- 3 Not available with 347V or 480V.
- 4 E8WC and E10WH only rated up to 35°C ambient.
- 5 E8WC & E10WH only available with P1-P4 packages.
- 6 DMG option not available with standalone or networked sensors/controls.
- 7 BDS not available with UPL1 or UPL2.
- 8 XAD & XAD924 not available with PIR3FC3V924 and PIRH3FC3V924.
- 9 Only vertical height adjustment. No angle adjustment. Use PM and SLVSQ or SLVRD for mounting to angled ceiling or canopies.
- 10 Power interruption delay >30 milliseconds required for operation. Refer sequence of operations on page 4 for more details.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	Watts	Distribution Type	30K (3000K, 70 CRI)		35K (3500K, 70 CRI)		40K (4000K, 70 CRI)		50K (5000K, 70 CRI)	
			Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
P1	27W	TSE	3,581	135	3,670	138	3,815	144	3,876	146
		TSM	3,620	136	3,710	140	3,856	145	3,917	147
		TSW	3,592	135	3,681	139	3,827	144	3,888	146
		TSR	3,464	130	3,550	134	3,690	139	3,749	141
		LANE	3,507	132	3,594	135	3,736	141	3,796	143
P2	34W	TSE	4,577	135	4,691	138	4,876	144	4,954	146
		TSM	4,626	136	4,741	140	4,928	145	5,007	147
		TSW	4,591	135	4,705	139	4,891	144	4,968	146
		TSR	4,427	130	4,537	134	4,716	139	4,791	141
		LANE	4,482	132	4,594	135	4,775	141	4,851	143
P3	43W	TSE	5,808	134	5,952	137	6,187	143	6,286	145
		TSM	5,870	135	6,015	139	6,253	144	6,353	146
		TSW	5,825	134	5,970	138	6,205	143	6,304	145
		TSR	5,617	130	5,757	133	5,984	138	6,079	140
		LANE	5,688	131	5,829	134	6,059	140	6,155	142
P4	56W	TSE	7,391	131	7,575	135	7,874	140	7,999	142
		TSM	7,470	133	7,656	136	7,958	141	8,085	144
		TSW	7,414	132	7,597	135	7,898	140	8,023	143
		TSR	7,149	127	7,326	130	7,615	135	7,737	137
		LANE	7,238	129	7,418	132	7,711	137	7,834	139
P5	82W	TSE	10,189	124	10,442	127	10,854	132	11,027	134
		TSM	10,298	125	10,553	128	10,970	134	11,145	136
		TSW	10,220	124	10,473	128	10,887	133	11,060	135
		TSR	9,855	120	10,099	123	10,498	128	10,665	130
		LANE	9,978	121	10,226	124	10,629	129	10,799	131
P6	108W	TSE	12,878	120	13,197	123	13,719	127	13,937	129
		TSM	13,015	121	13,338	124	13,865	129	14,086	131
		TSW	12,917	120	13,237	123	13,760	128	13,979	130
		TSR	12,455	116	12,764	119	13,268	123	13,480	125
		LANE	12,611	117	12,924	120	13,435	125	13,649	127
P7	122W	TSE	15,503	125	15,887	128	16,515	133	16,778	135
		TSM	15,668	126	16,057	129	16,691	135	16,957	137
		TSW	15,549	125	15,935	129	16,564	134	16,828	136

Up-light Lumen Output

Up-light Option	Watts	Lumens
UPL1	6.5W	519
UPL2	8.5W	715

Lumen Multiplier for 80CRI

CCT	Multiplier
30K	0.926
35K	0.945
40K	0.967
50K	0.965

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient	Lumen Multiplier
0°C 32°F	1.03
10°C 50°F	1.02
20°C 68°F	1.01
25°C 77°F	1
30°C 86°F	0.99
40°C 104°F	0.98

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.97	0.94	0.89

Electrical Load

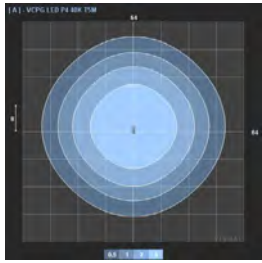
Power Package	System Watts	Current (A)					
		120V	208V	240V	277V	347V	480V
P1	27W	0.22	0.13	0.12	0.10	0.08	0.06
P2	34W	0.28	0.16	0.14	0.13	0.10	0.08
P3	43W	0.37	0.21	0.18	0.16	0.13	0.09
P4	56W	0.48	0.28	0.24	0.21	0.16	0.12
P5	82W	0.68	0.40	0.35	0.30	0.24	0.18
P6	108W	0.91	0.52	0.45	0.39	0.32	0.23
P7	124W	1.03	0.59	0.51	0.44	0.37	0.27



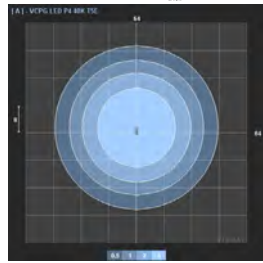
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the [Lithonia Lighting VCPG LED homepage](#).
Tested in accordance with IESNA LM-79 and LM-80 standards

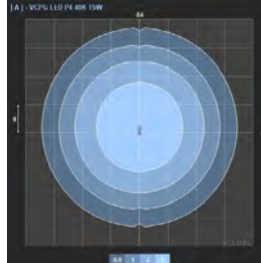
VCPG LED P4 T5M 40K



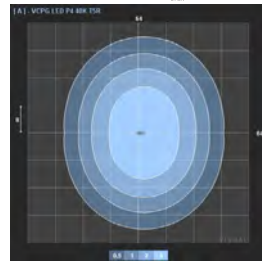
VCPG LED P4 T5E 40K



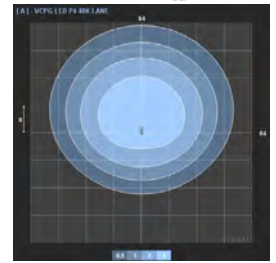
VCPG LED P4 T5W 40K



VCPG LED P4 T5R 40K



VCPG LED P4 LANE 40K



Control/Sensor Options

Motion/Ambient Sensor (PIR, PIRH)

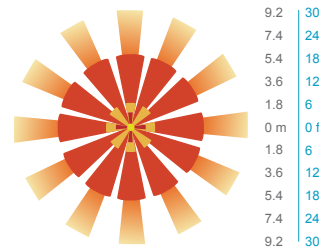
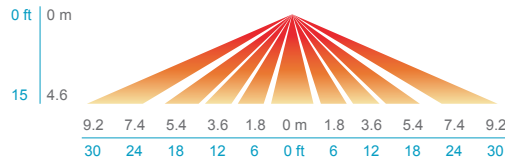
Motion/Ambient sensor (Sensor Switch MSOD, Xpoint MSOD) is integrated into the luminaire. The sensor provides both Motion and Daylight based dimming of the luminaire. For motion detection, the sensor utilizes 100% Digital Passive Infrared (PIR) technology that is tuned for walking size motion while preventing false tripping from the environment. The integrated photocell enables additional energy savings during daytime periods when there is sufficient daylight. Optimize sensor coverage by either selecting PIR or PIRH option. PIR option comes with a sensor lens that is optimized to provide maximum coverage for mounting heights between 8-15ft, while PIRH is optimized for 15-40ft mounting height.

Networked Control (NLTAIR2)

nLight® AIR is a wireless lighting controls platform that allows for seamless integration of both indoor and outdoor luminaires. Five-tier security architecture, 900 MHz wireless communication and app (CLAIRITY™ Pro) based configurability combined together make nLight® AIR a secure, reliable and easy to use platform.

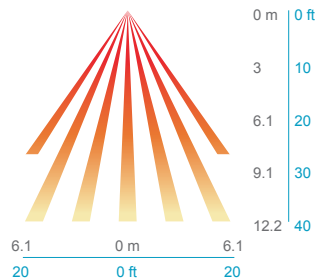
PIR

HIGH VIEW

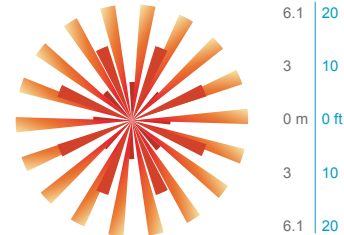


PIRH

SIDE VIEW



TOP VIEW



Motion/Ambient Sensor Default Settings

Option	Dim Level	High Level (when triggered)	Photocell Operation	Motion Time Delay	Ramp-down Time	Ramp-up Time
PIR or PIRH	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 5fc	5 min	5 min	Motion - 3 sec Photocell - 45 sec
PIR3FC3V or PIRH3FC3V	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 3fc	5 min	5 min	Motion - 3 sec Photocell - 45 sec

Sequence of Operations for UL924 Listed Controls/Sensors (PIR3FC3V924, PIRH3FC3V924, XAD924)

The UL924 listed control/sensor ("device") is designed to provide full light output for 90 minutes following power loss ("Egress Mode"), ignoring both manual and automatic dimming/occupancy/daylight control signals during this time. The sequence of operations is as follows:

- Normal condition: device can dim and turn off the luminaire as normal, in response to automatic and manual control.
- Utility power fails, and luminaire loses power.
- Backup power source activates, transfer switch moves the emergency circuit powering the luminaire onto the backup source, and luminaire regains power.
- The device detects this power interruption, if it is > 30ms (2 line cycles).
- The device ignores all dimming commands and controls the driver to full light output for 90 minutes.
- The device resumes normal dimming controls after 90 minutes.

These UL924 listed controls/sensors are not intended for use with Non-interruptible central emergency power systems. The power interruption, when transferring from normal utility power to emergency backup power, is required for the controller to activate its Egress Mode and provide full light output.



Mounting, Options & Accessories



PM – Pendant Mount
(compatible with 3/4" NPT,
pendant stem provided by
others)

D = 19"
H = 4.1"



SRM – Surface Mount

D = 19"
H = 4.1"



**SRM – Surface Mount
with Up-Light**

D = 19"
H = 5.3"



YK – Yoke/Trunnion Mount

D = 19"
H (Yoke) = 10"-18"



**PIR & PIRH – Motion/
Ambient sensor**

D = 19"
H = 4.6" (no up-light)
or 5.6" (with up-light)



**BDS – Bird shroud for
pendant mount**

D = 19"
H = 8"



**BDS – Bird shroud for
yoke mount**

D = 19"
H (Yoke) = 10"-18"



WG – Wire guard

D = 19"
H = 4.9" (no uplight)
or 5.9" (with up-light)



HS – House side shield

D = 19"
H = 7.1" (no up-light) or
8.1" (with up-light)

FEATURES & SPECIFICATIONS

INTENDED USE

The visually comfortable optics, energy savings, and long life of the VCPG LED Parking Garage luminaire make it an ideal choice for new commercial installations and retrofit parking garage opportunities. It is designed to meet or exceed recommended illuminance criteria when installed as a direct replacement of most HID parking garage luminaires. Its modern dayform and aesthetics also make it appealing for indoor low-bay applications.

CONSTRUCTION

Two-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. The LED driver is separated from the heat generating light engines and mounted in direct contact with the casting to promote low operating temperatures, higher lumen maintenance and long life. The housing is completely sealed against moisture and environmental contaminants (IP66) and is suitable for hose-down application.

FINISH

Exterior painted parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling.

OPTICS

Light guide technology provides a diffused light source, reducing glare from direct view of the LEDs. The light source is recessed into the luminaire, further reducing the high angle glare from the luminaire. A combination of precision molded micro prismatic acrylic lenses and back reflectors provide five different photometric distributions tailored specifically to parking garage applications. Up-light option comes with a dedicated light engine and custom optic designed to efficiently spread light on to the ceiling, thus reducing the cave effect.

ELECTRICAL

Light engine consists of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L89/100,000 hours at 25°C). The electronic driver has a power factor of >90%, THD <20%, and a minimum 6.0 KV surge rating. When ordering the SPD10KV option, a separate 10kV (5kA) surge protection device is installed within the luminaire which meets a minimum Category C low operation (per ANSI/IEEE C62.41.2).

INSTALLATION

Standard configuration accepts a rigid or free-swinging 3/4" NPT stem for pendant mounting. The surface mount option attaches to a 4x4" recessed or surface mount outlet box using a quick-mount kit (included); kit contains galvanized steel luminaire and outlet box plates and a full pad gasket. Kit has an integral mounting support that allows the luminaire to hinge down for easy electrical connections. Luminaire and plates are secured with set screws. Also, available with a yoke/trunnion mount option with 3/4" NPT provision for flexible conduit entry (conduit by others); height can be adjusted from 10-18". Supply leads are 24" in length as standard. Longer supply leads are available as additional options. Design can withstand up to a 3.0 G vibration load rating per ANSI C136.31.

LISTINGS

CSA certified to U.S. and Canadian standards. IP66 rated for outdoor applications. PIR options are rated for wet location. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY

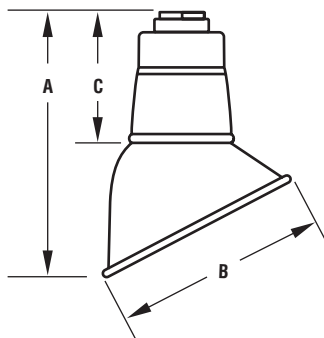
5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx.

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

LSI ABOLITE ANGLED REFLECTOR



DIMENSIONS



Fixture	Height (A)	Width (B)	Neck (C)	Weight (kg/lbs.)
AD 100	10" (254mm)	7" (178mm)	5" (127mm)	.9kg / 2.0 lbs.
AD 150	11-1/2" (292mm)	9" (229mm)	5-1/4" (133mm)	1.1kg / 2.0 lbs.
AD 200	13-1/2" (343mm)	11" (279mm)	5-1/2" (140mm)	1.1kg / 2.5 lbs.

FINISH - Available in either Architectural Textured or High Gloss.

LAMP OPTIONS - Designed to accommodate Incandescent, Compact Fluorescent, and HID lamps. CFL and HID lamps available – order separately; Incandescent lamps by others.

BALLAST - CFL and HID require a Wall, Ceiling, or Remote Ballast. See Accessories page.

MOUNTING - Fixed hub tapped for 3/4" NPT conduit. Choose from a wide variety of wall and gooseneck brackets (see accessory section). Not designed for uplight applications.

REFLECTOR - Heavy-duty, spun galvanized steel construction.

SOCKETS - Incandescent (rated 660 Watt/600 Volt) and HID fixtures (4KV pulse rated) are medium base porcelain. Compact Fluorescent sockets feature smart push-pull thermoplastic design for ease of lamping.



All LSI ABOLITE products available as Wall, Pole, & Ceiling Mounted and can be used Indoors. (See Accessories page)

Also available in LED

Not Designed For Uplight Applications

LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **AD 200 INC 120 MSV LDS96 WL PG3**

Luminaire Prefix	Lamp Wattage	Light Source	Line Voltage	Luminaire Finish	Mounting	Factory Installed Options	Field Installed Options
AD 100 AD 150 AD 200	(100 Watt Max.) (150 Watt Max.) (200 Watt Max.)	INC - Incandescent	120	MSV - Metallic Silver GWT - Gloss White GBK - Gloss Black GRD - Gloss Red GPT - Textured Graphite RUS - Textured Rust SVG - Satin Verde Green SCP - Satin Copper STQ - Satin Turquoise	LDS96WL - Factory prewired leads for use with stem or bracket mounting in wet locations	PG3 - Globe ⁴	Gooseneck & Wall Brackets Remote Ballasts Wire Guards Stems
AD 200	26/32/42	CFL - Compact Fluorescent ² (Globe option required)	UE		Not available with cord sets		
AD 100 AD 150 AD 200	50 70 100	MP - Metal Halide ^{2,3} (for use with open optics in indoor applications only)	120 277				
AD 200	50 70 100	MH - Metal Halide ² (PG3 Globe option required)					
	175 ¹	PSMV - Pulse-Start Metal Halide ² (PG3 Globe option required)					

FOOTNOTES:

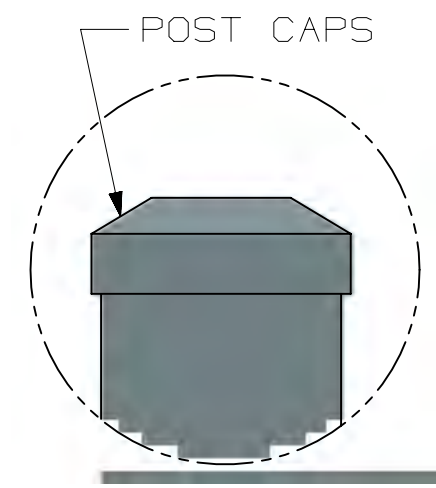
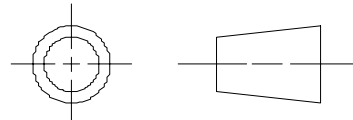
- 1- Requires the use of Pulse-Start Medium Base Reduced Envelope lamp. Consult factory for other light sources available for export.
- 2- CFL, PSMV, and MH remote ballast required (see accessory section).
- 3- Damp location listed only.
- 4- For use with AD200 only.



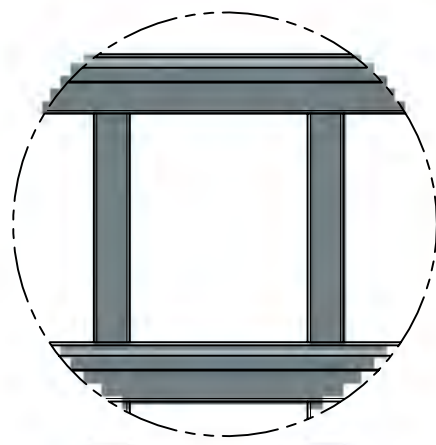
Project Name _____ Fixture Type _____
Catalog # _____

10/22/15

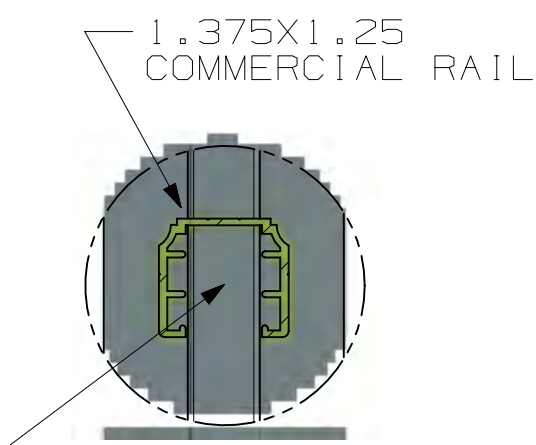
© 2015
LSI INDUSTRIES INC.



DETAIL B
SCALE 1:2

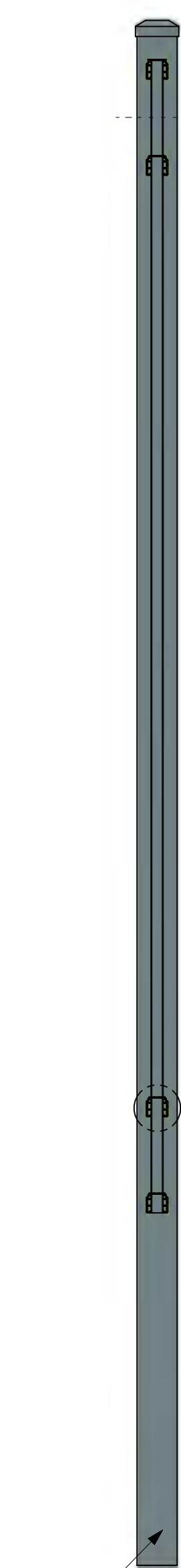


DETAIL D
SCALE 1:4



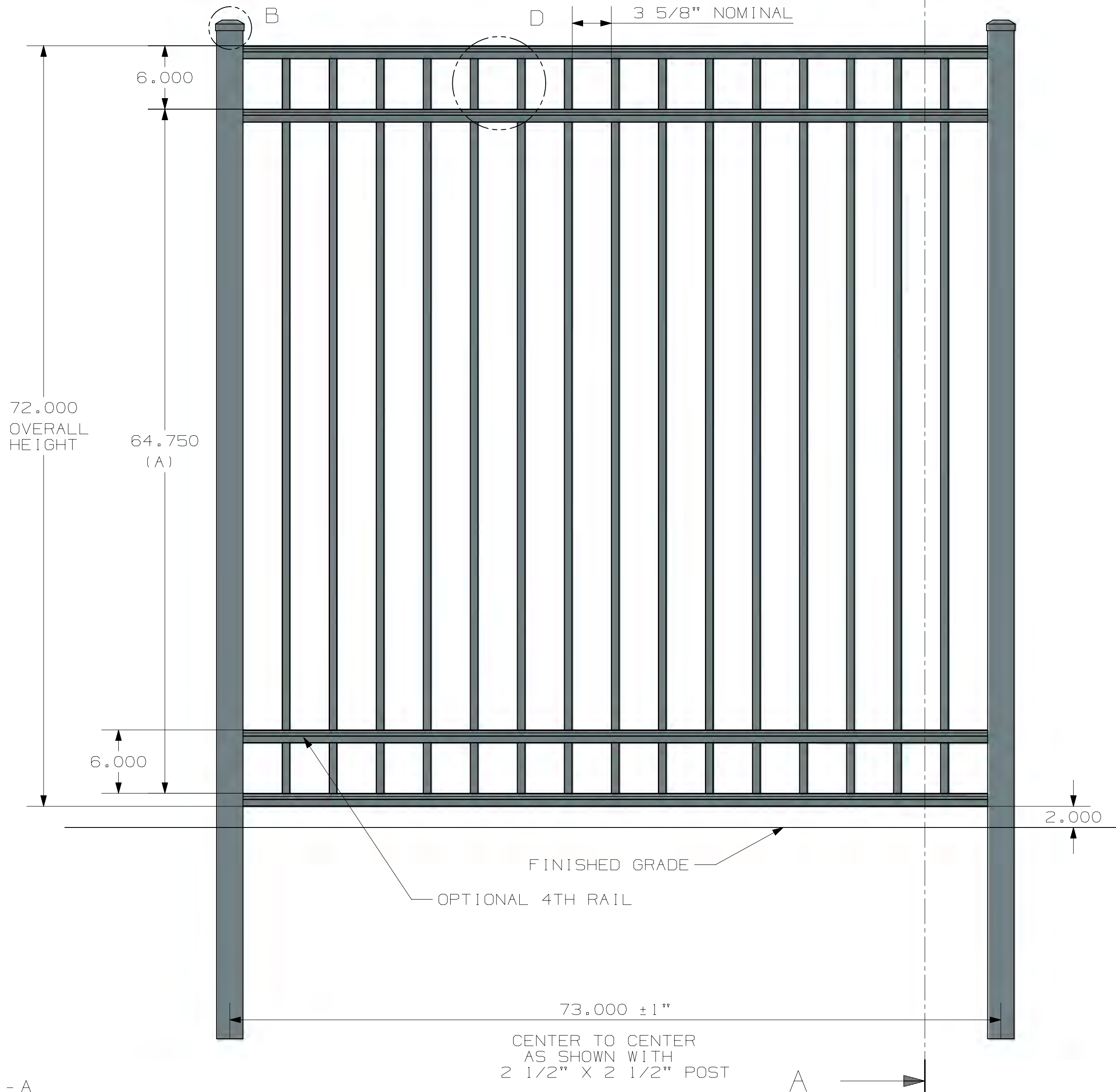
1.375X1.25
COMMERCIAL RAIL
3/4" X 3/4" X .055 WALL
COMMERCIAL PICKET

DETAIL C
SCALE 1:2



SECTION A - A

- POST OPTIONS
- 2" X 2" X .080" WALL
 - 2" X 2" X .125" WALL
 - 2 1/2" X 2 1/2" X .100" WALL
 - 3" X 3" X .125" WALL



HEIGHT	A
3'	28 3/4"
3 1/2'	34 3/4"
4'	40 3/4"
4 1/2'	46 3/4"
5'	52 3/4"
6'	64 3/4"

3D CAD MASTER PART NAME:

ALL DIMENSIONS IN INCHES



ULTRA ALUMINUM MANUFACTURING, INC.
2124 GRAND COMMERCE DR. HOWELL, MI 48855
PHONE (800) 656-4420 FAX (800) 646-7429

FIRST ISSUED
DRAWN BY
CHECKED BY
APPROVED BY

TITLE
UAF-200 FLAT TOP FLUSH BOTTOM
COMMERCIAL

SCALE 1:1

SIZE DRG NO. C
UAF-200 FLAT TOP FLUSH BOTTOM COMMERCIAL 6X6
REV

SHEET 1 OF 1

