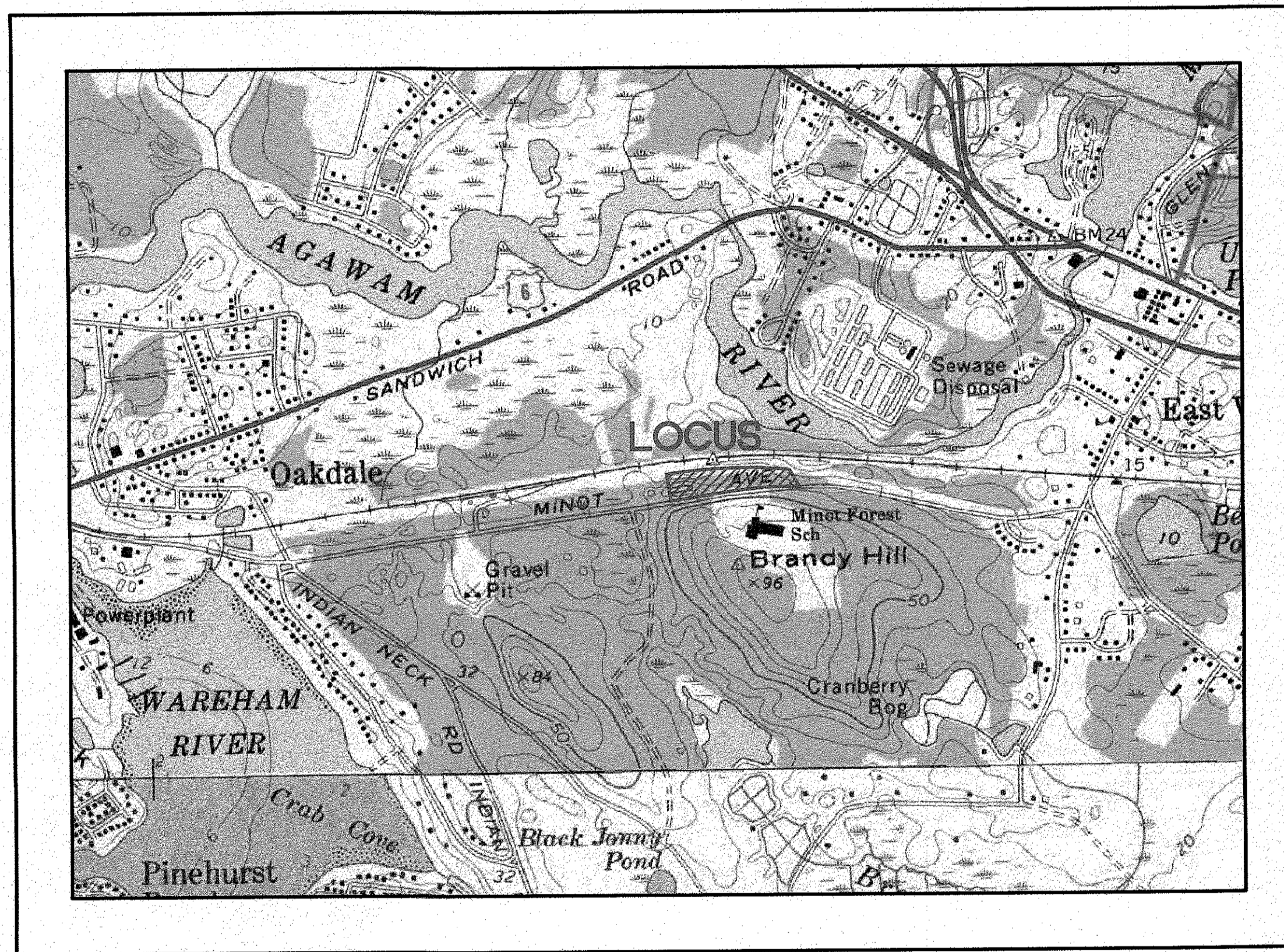


GIANCOLA PROPERTIES MINOT LLC

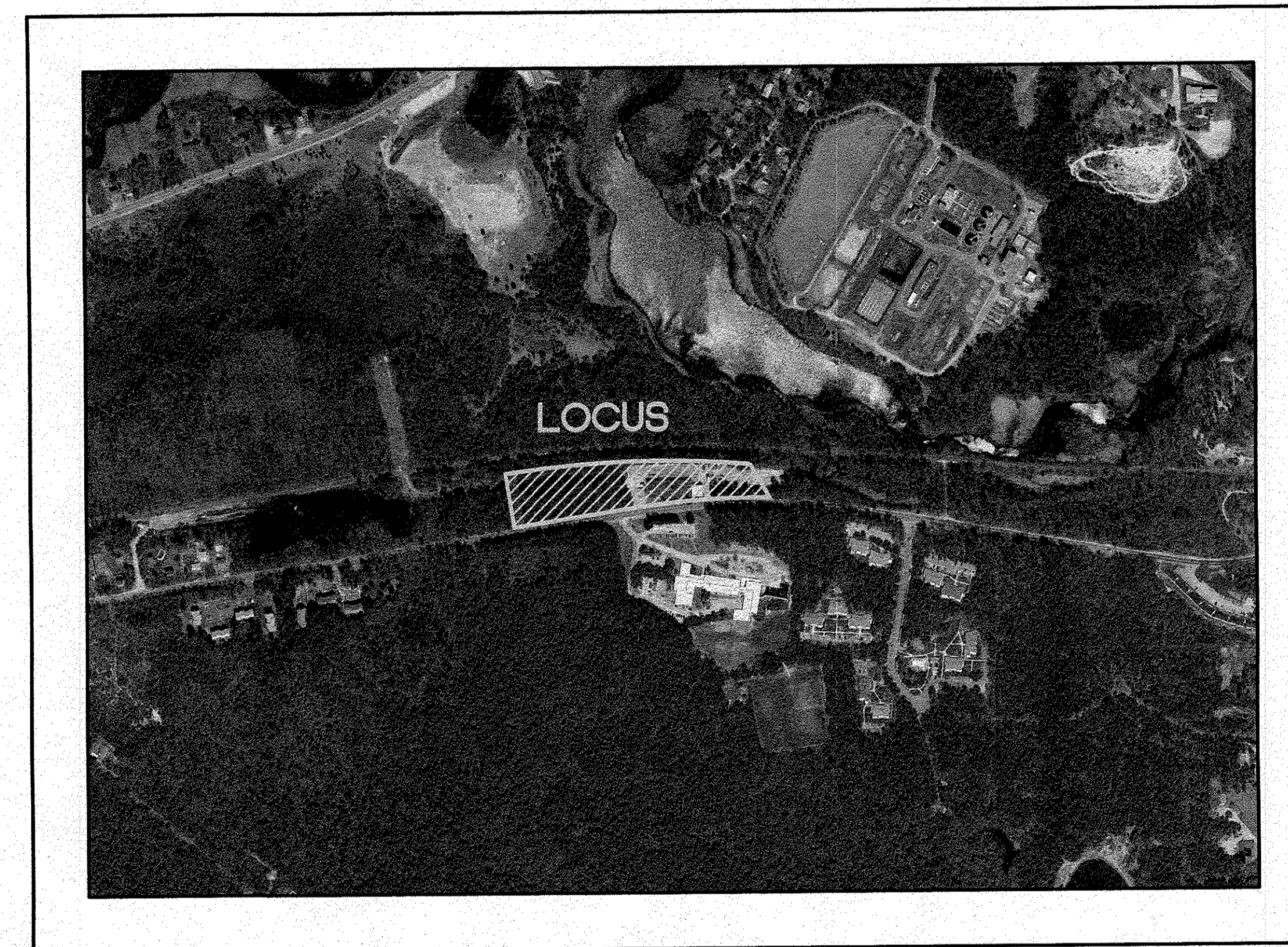
SITE DEVELOPMENT PLAN 72 MINOT AVENUE WAREHAM, MASSACHUSETTS

OWNER: GIANCOLA PROPERTIES MINOT LLC
P.O. BOX 570
EAST WAREHAM, MA 02538

APPLICANT: GIANCOLA PROPERTIES MINOT LLC
P.O. BOX 570
EAST WAREHAM, MA 02538



— U.S.G.S. LOCUS PLAN —
SCALE: 1"=1000'



— MASSGIS ORTHOPHOTO —
SCALE: 1"=500'

SITE DATA

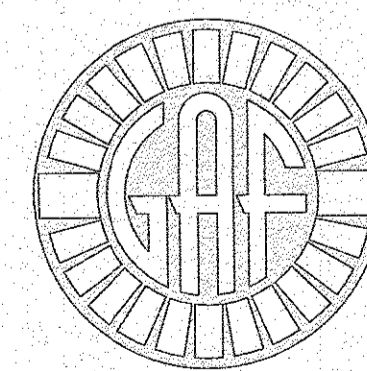
ZONING DISTRICT: MR-30
ASSESSOR'S MAP: 44
ASSESSOR'S LOTS: 1000
REQUIRED LOT AREA: 30,000 S.F.
REQUIRED ROAD FRONTAGE: 150'
FRONT SETBACK: 20'
SIDE & REAR SETBACK: 10'
MAX. PRINCIPAL BUILDING HEIGHT: 35'
MAX. BUILDING COVERAGE: NO REGULATION
MAX. IMPERVIOUS SURFACE: NO REGULATION
WATER SUPPLY: TOWN WATER
SANITARY SEWER: TOWN SEWER

ZONING DATA

ZONING TABLE	ALLOWED	PROVIDED
LOT AREA	30,000 S.F.	199,665 S.F.
FRONT SETBACK	20'	35.0'
SIDE SETBACK	10'	124.0'
REAR SETBACK	10'	98.0'

FLOOD ZONE DATA

ENTIRE LOCUS IS SHOWN AS 'ZONE X'
REFER TO THE FEMA FLOOD INSURANCE RATE MAPS, COMMUNITY PANEL NO. 25023C0489K, DATED: FEBRUARY 5, 2014.



G.A.F. ENGINEERING, INC.
PROFESSIONAL ENGINEERS & LAND SURVEYORS
266 MAIN STREET, WAREHAM, MA 02571
TEL: (508) 295-6600 FAX: (508) 295-6634
E-MAIL: gaf@gaf-eng.com
AUGUST 2, 2018

PARKING DATA:

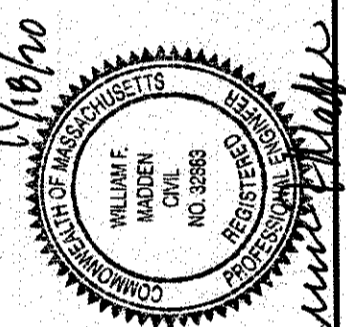
REQUIRED: 1 SPACE PER 300 S.F. GFA
16,650 S.F./300 S.F.=56 SPACES,
TOTAL REQUIRED: 56 SPACES
PROVIDED: 58 SPACES

PLAN INDEX:

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES & LEGEND
3	SITE OVERVIEW PLAN
4	EXISTING CONDITIONS PLAN
5	LAYOUT & UTILITIES
6	GRADING & DRAINAGE
7	LANDSCAPING & LIGHTING PLAN
8	DETAILS SHEET 1
9	DETAILS SHEET 2
10	DETAILS SHEET 3
11	DETAILS SHEET 4
12	EROSION CONTROL PLAN
13	FIRE TRUCK ACCESS PLAN

DATE:	AUG. 2, 2018
DRAWN BY:	JMP
CHECKED BY:	WFM
JOB NO.:	16-8842
SCALE:	AS NOTED

APPROVED BY:



G.A.F. ENGINEERING, INC.
PROFESSIONAL ENGINEERS & LAND SURVEYORS
266 MAIN STREET - WAREHAM, MA 02571
TEL: (508) 295-6600 FAX: (508) 295-6634
E-MAIL: gaf@gaf-eng.com
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PREPARED FOR:
GIANCOLA PROPERTIES MINOT LLC
72 MINOT AVE. WAREHAM, MA
P.O. BOX 570 EAST WAREHAM, MA

JOB NO.: 16-8842
DWG. 1 OF 13

DRAINAGE OPERATION AND MAINTENANCE SCHEDULE:

THE OPERATION AND MAINTENANCE (O&M) SCHEDULE DURING THE CONSTRUCTION PERIOD IS THE RESPONSIBILITY OF THE CONTRACTOR. THE OUTLINE BELOW SHALL BE FOLLOWED TO ENSURE THE PROPER CONSTRUCTION AND FUNCTION OF THE DRAINAGE FACILITIES.

- IN CONJUNCTION WITH THE SITE CONSTRUCTION, ALL DRAINAGE STRUCTURES SHALL BE INSTALLED AND THE AFFECTED AREAS STABILIZED (LOAM AND SEED, HYDROSEED, PLANTED, RIP-RAP, ETC.). PERMANENT STABILIZATION OF THESE AREAS SHALL BE STARTED AS SOON AS POSSIBLE.
- EROSION CONTROL SHALL BE PLACED ALONG THE LIMITS OF WORK AND WHERE SHOWN ON THE PLAN.
- A CONSTRUCTION ENTRANCE WILL NEED TO BE INSTALLED BEFORE ANY CONSTRUCTION ACTIVITY OCCURRING ON-SITE.
- ALL CATCH BASINS SHALL HAVE TEMPORARY SILT SACKS OR AN APPROVED EQUAL INSTALLED IN THEM AS SOON AS THE STRUCTURE IS SET. CONTRACTOR SHALL REMOVE AND DISPOSE OF THEM AT THE COMPLETION OF CONSTRUCTION. THE CATCH BASINS SHALL BE INSPECTED WEEKLY DURING CONSTRUCTION. IF THERE IS ANY SEDIMENT BUILDUP, THE AFFECTED STRUCTURES SHALL BE CLEANED IMMEDIATELY, AND ALL MATERIAL REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS.
- STONE FILLED TRENCHES SHALL BE COVERED WITH AN ADDITIONAL TEMPORARY LAYER OF FILTER FABRIC UNTIL THE ABOVE GRADIENT SLOPE IS STABILIZED. IF THERE IS ANY EVIDENCE OF SEDIMENT ENTERING THE TRENCHES, THE AFFECTED AREA OF THE TRENCH SHALL BE FULLY RECONSTRUCTED INCLUDING THE FILTER FABRIC.
- ALL CATCH BASINS, DRAIN MANHOLES AND LEACHING CHAMBERS SHALL BE INSPECTED WEEKLY DURING CONSTRUCTION. IF THERE IS ANY SEDIMENT BUILDUP, THE AFFECTED STRUCTURES SHALL BE CLEANED IMMEDIATELY, AND ALL MATERIAL REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS. ALL CATCH BASINS SHALL HAVE TEMPORARY SILT SACKS OR AN APPROVED EQUAL INSTALLED IN THEM AS SOON AS THE STRUCTURE IS SET, CONTRACTOR SHALL REMOVE AND DISPOSE OF THEM AT THE COMPLETION OF CONSTRUCTION.
- THE DRAINAGE BASIN SHALL BE INSPECTED WEEKLY DURING CONSTRUCTION. IF THERE IS ANY SEDIMENT BUILDUP, THE AFFECTED AREA OR STRUCTURES SHALL BE CLEANED IMMEDIATELY, AND ALL MATERIAL REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS.
- ALL AREAS SHALL BE INSPECTED WEEKLY, AND AFTER LARGE STORMS. IF THERE IS EVIDENCE OF EROSION, THE ERODED AREA SHALL BE RE-STABILIZED, AND MEASURES SHALL BE TAKEN TO PREVENT REOCCURRENCE. THIS SCHEDULE MUST BE ADHERED TO BY THE CONTRACTOR UNTIL THE PROJECT IS ACCEPTED BY THE OWNER.

POST-CONSTRUCTION OPERATION AND MAINTENANCE PLAN:

UPON THE COMPLETION OF CONSTRUCTION, MAINTENANCE SHALL BE CONDUCTED BY THE OWNER OR OWNER'S AGENT ON THE SITE. THE FOLLOWING SHALL BE CARRIED OUT BY THE RESPONSIBLE PARTY AND SHALL BE ADHERED TO ENSURE THE PROPER OPERATION OF THE DRAINAGE FACILITIES.

- PARKING LOT SWEEPING IS AN EFFECTIVE NONSTRUCTURAL SOURCE CONTROL THAT WILL REMOVE SEDIMENT FROM PAVED SURFACES. PARKING LOT SWEEPING SHOULD BE DONE BY THE USE OF A HIGH EFFICIENCY VACUUM SWEEPER OR REGENERATIVE AIR SWEEPER. PARKING LOT SWEEPING SHALL BE DONE TWICE PER YEAR, ONCE REMOVED FROM PAVED SURFACES, THE SWEEPINGS MUST BE HANDLED AND DISPOSED OF PROPERLY IN ONE OF THE WAYS APPROVED BY MASSDEP (SEE POLICY # BAW-18-001: REUSE & DISPOSAL OF STREET SWEEPINGS).
- DEEP SUMP CATCH BASINS ARE UNDERGROUND RETENTION SYSTEMS DESIGNED TO REMOVE TRASH, DEBRIS AND COARSE SEDIMENT FROM STORMWATER RUNOFF AND SERVE AS TEMPORARY SPILL CONTAINMENT DEVICES FOR FLOATABLES SUCH AS OILS AND GREASE. INSPECT CATCH BASINS MONTHLY AND CLEAN AT LEAST TWO TIMES PER YEAR AND AT THE END OF THE FOLIAGE AND SNOW-REMOVAL SEASONS. SEDIMENTS MUST ALSO BE REMOVED WHENEVER THE DEPTH OF DEPOSITS IS GREATER THAN OR EQUAL TO ONE HALF THE DEPTH FROM THE BOTTOM OF THE INVERT. SEDIMENT SHALL BE REMOVED THROUGH THE USE OF A VACUUM TRUCK. SEDIMENT MUST BE HANDLED AND DISPOSED OF PROPERLY IN ONE OF THE WAYS ALREADY APPROVED BY MASSDEP (SEE MASSDEP POLICY ON MANAGEMENT OF CATCH BASIN CLEANINGS). IF THERE IS EVIDENCE THAT THEY HAVE BEEN CONTAMINATED BY A SPILL OR OTHER MEANS, THE CLEANINGS MUST BE EVALUATED IN ACCORDANCE WITH THE MASSDEP HAZARDOUS WASTE REGULATIONS, 310 CMR 30.00 AND HANDLED AS HAZARDOUS WASTE.
- PROPRIETARY CATCH BASINS (WATER QUALITY CATCH BASINS) ARE UNDERGROUND RETENTION SYSTEMS DESIGNED TO REMOVE TRASH, DEBRIS AND COARSE SEDIMENT FROM STORMWATER RUNOFF AND SERVE AS TEMPORARY SPILL CONTAINMENT DEVICES FOR FLOATABLES SUCH AS OILS AND GREASE. INSPECT THE UNITS MONTHLY AND CLEAN AT LEAST TWO TIMES PER YEAR AND AT THE END OF THE FOLIAGE AND SNOW-REMOVAL SEASONS. SEDIMENTS MUST ALSO BE REMOVED WHENEVER THE DEPTH OF DEPOSITS IS GREATER THAN OR EQUAL TO ONE HALF THE DEPTH FROM THE BOTTOM OF THE INVERT. SEDIMENT SHALL BE REMOVED THROUGH THE USE OF A VACUUM TRUCK. SEDIMENT MUST BE HANDLED AND DISPOSED OF PROPERLY IN ONE OF THE WAYS ALREADY APPROVED BY MASSDEP (SEE MASSDEP POLICY ON MANAGEMENT OF CATCH BASIN CLEANINGS). IF THERE IS EVIDENCE THAT THEY HAVE BEEN CONTAMINATED BY A SPILL OR OTHER MEANS, THE CLEANINGS MUST BE EVALUATED IN ACCORDANCE WITH THE MASSDEP HAZARDOUS WASTE REGULATIONS, 310 CMR 30.00 AND HANDLED AS HAZARDOUS WASTE.
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- INFILTRATION BASIN AREAS SHALL BE INSPECTED AT LEAST FOUR TIMES PER YEAR TO ENSURE THE BASINS ARE OPERATING AS INTENDED. ALSO INSPECT THE BASINS DURING AND AFTER MAJOR STORM EVENTS TO DETERMINE IF THE BASINS ARE MEETING THE EXPECTED DETENTION TIMES. EXAMINE THE OUTLET STRUCTURE FOR EVIDENCE OF CLOGGING OR OUTFLOW RELEASE VELOCITIES GREATER THAN THE DESIGN FLOW. POTENTIAL PROBLEMS THAT SHALL BE CHECKED INCLUDE: SUBSIDENCE, EROSION, CRACKING OR TREE GROWTH ON THE EMBANKMENT; DAMAGE TO THE EMERGENCY SPILLWAY; SEDIMENT ACCUMULATION AROUND THE OUTLET; INADEQUACY OF THE INLET/OUTLET CHANNEL EROSION CONTROL MEASURES; CHANGES IN THE CONDITION OF THE PILOT CHANNEL; AND EROSION WITHIN THE BASIN AND BANKS. MAKE ANY NECESSARY REPAIRS IMMEDIATELY. MOW THE UPPER-STAGE, SIDE SLOPES AND EMBANKMENTS AT LEAST TWICE PER YEAR. REMOVE SEDIMENT AS NECESSARY, BUT AT LEAST ONCE EVERY FIVE YEARS. SEDIMENT SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
- INFILTRATION CHAMBERS SHALL BE INSPECTED AFTER EVERY MAJOR STORM EVENT IN THE FIRST FEW MONTHS AFTER CONSTRUCTION TO ENSURE PROPER STABILIZATION AND FUNCTION. THEREAFTER, THE INFILTRATION CHAMBERS SHALL BE INSPECTED AT LEAST ONCE PER YEAR. WATER DEPTH IN THE INFILTRATION CHAMBERS SHOULD BE OBSERVED AND MEASURED AT 0, 24, AND 48-HOUR INTERVALS AFTER A MAJOR STORM EVENT AT LEAST ONCE PER YEAR. CLEARANCE RATES ARE CALCULATED BY DIVIDING THE DROP IN THE WATER LEVEL (INCHES) BY THE ELAPSED TIME (HOUR). A COMPARISON OF CLEARANCE RATE MEASUREMENTS TAKEN OVER THE YEARS PROVIDE A USEFUL TOOL TRACKING ANY CLOGGING PROBLEMS WITH THE UNDERGROUND INFILTRATION SYSTEM.
- STONE FILLED TRENCHES SHALL BE INSPECTED DURING AND 24 HOURS AFTER ALL MAJOR STORM EVENTS TO LOOK FOR PONDED WATER. IF THERE IS EVIDENCE OF PONDED WATER AT THE SURFACE OF THE TRENCH, IT IS LIKELY THAT THE TRENCH IS CLOGGED. REMOVE AND REPLACE THE FIRST LAYER OF STONE AGGREGATE AND FILTER FABRIC. IF WATER IS PONDED INSIDE THE TRENCH THEN THE TRENCH HAS FAILED. IN THIS CASE REMOVE ALL ACCUMULATED SEDIMENT, STONE AND FILTER FABRIC, THE BOTTOM OF THE TRENCH MUST BE SCARIFIED AND TILLED TO INDUCE INFILTRATION AND REPLACE WITH NEW STONE AND FILTER FABRIC. INSPECT STONE TRENCHES EVERY 6 MONTHS AND ROUTINELY REMOVE DEBRIS, TRASH, LEAVES, AND ANY SEDIMENT FROM THE SURFACE OF THE TRENCH, ADD STONE IF NECESSARY.

DRAINAGE INSTALLATION NOTES:

- ALL DRAINAGE PIPES, UNLESS OTHERWISE NOTED, ARE TO BE ADS-N-12 PIPE WITH SOIL TIGHT JOINTS AND FITTINGS. REFER TO PLAN FOR LOCATION, SIZES AND SLOPES.
- ALL ROOF DRAIN PIPES, UNLESS OTHERWISE NOTED, ARE TO BE 6" ADS-N-12 PIPE WITH SOIL TIGHT JOINTS AND FITTINGS. MINIMUM SLOPE TO BE 1.00%. REFER TO PLAN FOR LOCATION.
- MIN. COVER ON PIPES SHALL NOT BE LESS THAN 1.5 FEET.
- ALL WORK AND MATERIAL SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWN OF WAREHAM MUNICIPAL MAINTENANCE DEPARTMENT.

PERMIT SET
(NOT FOR CONSTRUCTION)

GENERAL NOTES:

- ALL UNDERGROUND UTILITIES SHOWN OR NOT SHOWN WERE COMPILED ACCORDING TO AVAILABLE RECORD PLANS AND IN PART FROM FIELD SURVEY AND ARE APPROXIMATE ONLY. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD, BEFORE EXCAVATING, BLASTING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORATION OR REPAIRING. ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE CONTACTED INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN. SEE MGL CHAPTER 370, ACTS OF 1963. CONTRACTORS MUST CALL DIG-SAFE AT (811) OR (1-888-DIG-SAFE) G.A.F. ENGINEERING, INC. ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.
- EXISTING CONDITIONS INFORMATION IS BASED ON AN ON THE GROUND FIELD SURVEY BY G.A.F. ENGINEERING, INC. ON VARIOUS DATES AND MOST RECENTLY IN JULY OF 2018.
- THE CONTRACTOR SHALL GIVE ALL NOTICES, COMPLY WITH ALL LAWS AND REGULATIONS, AND PAY ALL FEES ASSOCIATED WITH THE INSTALLATION OF THIS WORK.
- THE CONTRACTOR SHALL FIELD VERIFY, PRIOR TO CONSTRUCTION ALL EXISTING UNDERGROUND UTILITY LOCATIONS AND POINTS OF INTERCONNECTION.
- THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, SUPERVISION, TOOLS, EQUIPMENT, FUEL, POWER, SANITARY FACILITIES AND INCIDENTALS NECESSARY FOR THE FURNISHING, PERFORMANCE, TESTING, START-UP AND COMPLETION OF THIS WORK.
- SITE BENCHMARK: FRONT BONNET BOLT ON EX. HYDRANT EL. 41.00, NAVD--88.

CONSTRUCTION NOTES:

- IN GENERAL, THE PLANS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW EVERY FITTING, CHANGE IN DIRECTION OR DETAIL OF CONSTRUCTION.
- THE LOCATION OF UTILITIES WERE OBTAINED FROM VARIOUS SOURCES OF INFORMATION. THE EXACT LOCATION AND COMPLETENESS IS NOT GUARANTEED.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF PERSONNEL AND PROTECTION OF PROPERTY AT THE SITE OR ADJACENT THERETO INCLUDING TREES, SHRUBS, LAWN, PAVEMENTS, ROADWAYS, STRUCTURES AND UNDERGROUND UTILITIES NOT DESIGNATED FOR REMOVAL, RELOCATION, OR REPLACEMENT.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION REQUIRED FOR THE INSTALLATION OF THIS WORK.
- THE CONTRACTOR SHALL CONSULT WITH A GEOTECHNICAL ENGINEER TO COORDINATE THE TYPE OF FILL TO BE USED UNDER THE BUILDING SLAB AND PARKING LOT.
- THE CONTRACTOR SHALL COORDINATE THE PLACEMENT OF FILL, METHOD OF COMPACTION, AND COMPACTION TESTING WITH A GEOTECHNICAL ENGINEER.
- THE FREQUENCY OF INSPECTIONS AND COMPACTION TESTING SHALL BE DETERMINED BY THE OWNER AND GEOTECHNICAL ENGINEER.
- ALL MATERIALS SHALL BE NEW AND FREE FROM DEFECTS AND OF GOOD QUALITY.
- THE CONTRACTOR SHALL KEEP THE PREMISES FREE FROM THE ACCUMULATION OF WASTE MATERIAL AND OTHER DEBRIS RESULTING FROM THIS WORK.
- ALL PAVEMENT MARKINGS DISTURBED BY CONSTRUCTION SHALL BE RESTORED AS PART OF THIS WORK.
- THE CONTRACTOR SHALL INSTITUTE ALL SAFETY MEASURES NECESSARY TO PROTECT THE PUBLIC SAFETY. THIS SHALL INCLUDE, BUT NOT LIMITED TO, BARRICADES, SIGNS, LIGHTING, FENCES, POLICE DETAILS, AND ANY OTHER MEANS AS DIRECTED. NO TRENCHES ARE TO REMAIN OPEN OVERNIGHT.
- ELEVATIONS ARE IN FEET AND TENTHS AND ARE BASED ON THE DATUM OF NAVD88.
- SIDE SLOPE GRADING SHALL BE AS NOTED ON THE SITE PLANS.
- ALL SIDE SLOPES SHALL BE DRESSED WITH 4 INCHES OF TOPSOIL UNLESS OTHERWISE NOTED. WHERE SIDE SLOPES EXCEED 3:1, PROVIDE AN EROSION CONTROL BLANKET OVER THE PLANTED SEED BED. SEE DETAIL IF APPLICABLE.
- PERMANENT SEEDING (BEFORE SEPTEMBER 15) LIME TO PH OF 6.5 ACCORDING TO SOIL TEST OR APPLY AT THE RATE OF 100 TO 150 LBS. PER 1,000 SQUARE FEET. APPLY 10-20-20 FERTILIZER AT 1,000 LBS. PER ACRE. INCORPORATE LIME AND FERTILIZER IN TOP 4 INCHES OF SOIL. SEED 100 LBS. PER ACRE OF THE FOLLOWING SEED MIX.

PURE PERCENT	SEED
30-35%	CREeping RED FESCUE
30-35%	PERENNIAL RYEGRASS
20-25%	KENTUCKY BLUEGRASS
10-15%	ANNUAL RYEGRASS

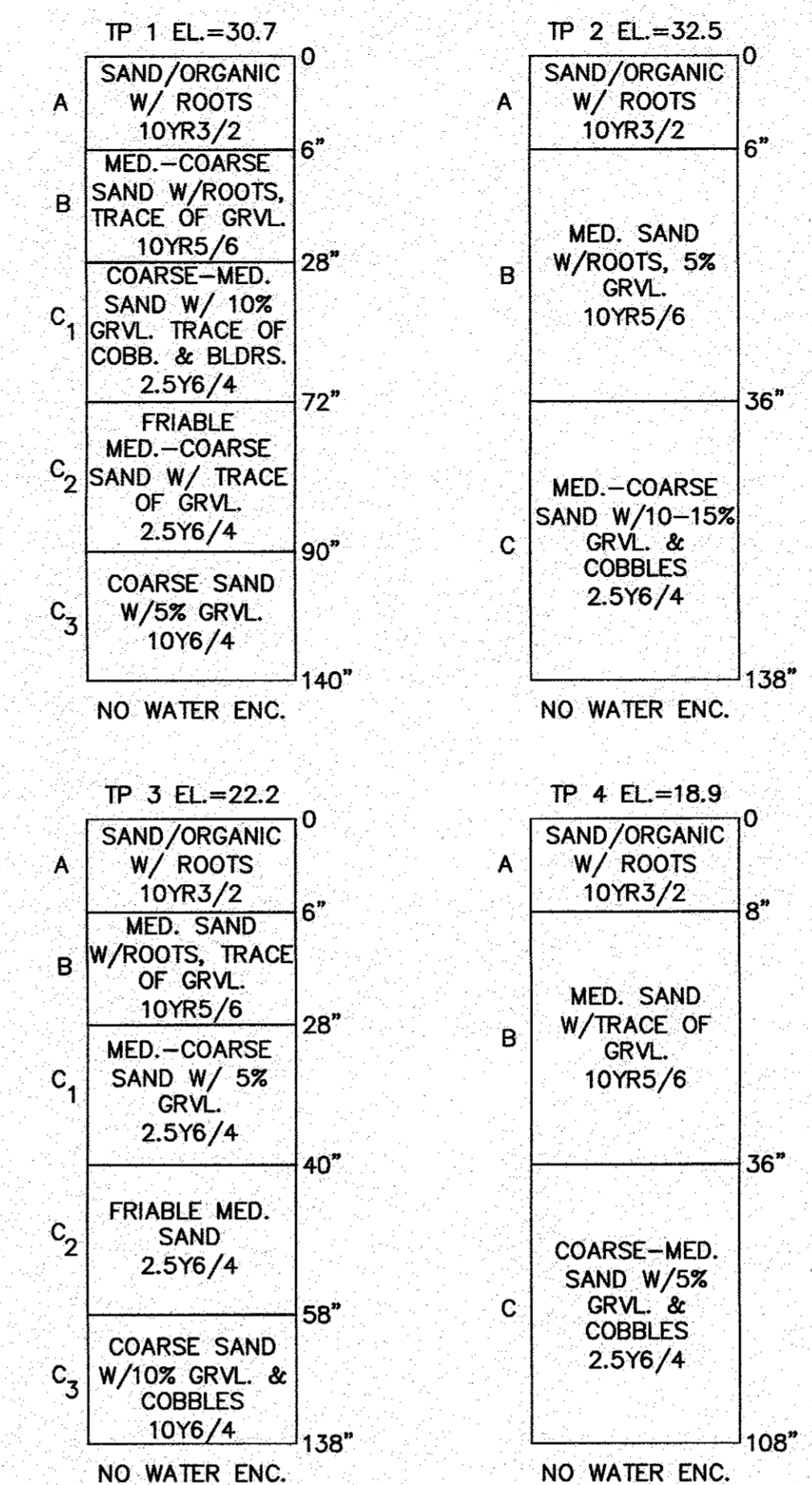
HYDRO SEEDING IS AN ALTERNATIVE FOR THIS APPLICATION. A MIXTURE OF SEED WATER AND MULCH IS SPRAYED ON THE SEED BED COMBINING THREE (3) SEPARATE ACTIONS INTO ONE (1) OPERATION
- ALL SEWER WORK SHALL BE DONE IN ACCORDANCE WITH THE TOWN OF WAREHAM SEWER DEPARTMENT RULES AND REGULATIONS.
- ALL METHODS AND MATERIALS SHALL CONFORM WITH MossDOT STANDARDS AND THE REQUIREMENTS OF THE TOWN OF WAREHAM MUNICIPAL MAINTENANCE DEPARTMENT.

EROSION CONTROL NOTES:

- THE SITE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SUITABLE EROSION AND SEDIMENTATION CONTROL DEVICES ON SITE DURING CONSTRUCTION AS REQUIRED TO PREVENT SILT FROM LEAVING THE SITE. SILT WILL NOT BE ALLOWED BEYOND CONSTRUCTION LIMITS. ADDITIONAL PROTECTION: ON-SITE PROTECTION MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNFORESEEN CONDITIONS OR ACCIDENTS.
- EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLANS DOES NOT PROVIDE SUFFICIENT EROSION AND SEDIMENT CONTROL, ADDITIONAL CONTROL MEASURES SHALL BE IMPLEMENTED. CONTRACTOR IS RESPONSIBLE FOR REPAIRING OR REPLACING EROSION CONTROL DEVICES WHICH BECOME INEFFECTIVE.
- CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR ALL GRADING AND OTHER LAND DISTURBING ACTIVITIES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR THE CLEANUP AND REMOVAL OF ANY BUILDUP OF SEDIMENT WHICH ESCAPES FROM THE SITE.
- CONTRACTOR IS RESPONSIBLE FOR CLEANING SILT AND DEBRIS OUT OF ALL STORM DRAINAGE STRUCTURES UPON THE COMPLETION OF CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TEMPORARY EROSION CONTROL MEASURES AFTER CONSTRUCTION IS COMPLETE AND ALL DISTURBED AREAS HAVE BEEN STABILIZED.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ANY FINES LEVIED AGAINST THE SITE FOR VIOLATIONS OF EROSION CONTROL REGULATIONS.
- CONTRACTOR SHALL PROVIDE TEMPORARY GROUND COVER FOR ALL AREAS WITH EXPOSED SOIL WHICH WILL NOT BE DISTURBED BY GRADING OPERATIONS FOR A PERIOD OF THIRTY DAYS OR MORE.
- IF WORK ON THIS PROJECT IS SUSPENDED FOR ANY REASON, THE CONTRACTOR SHALL MAINTAIN THE SOIL EROSION AND SEDIMENTATION CONTROL FACILITIES IN GOOD CONDITION DURING THE SUSPENSION OF WORK.
- SPRINKLE OR APPLY DUST SUPPRESSERS TO MINIMIZE DUST AT THE CONSTRUCTION SITE. MAINTAIN DUST CONTROL MEASURES UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
- THE CONTRACTOR WILL ALSO NEED TO COMPLY TO ANY ORDER OF CONDITIONS THAT MAY BE ISSUED BY THE TOWN OF WAREHAM CONSERVATION COMMISSION.

TEST PIT DATA

DATE OF TESTING: JULY 23, 2018
PERFORMED BY: BRIAN GRADY, G.A.F. ENGINEERING INC.
REFER TO EXISTING CONDITIONS PLAN FOR TEST PIT LOCATIONS



ABBREVIATIONS

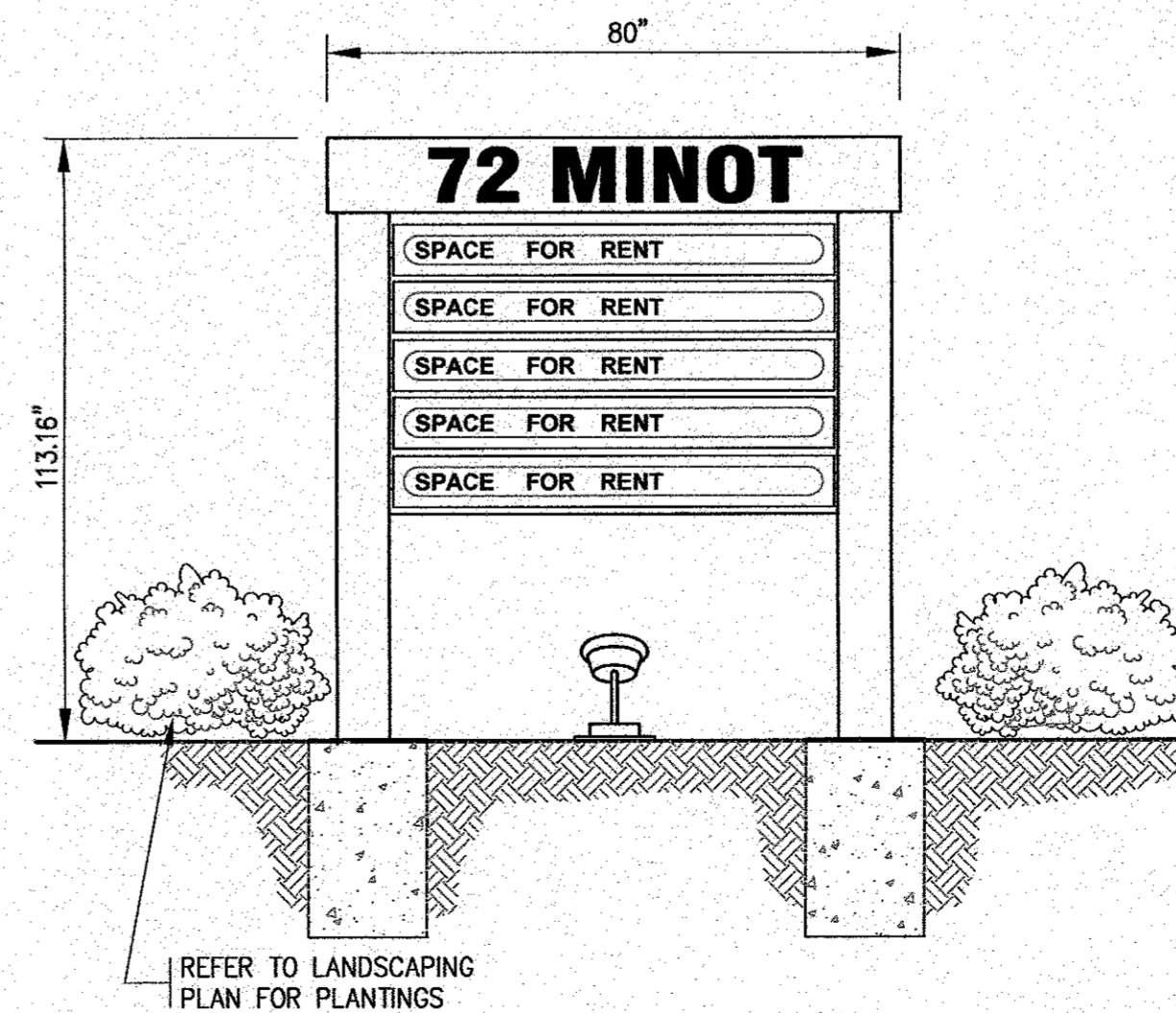
AC	ASBESTIC CONCRETE
ADS	ADVANCED DRAINAGE SYSTEM
APPROX.	APPROXIMATE
BIT. CONC.	BITUMINOUS CONCRETE
CB	BOTTOM OF CURB
BW	BORDERING VEGETATED WETLANDS
BLDRS	BOULDER
CB	CATCH BASIN
CB/DH	CONCRETE BOUND/DRILL HOLE
CDB	CAPE COD BERM
CEM.	CEMENT
CONC.	CONCRETE
C.L.D.I.	CEMENT LINED DUCTILE IRON
DIA	DIAMETER
DMH	DRAIN MANHOLE
D.I.	DUCTILE IRON
E	ELECTRIC
ELEV., EL.	ELEVATION
EOP	EDGE OF PAVEMENT
EX.	EXISTING
F.F.E.	FINISHED FLOOR ELEVATION
F.E.S.	FLARED END SECTION
FND.	FOUND
FF	FIRE PROTECTION
HYD	HYDRANT
HP	HANDICAP PARKING
INV.	INVERT
MAX	MAXIMUM
MED	MEDIUM
MIN.	MINIMUM
MNH	MASSACHUSETTS HIGHWAY BOUND
N.T.S.	NOT TO SCALE
N/F	NOW OR FORMERLY
OHW	OVERHEAD WIRE
PCC	PRECAST CONCRETE CURBING
PVC	POLYVINYL CHLORIDE PIPE
PROP.	PROPOSED
RCP	REINFORCED CONCRETE PIPING
R	RADIUS
R&D	REMOVE AND DISPOSE
R&S	REMOVE AND STOCK
SB/DH	STONE BOUND/DRILL HOLE
S	SEWER
SGE	SLOPED GRANITE EDGING
SMH	SEWER MANHOLE
STA	STATION
TC	TOP OF CURB
TYP.	TYPICAL
T/O/F	TOP OF FOUNDATION
UP	UTILITY POLE
UE	UNDERGROUND ELECTIC
W	WATER
WG,WV	WATER GATE, WATER VALVE
VCC	VERTICAL GRANITE CURB
C.I.	CAST IRON
D.CS	DRAINAGE CONTROL STRUCTURE
TW	TOP OF WALL
BW	BOTTOM OF WALL
WQS	WATER QUALITY STRUCTURE

LEGEND

EXISTING	DESC.	PROPOSED
	CONTOURS	
	SPOT GRADES	
	WETLANDS	
	F.E.M.A. FLOOD ZONE	
	DRAIN LINE	
	CATCH BASIN (CB)	
	DRAIN MANHOLE (DMH)	
	ELECTRIC MANHOLE (EMH)	
	OVERHEAD WIRES	
	UTILITY POLE	
	GUY POLE	
	WATER GATE VALVE	
	WATER SHUTOFF/CURB STOP	
	HYDRANT	
	WATER LINE	
	UNDERGROUND UTILITIES	
	SIGN	
	FENCE	
	BOUND	
	TEST PIT/PERIC TEST	
	SILT FENCE	
	GUARD RAIL	
	FLARED END SECTION	
	STONE WALL	
	50' NO ACTIVITY ZONE	
	100' WETLAND BUFFER ZONE	
	SEWER MANHOLE (SMH)	
	SEWER LINE	
	TREELINE	
	LIGHT POST	
	GAS LINE	
	GAS GATE/VALVE	
	GAS SHUTOFF	
	GAS METER	

WATER INSTALLATION NOTES:

- ALL WATER MAINS, SERVICES, GATE VALVES/GATE BOX, CURB STOPS, HYDRANTS, FITTINGS, ETC. & METHOD OF INSTALLATION SHALL CONFORM TO THE TOWN OF WAREHAM FIRE DISTRICT RULES & REGULATIONS.
- WATER MAIN SHALL BE TESTED & DISINFECTED IN ACCORDANCE WITH THE TOWN OF WAREHAM FIRE DISTRICT REQUIREMENTS.
- CONTRACTOR TO COORDINATE WITH THE TOWN OF WAREHAM FIRE DISTRICT FOR THE INSPECTIONS OF THE WATER MAIN INSTALLATION.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO COMPLETE THE INSTALLATION OF THE WATER SERVICE.
- THE CONTRACTOR SHALL OBTAIN A COPY OF THE REGULATIONS FROM THE TOWN OF WAREHAM FIRE DISTRICT BEFORE PROCEEDING WITH THE INSTALLATION OF THE WATER SERVICE.



SIGN DETAIL

N.T.S.

- THE PROPOSED SIGN SHALL MEET THE REQUIREMENTS OF ARTICLE 11 OF THE WAREHAM ZONING BY-LAW.

DATE: AUG. 2, 2018
DRAWN BY: JMP
CHECKED BY: WFM
JOB NO.: 16-8842
SCALE: AS NOTED

APPROVED BY: [Signature]

G.A.F. ENGINEERING, INC.
PROFESSIONAL ENGINEERS & LAND SURVEYORS
266 MAIN STREET - WAREHAM, MA 02571
TEL: (508) 295-6600 FAX: (508) 295-6634
E-MAIL: gaf@gaf-inc.com

SITE DEVELOPMENT PLAN
GENERAL NOTES & LEGEND
72 MINOT AVE.
WAREHAM, MA

PREPARED FOR:
GIANCOLA PROPERTIES MINOT LLC
72 MINOT AVE.
WAREHAM, MA
P.O. BOX 570
EAST WAREHAM, MA

NO CHANGES THIS SHEET
REV. DRAINAGE O&M SCHEDULE
PER PEER REVIEW COMMENTS

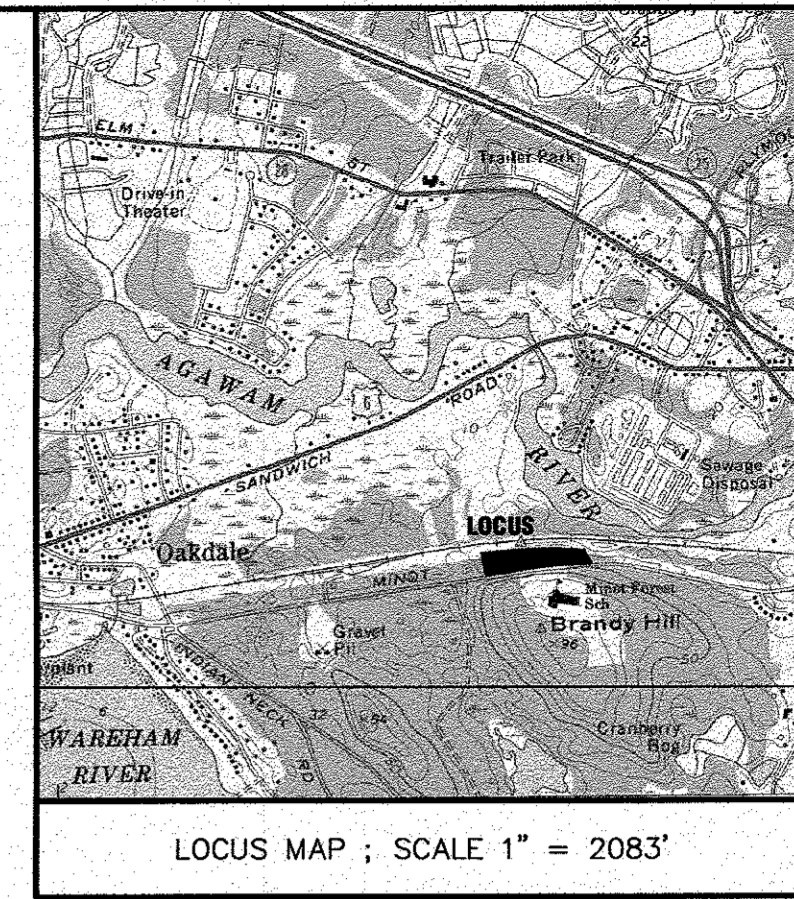
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BY: JMP

DATE: 6/16/20
BY: JMP

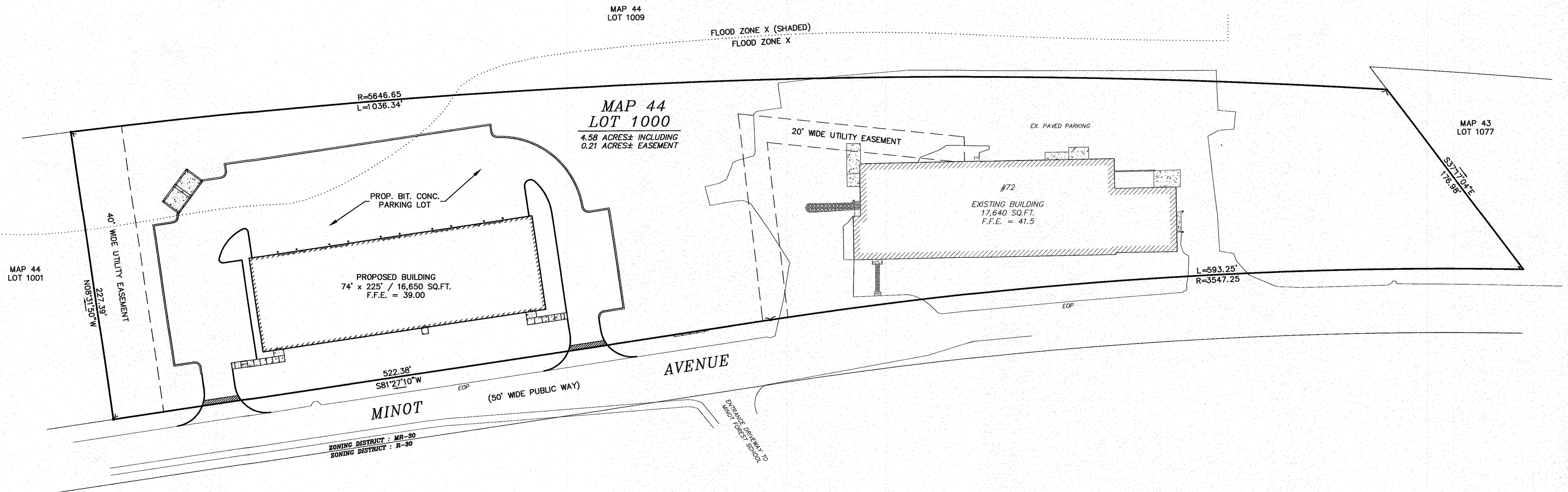
DATE: 8/28/18
BY: WFM

DATE: []
BY: []

JOB NO.: 16-8842
DWG. 2 OF 13

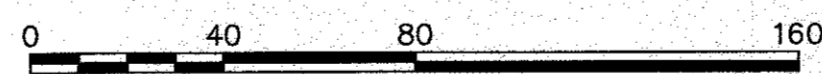


LOCUS MAP ; SCALE 1" = 2083'



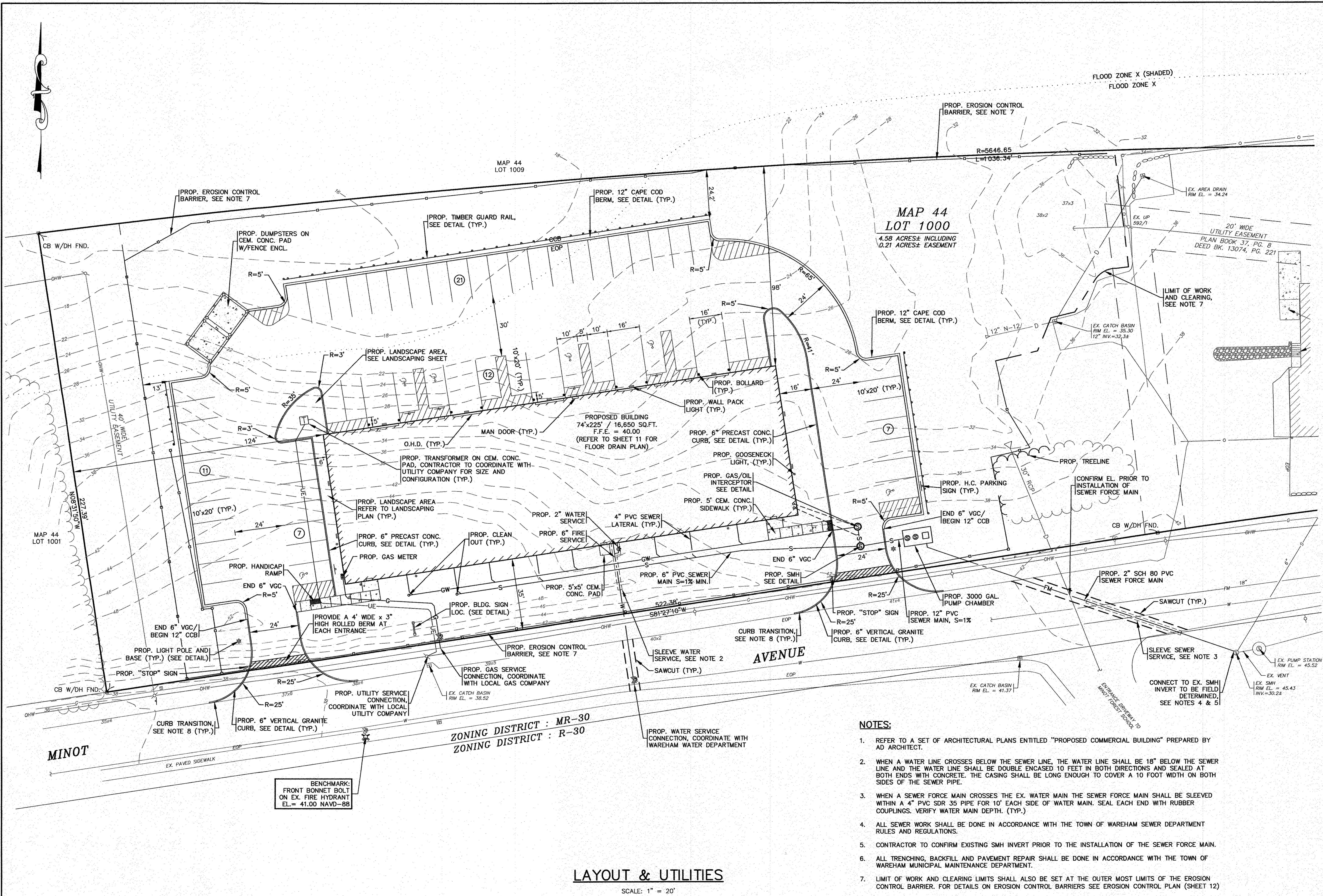
SITE OVERVIEW PLAN

SCALE: 1" = 40'



PROPOSED SITE PLAN SITE OVERVIEW PLAN 72 MINOT AVE. WAREHAM, MA GIANCOLA PROPERTIES MINOT LLC P.O. BOX 570 EAST WAREHAM, MA	DATE: AUG. 2, 2018 DRAWN BY: JH CHECKED BY: WFM JOB NO.: 16-8842 SCALE: 1" = 40'	APPROVED BY: [Signature] STATE OF MASSACHUSETTS REGISTERED PROFESSIONAL ENGINEER WILLIAM WALTER CHIL NO. 20886 EXPIRES 12/31/2022	G.A.F. ENGINEERING, INC. PROFESSIONAL ENGINEERS & LAND SURVEYORS 266 MAIN STREET - WAREHAM, MA 02571 TEL: (508) 295-6600 FAX: (508) 295-6634 E-MAIL: gaf.eng@verizon.net or info@gaf-eng.com	APPROVED BY: [Signature] DATE: 8/29/18 REV. 1 DESCRIPTION: PER PEER REVIEW COMMENTS	
	APPROVED BY: [Signature] DATE: 11/12/20	APPROVED BY: [Signature] DATE: 6/16/20	APPROVED BY: [Signature] DATE: 8/29/18	APPROVED BY: [Signature] DATE: 8/29/18	APPROVED BY: [Signature] DATE: 8/29/18
	APPROVED BY: [Signature] DATE: 11/12/20	APPROVED BY: [Signature] DATE: 6/16/20	APPROVED BY: [Signature] DATE: 8/29/18	APPROVED BY: [Signature] DATE: 8/29/18	APPROVED BY: [Signature] DATE: 8/29/18
	APPROVED BY: [Signature] DATE: 11/12/20	APPROVED BY: [Signature] DATE: 6/16/20	APPROVED BY: [Signature] DATE: 8/29/18	APPROVED BY: [Signature] DATE: 8/29/18	APPROVED BY: [Signature] DATE: 8/29/18

H:\GAF DRAWINGS\2016 DRAWINGS\16-8842 (GIANCOLA)\8842 SITE PLAN 2018_REV1-2.dwg



**MAP 44
LOT 1000**
4.58 ACRES± INCLUDING
0.21 ACRES± EASEMENT

**ZONING DISTRICT : MR-30
ZONING DISTRICT : R-30**

LAYOUT & UTILITIES

SCALE: 1" = 20'
0 20 40 80

NOTES:

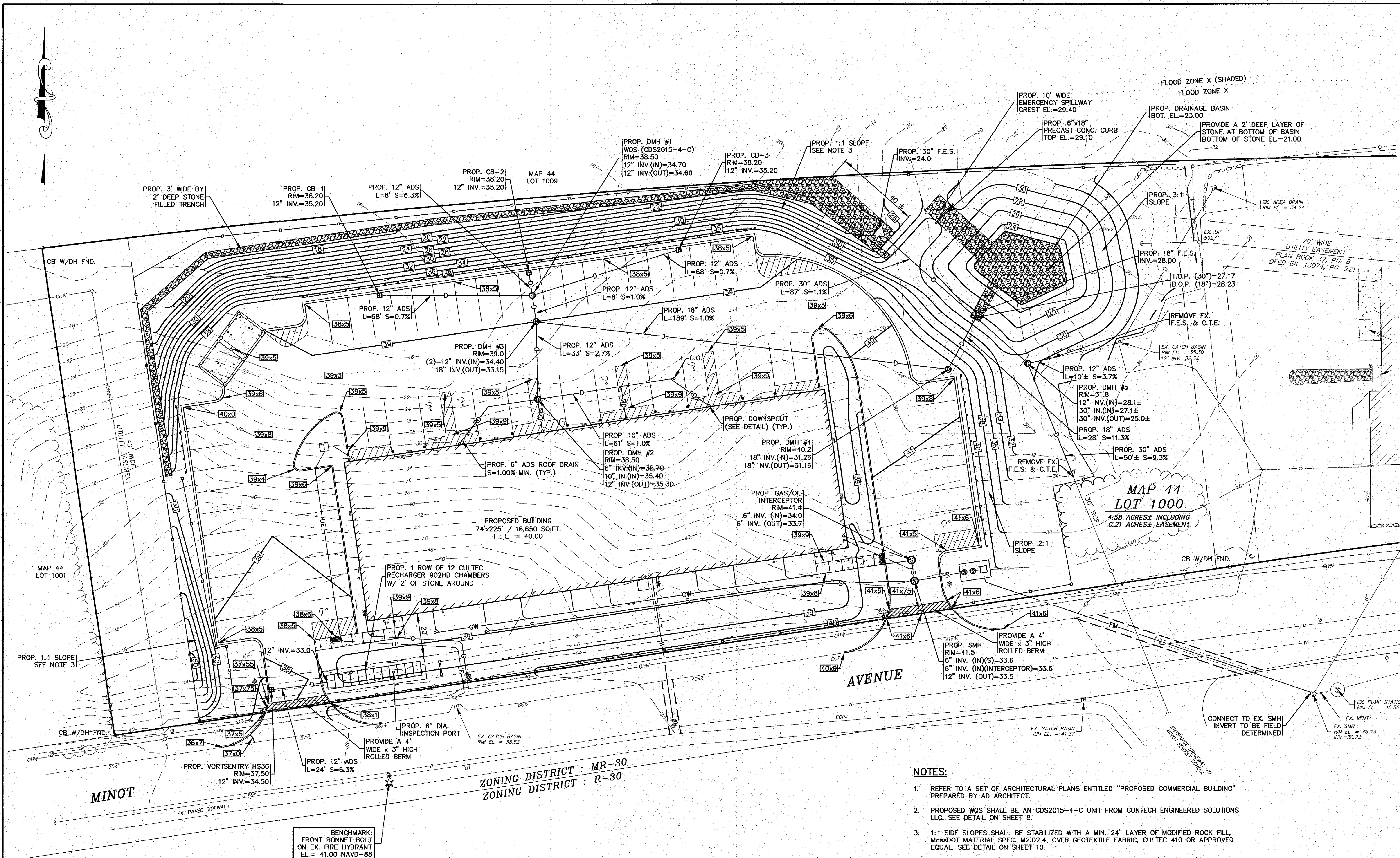
- REFER TO A SET OF ARCHITECTURAL PLANS ENTITLED "PROPOSED COMMERCIAL BUILDING" PREPARED BY AD ARCHITECT.
- WHEN A WATER LINE CROSSES BELOW THE SEWER LINE, THE WATER LINE SHALL BE 18" BELOW THE SEWER LINE AND THE WATER LINE SHALL BE DOUBLE ENCASED 10 FEET IN BOTH DIRECTIONS AND SEALED AT BOTH ENDS WITH CONCRETE. THE CASING SHALL BE LONG ENOUGH TO COVER A 10 FOOT WIDTH ON BOTH SIDES OF THE SEWER PIPE.
- WHEN A SEWER FORCE MAIN CROSSES THE EX. WATER MAIN THE SEWER FORCE MAIN SHALL BE SLEEVED WITHIN A 4" PVC SDR 35 PIPE FOR 10' EACH SIDE OF WATER MAIN. SEAL EACH END WITH RUBBER COUPLINGS. VERIFY WATER MAIN DEPTH. (TYP.)
- ALL SEWER WORK SHALL BE DONE IN ACCORDANCE WITH THE TOWN OF WAREHAM SEWER DEPARTMENT RULES AND REGULATIONS.
- CONTRACTOR TO CONFIRM EXISTING SMH INVERT PRIOR TO THE INSTALLATION OF THE SEWER FORCE MAIN.
- ALL TRENCHING, BACKFILL AND PAVEMENT REPAIR SHALL BE DONE IN ACCORDANCE WITH THE TOWN OF WAREHAM MUNICIPAL MAINTENANCE DEPARTMENT.
- LIMIT OF WORK AND CLEARING LIMITS SHALL ALSO BE SET AT THE OUTER MOST LIMITS OF THE EROSION CONTROL BARRIER. FOR DETAILS ON EROSION CONTROL BARRIERS SEE EROSION CONTROL PLAN (SHEET 12)
- PROVIDE A CURB TRANSITION FOR THE FIRST SECTION OF VERTICAL GRANITE CURBING AT ALL ENTRANCE OPENINGS. SEE DETAIL ON SHEET 10.

BENCHMARK:
FRONT BONNET BOLT
ON EX. FIRE HYDRANT
EL. = 41.00 NAVD-88

PERMIT SET
(NOT FOR CONSTRUCTION)

DATE: AUG. 2, 2018.	APPROVED BY:		NO CHANGES THIS SHEET
DRAWN BY: JH/JMP	DATE: 11/12/20		WFM
CHECKED BY: WFM	DATE: 6/16/20	WFM	ADDED ROLLED BERM, ADJ. LIMIT OF WORK
JOB NO.: 16-8842	DATE: 8/25/18	WFM	PER PEER REVIEW & TOWN COMMENTS
SCALE: 1" = 20'	REV. DATE BY	APP'D	DESCRIPTION
G.A.F. ENGINEERING, INC. PROFESSIONAL ENGINEERS & LAND SURVEYORS 266 MAIN STREET - WAREHAM, MA 02571 TEL: (508) 295-6600 FAX: (508) 295-6634 E-MAIL: gaf@gaf-eng.com		PREPARED FOR: GIANCOLA PROPERTIES MINOT LLC 72 MINOT AVE. WAREHAM, MA P.O. BOX 570 EAST WAREHAM, MA	
SITE DEVELOPMENT PLAN LAYOUT & UTILITIES		JOB NO.: 16-8842 DWG. 5 OF 13	

H:\GAF DRAWINGS\2018 DRAWINGS\16-8842 (GIANCOLA)\DWG\1842 SITE PLAN 2018_REV-2.dwg



ZONING DISTRICT : MR-30
 ZONING DISTRICT : R-30

BENCHMARK:
 FRONT BONNET BOLT
 ON EX. FIRE HYDRANT
 EL. = 41.00 NAVD-88

NOTES:

- REFER TO A SET OF ARCHITECTURAL PLANS ENTITLED "PROPOSED COMMERCIAL BUILDING" PREPARED BY AD ARCHITECT.
- PROPOSED WQS SHALL BE AN CDS2015-4-C UNIT FROM CONTECH ENGINEERED SOLUTIONS LLC. SEE DETAIL ON SHEET 8.
- 1:1 SIDE SLOPES SHALL BE STABILIZED WITH A MIN. 24" LAYER OF MODIFIED ROCK FILL, MassDOT MATERIAL SPEC. M2.02.4, OVER GEOTEXTILE FABRIC, CULTEC 410 OR APPROVED EQUAL. SEE DETAIL ON SHEET 10.
- 2:1 SIDE SLOPES SHALL BE STABILIZED WITH AN EROSION CONTROL BLANKET OVER THE PLANTED SEED BED. SEE DETAIL ON SHEET 11.
- ALL CATCH BASINS SHALL HAVE TEMPORARY SILT SACKS OR AN APPROVED EQUAL INSTALLED IN THEM AS SOON AS THE STRUCTURE IS SET. CONTRACTOR SHALL REMOVE AND DISPOSE OF THEM AT THE COMPLETION OF CONSTRUCTION.
- LIMIT OF WORK AND CLEARING LIMITS SHALL ALSO BE SET AT THE OUTER MOST LIMITS OF THE EROSION CONTROL BARRIER.

GRADING & DRAINAGE

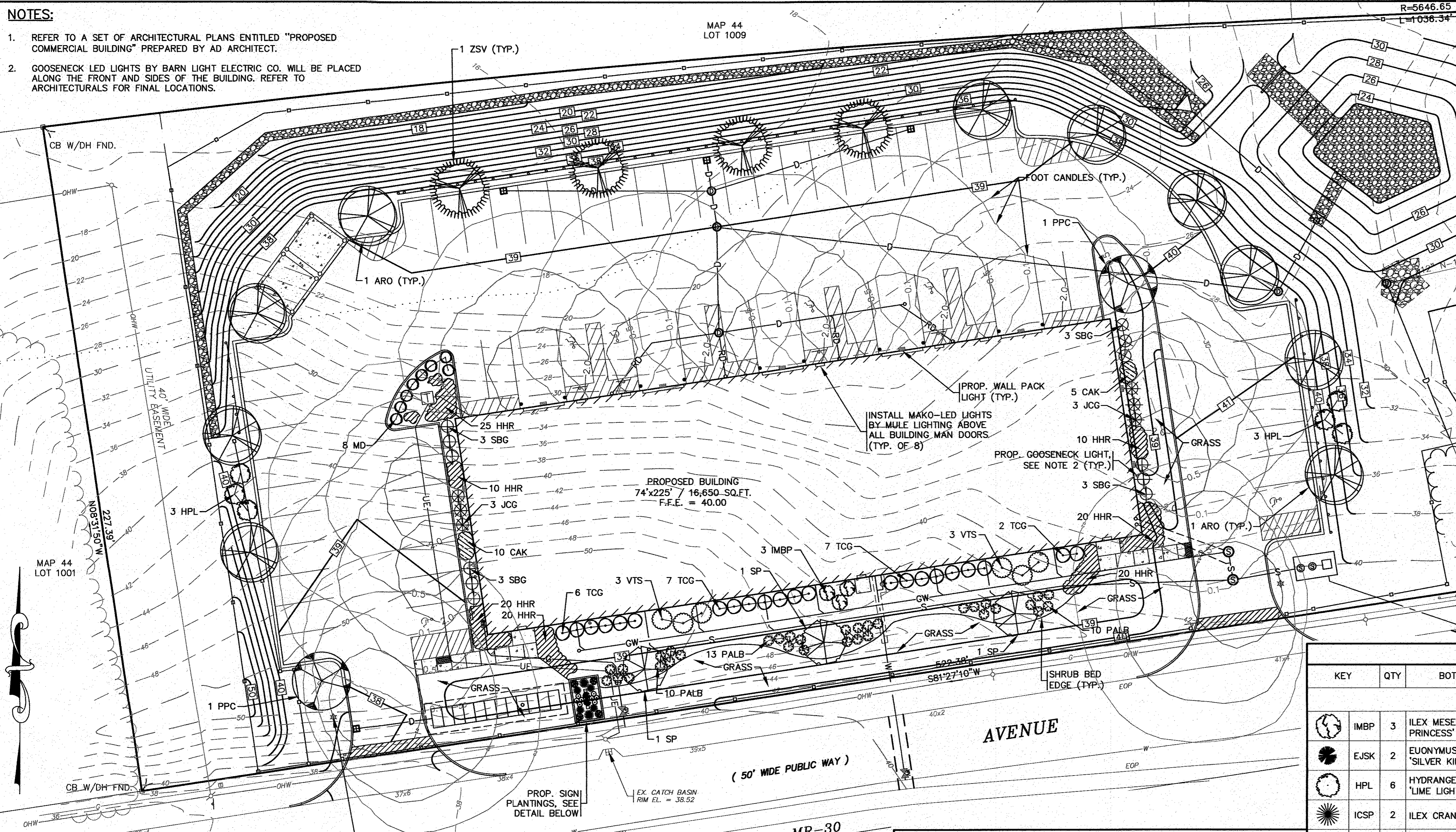
SCALE: 1" = 20'
 0 20 40 80

PERMIT SET
 (NOT FOR CONSTRUCTION)

DATE: AUG. 2, 2018		APPROVED BY:	
DRAWN BY: JWP			
CHECKED BY: WFM			
JOB NO.: 16-8842		<p>G.A.F. ENGINEERING, INC. PROFESSIONAL ENGINEERS & LAND SURVEYORS 286 MAIN STREET - WAREHAM, MA 02571 TEL: (508) 295-6600 FAX: (508) 295-6634 E-MAIL: gaf@gaf-eng.com</p>	
SCALE: 1" = 20'		<p>SITE DEVELOPMENT PLAN GRADING & DRAINAGE</p>	
<p>EXTEND RIP RAP AT 30" F.E.S. ELIMINATE SWALE, REV. DRAINAGE BASIN PER PEER REVIEW & TOWN COMMENTS</p>		<p>PREPARED FOR: GIANCOLA PROPERTIES MINOT LLC 72 MINOT AVE. WAREHAM, MA P.O. BOX 570 EAST WAREHAM, MA</p>	
REV.	DATE	BY	DESCRIPTION
3	11/12/20	JWP	EXTEND RIP RAP AT 30" F.E.S.
2	6/16/20	JWP	ELIMINATE SWALE, REV. DRAINAGE BASIN
1	8/29/18	JWP	PER PEER REVIEW & TOWN COMMENTS

NOTES:

- REFER TO A SET OF ARCHITECTURAL PLANS ENTITLED "PROPOSED COMMERCIAL BUILDING" PREPARED BY AD ARCHITECT.
- GOOSENECK LED LIGHTS BY BARN LIGHT ELECTRIC CO. WILL BE PLACED ALONG THE FRONT AND SIDES OF THE BUILDING. REFER TO ARCHITECTURALS FOR FINAL LOCATIONS.



NOTE:

LANDSCAPE ARCHITECTURE BY: E.A. FULLER ASSOCIATES—LANDSCAPE ARCHITECTS
 170 PLYMOUTH STREET, P.O. BOX 48
 NORTH CARVER, MA 02355

PLANTING STANDARDS:

- THE LANDSCAPE CONTRACTOR SHALL FURNISH AND INSTALL AND/OR DIG, BALL, BURLAP, AND TRANSPANT ALL PLANT MATERIALS LISTED ON THE PLANT SCHEDULE. BARE—ROOT IS TYPICALLY NOT PERMITTED FOR ANY TREE.
- PLANT MATERIALS SHALL CONFORM TO THE REQUIREMENTS DESCRIBED IN THE LATEST EDITION OF AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERMEN. PLANTS SHALL BE NURSERY GROWN.
- PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED IN THE PLANT SCHEDULE. CALIPER MEASUREMENTS SHALL BE TAKEN SIX (6) INCHES ABOVE GRADE FOR TREES UNDER FOUR (4) INCHES IN DIAMETER AND TWELVE (12) INCHES ABOVE GRADE FOR TREES FOUR (4) INCHES IN DIAMETER AND LARGER.
 - MINIMUM BRANCHING HEIGHT FOR ALL SHADE TREES SHALL BE SIX (6) FEET.
 - MINIMUM SIZE FOR SHADE TREES SHALL BE TWO AND ONE HALF (2.5) INCHES IN DIAMETER AND TWELVE (12) FEET IN HEIGHT.
 - MINIMUM SIZE FOR EVERGREEN TREES SHALL BE BETWEEN SIX (6) AND EIGHT (8) FEET IN HEIGHT.
 - MINIMUM SIZE FOR SHRUBS SHALL BE THREE (3) FEET IN HEIGHT.
- A PROFESSIONAL HORTICULTURIST/NURSERYMAN SHALL BE CONSULTED TO DETERMINE THE PROPER TIME TO MOVE AND INSTALL PLANT MATERIAL SO THAT DISTRESS TO THE PLANT IS MINIMIZED. PLANTING OF DECIDUOUS PLANT MATERIAL MAY BE CONTINUED DURING WINTER MONTHS PROVIDED THERE IS NO FROST IN THE GROUND AND FROST—FREE TOPSOIL PLANTING MIXTURES ARE USED.
- A LANDSCAPE CONTRACTOR SHALL EXCAVATE ALL PLANT PITS, VINE PITS, HEDGE TRENCHES, AND SHRUB BEDS AS FOLLOWS:
 - ALL PITS SHALL BE GENERALLY CIRCULAR IN OUTLINE, WITH VERTICAL SIDES. THE TREE PIT SHALL BE DEEP ENOUGH TO ALLOW ONE—EIGHTH (1/8) OF THE BALL TO BE ABOVE THE EXISTING GRADE. PLANTS SHALL REST ON UNDISTURBED EXISTING SOIL OR WELL COMPACTED BACKFILL ON EVERY SIDE, THE TREE PITS MUST BE A MINIMUM OF 2 TIMES THE ROOT BALL DIAMETER.
 - IF AREAS ARE DESIGNATED AS SHRUB BEDS OR HEDGE TRENCHES, THEY SHALL BE CULTIVATED TO AT LEAST EIGHTEEN (18) INCHES IN DEPTH. AREAS DESIGNATED FOR GROUND COVERS AND VINES SHALL BE CULTIVATED TO AT LEAST TWELVE (12) INCHES IN DEPTH.
- EACH TREE, SHRUB, OR VINE SHALL BE PRUNED IN AN APPROPRIATE MANNER IN ACCORDANCE WITH ACCEPTED STANDARD PRACTICE.
- ALL TRENCHES AND SHRUB BEDS SHALL BE EDGED AND CULTIVATED TO THE LINES SHOWN ON THE DRAWING. THE AREAS AROUND ISOLATED PLANTS SHALL BE EDGED AND CULTIVATED TO THE FULL DIAMETER OF THE PIT. SOIL THAT HAS BEEN REMOVED AND STACKED SHALL BE USED TO TRIM THE EDGES OF ALL EXCAVATED AREAS TO THE NEAT LINES OF THE PLANT PIT SAUCERS, THE EDGE OF SHRUB AREAS, HEDGE TRENCHES AND VINE POCKETS.
- AFTER CULTIVATION, ALL PLANT MATERIALS SHALL BE MULCHED WITH A LAYER BETWEEN TWO (2) AND THREE (3) INCHES DEEP OF HEMLOCK / SPRUCE MULCH OVER THE ENTIRE AREA OF THE BED OR SAUCER.
- A TWO (2) YEAR GUARANTEE SHALL BE PROVIDED ON ALL NEW PLANT MATERIAL. IF ANY TREE OR SHRUB DIES WITHIN THIS PERIOD OF TIME, IT SHALL BE REPLACED.
- ALL AREAS NOT LANDSCAPED SHALL BE LOAMED AND SEEDED.

DATE	BY	DESCRIPTION
AUG. 2, 2018	JMP	EXTEND RIP RAP AT 30" F.E.S.
	EAF	PROF. BLDG. F.E.E., REV. DRAINAGE DESIGN
	JMP	PER PEER REVIEW & TOWN COMMENTS
	JMP	REV.

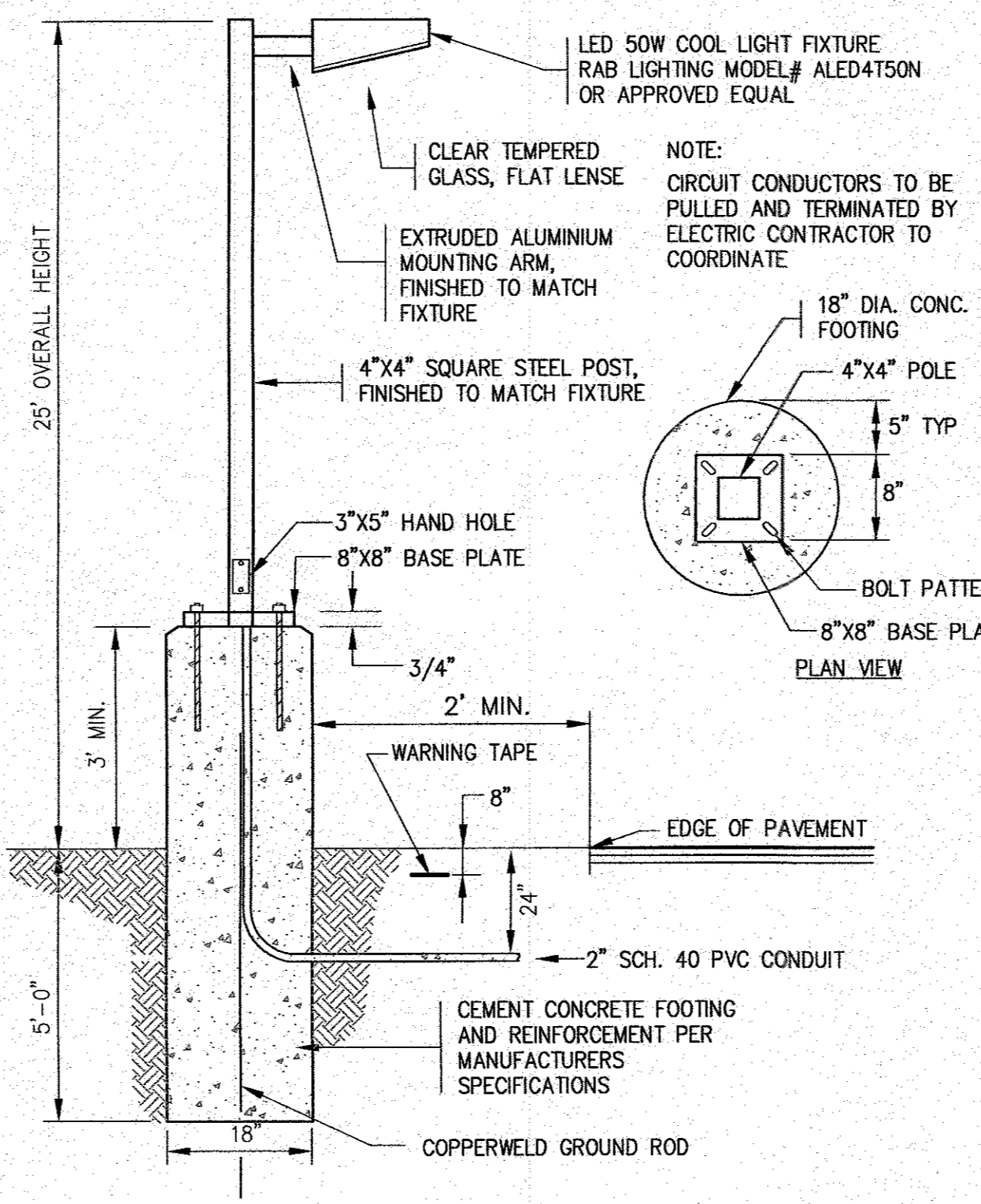
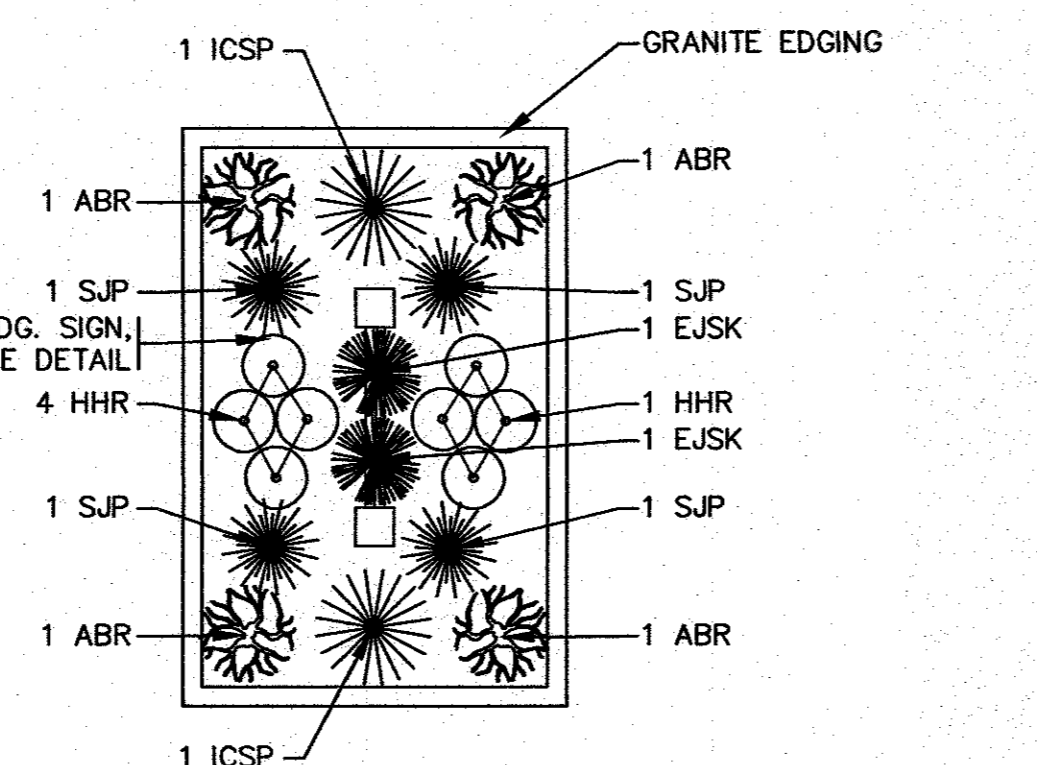
DATE: AUG. 2, 2018
 DRAWN BY: JMP
 CHECKED BY: EAF
 JOB NO.: 16-B842
 SCALE: 1" = 20'

PLANT LIST

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS	REMARKS
SHRUBS						
IMBP	3	ILEX MESERVEAE 'BLUE PRINCESS'	BLUE HOLLY	3'-4' HT.	5 GAL.	PLANT 5' O.C.
EJSK	2	EUONYMUS JAPONICUS 'SILVER KING'	SILVER KING EUONYMUS	24"-28" HT.	3 GAL.	PLANT 3' O.C.
HPL	6	HYDRANGEA PANICULATA 'LIME LIGHT'	LIMELIGHT HYDRANGEA	30"-36" HT.	5 GAL.	PLANT 5' O.C.
ICSP	2	ILEX CRANATA 'SKY PENCIL'	SKY PENCIL HOLLY	4'-5' HT.	B & B	AS SHOWN
JCG	6	JUNIPERUS CHINENSIS 'GOLD COAST'	GOLD TIPPED GROUND JUNIPER	3 GAL.	5 GAL.	PLANT 3' O.C.
MD	8	MICROBIOTA DECUSSATA	SIBERIAN CARPET CYPRESS	18"-24" SPR.	3 GAL.	PLANT 3' O.C.
SBG	12	SPIRAEA APONICA 'NEON FLASH'	NEON FLASH APANENSE SPIREA	18"-24" SPR.	3 GAL.	PLANT 3' O.C.
SJP	4	SPIRAEA JAPONICA 'LITTLE PRINCESS'	LITTLE PRINCESS SPIREA	18"-24" SPR.	3 GAL.	PLANT 2' O.C.
TCG	22	TAXUS CUSPIDATA 'GREEN WAVE'	GREEN WAVE SPREADING YEW	18"-24" SPR.	4 GAL.	PLANT 4' O.C.
VTS	6	VIBURNUM PLICATUM TOMETOSUM 'SHASTA'	SHASTA DOUBLEFILE VIBURNUM	3'-4' HT.	5 GAL.	PLANT 5' O.C.
SHADE & ORNAMENTAL TREES						
ARO	11	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3" CAL.	B & B	PLANT 40' O.C.
SP	3	STEWARTIA PSEUDOCAMELLIA	JAPANESE STEWARTIA	2.5" CAL.	B & B	AS SHOWN
PCC	6	PYRUS CALLERYANA 'CHANTICLEER'	CLEVELAND SELECT CALLERY PEAR	3" CAL.	B & B	PLANT 35' O.C.
ZSV	4	ZELKOVA SERRATA 'VILLAGE GREEN'	VILLAGE GREEN ZELKOVA	3" CAL.	B & B	PLANT 40' O.C.
ORNAMENTAL GRASSES & PERENNIALS						
ABR	4	ASTILBE AREDSII 'BURGUNDY RED'	BURGUNDY RED ASTILBE	1 GAL.	20" HT.	18" O.C.
CAK	15	CALAMACROSISTIS ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	1 GAL.	36" HT.	18" O.C.
HRR	8	HEMEROCALIS 'ROSY RETURNS'	ROSY RETURNS DAYLILY	1 GAL.	18" HT.	18" O.C.
HHR	124	HEMEROCALIS 'HAPPY RETURNS'	HAPPY RETURNS DAYLILY	1 GAL.	18" HT.	18" O.C.
PALB	33	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	LITTLE BUNNY FOUNTAIN GRASS	1 GAL.	18" HT.	18" O.C.

LANDSCAPING & LIGHTING PLAN

SCALE: 1" = 20'



PERMIT SET
 (NOT FOR CONSTRUCTION)

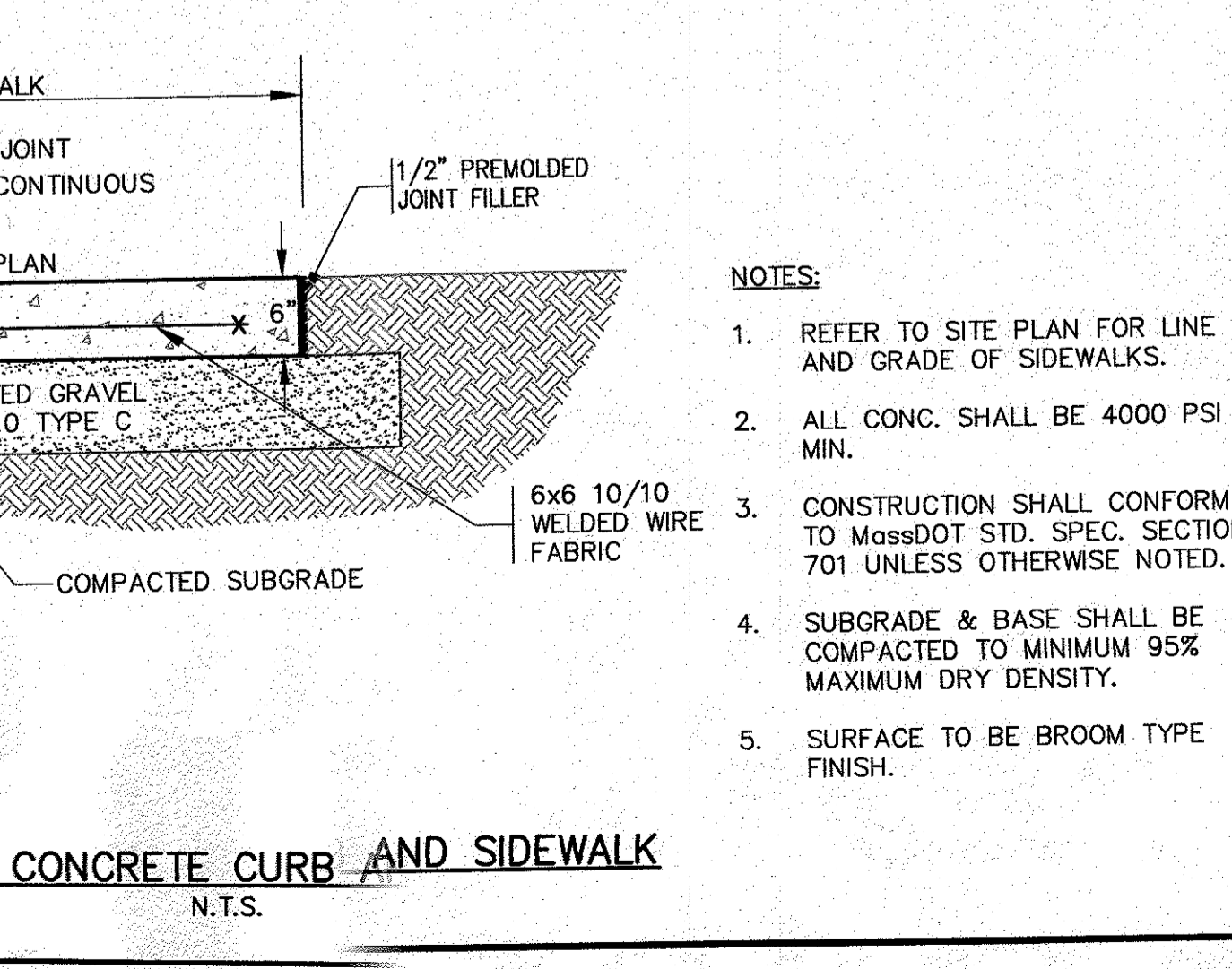
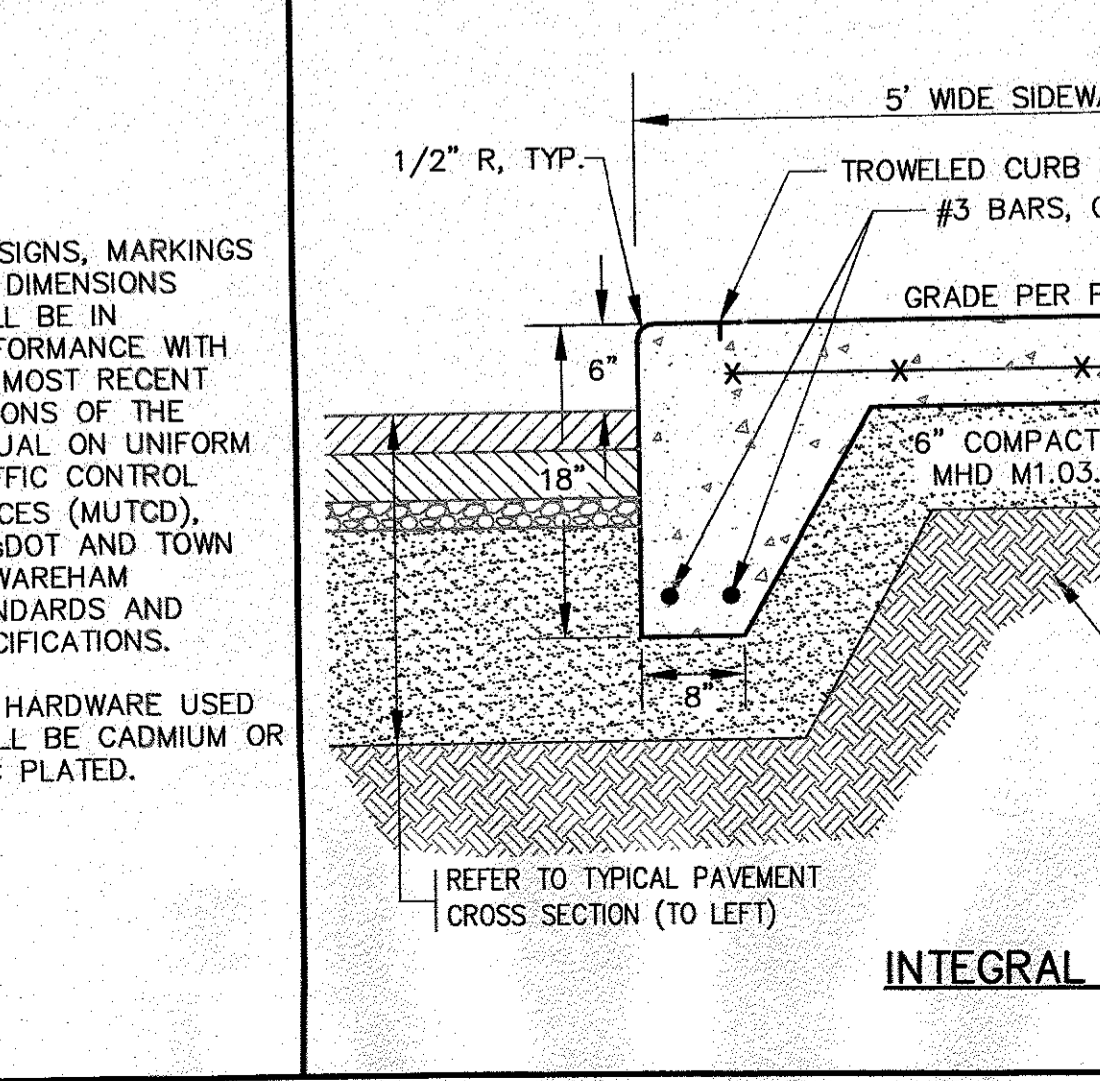
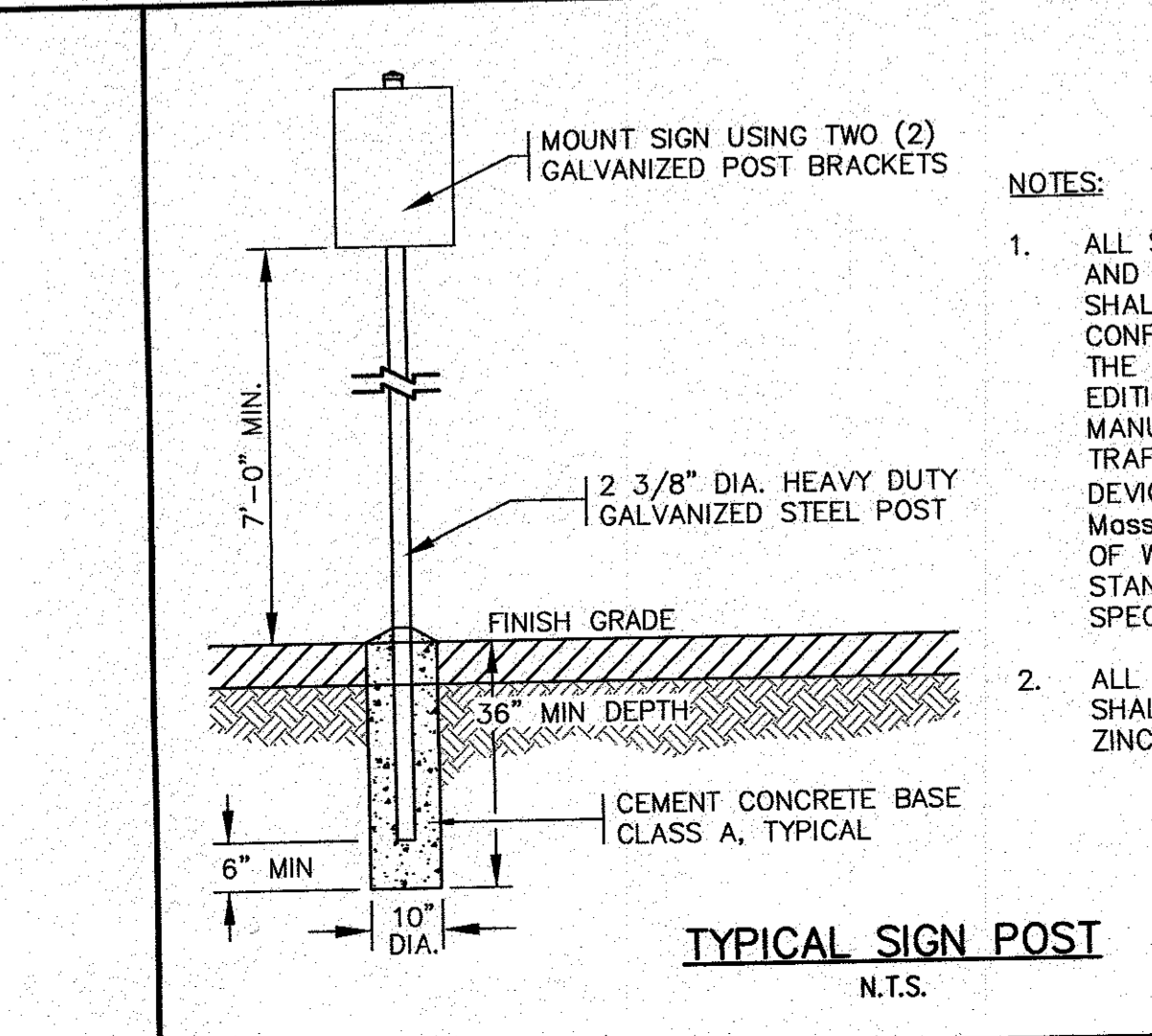
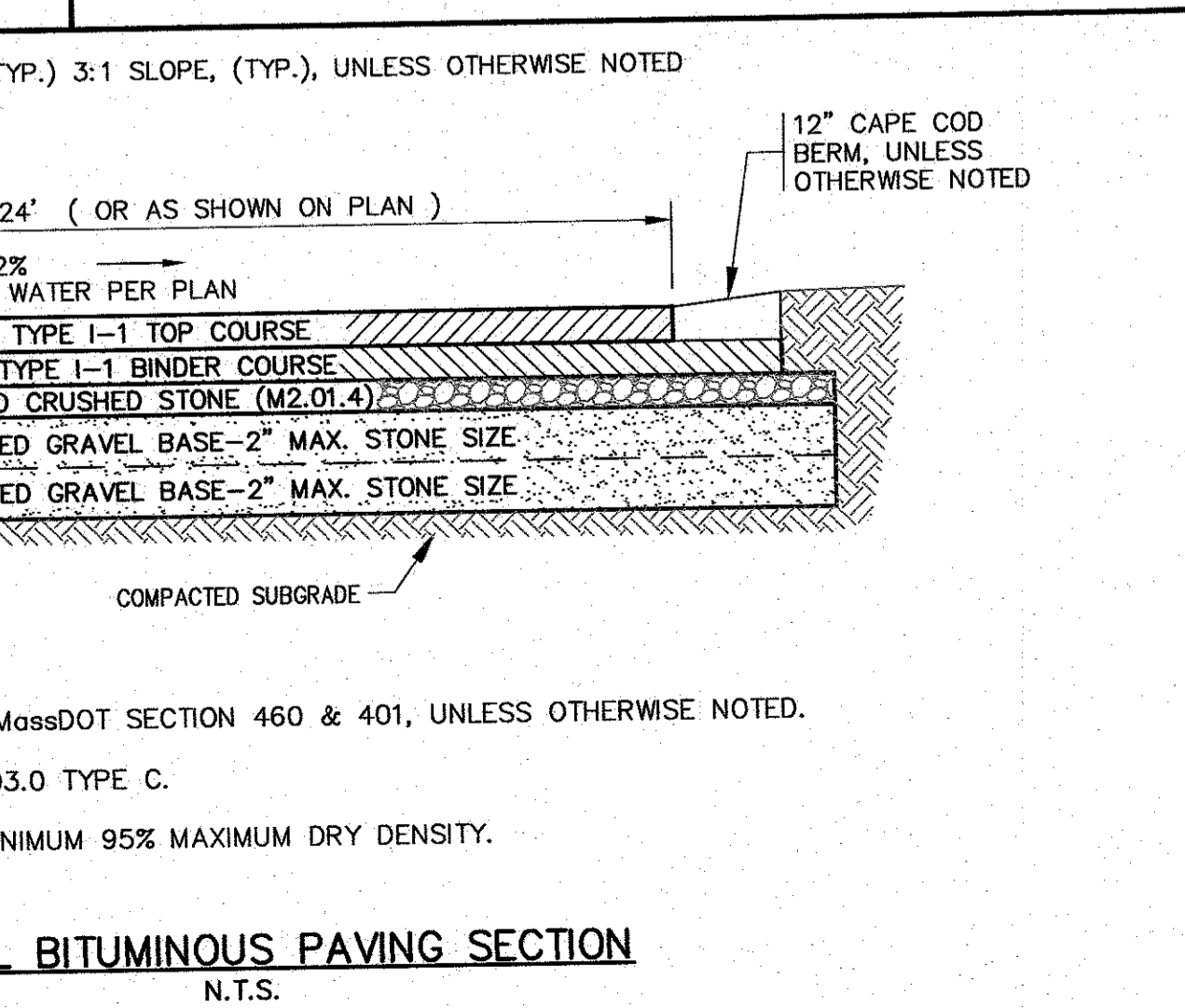
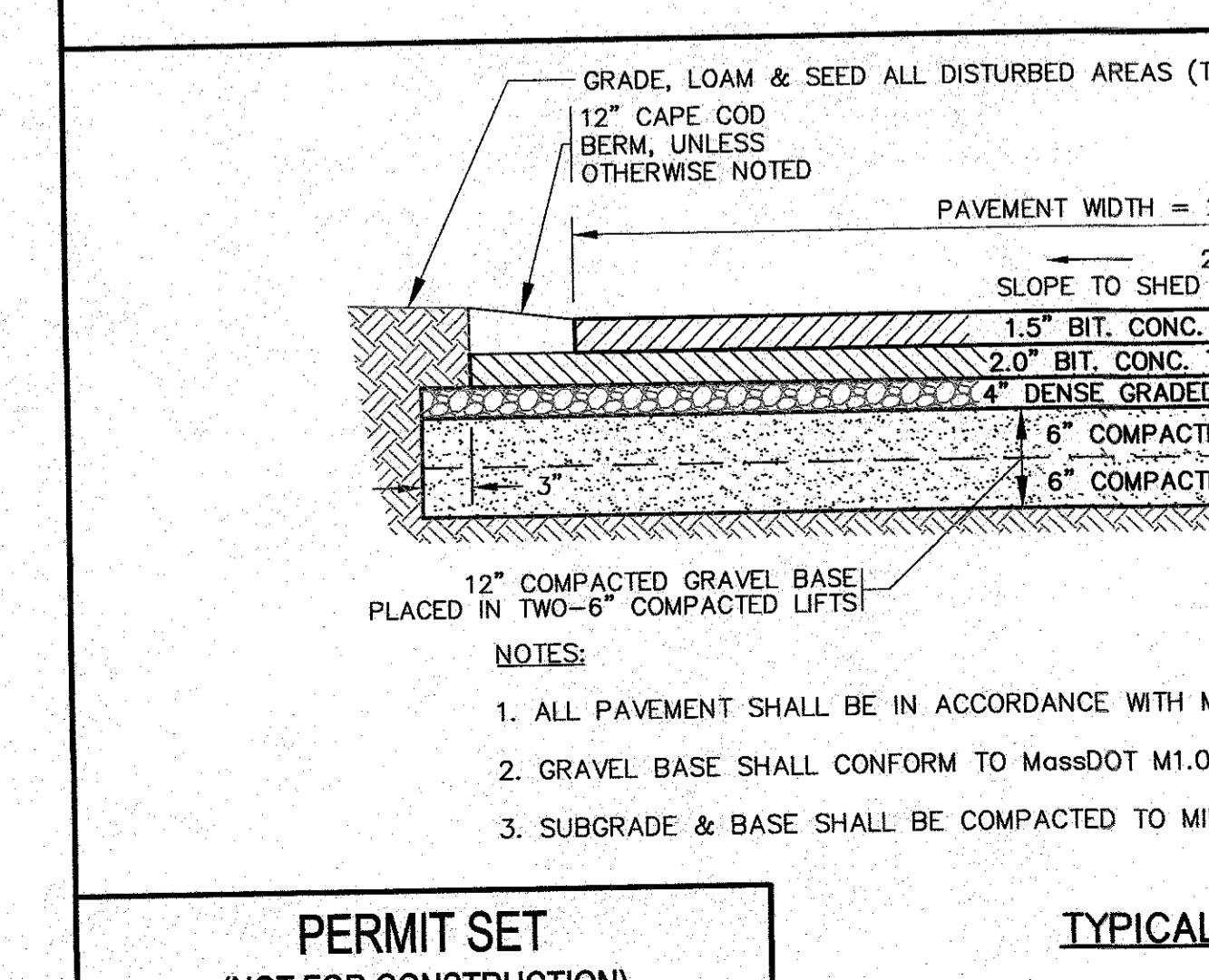
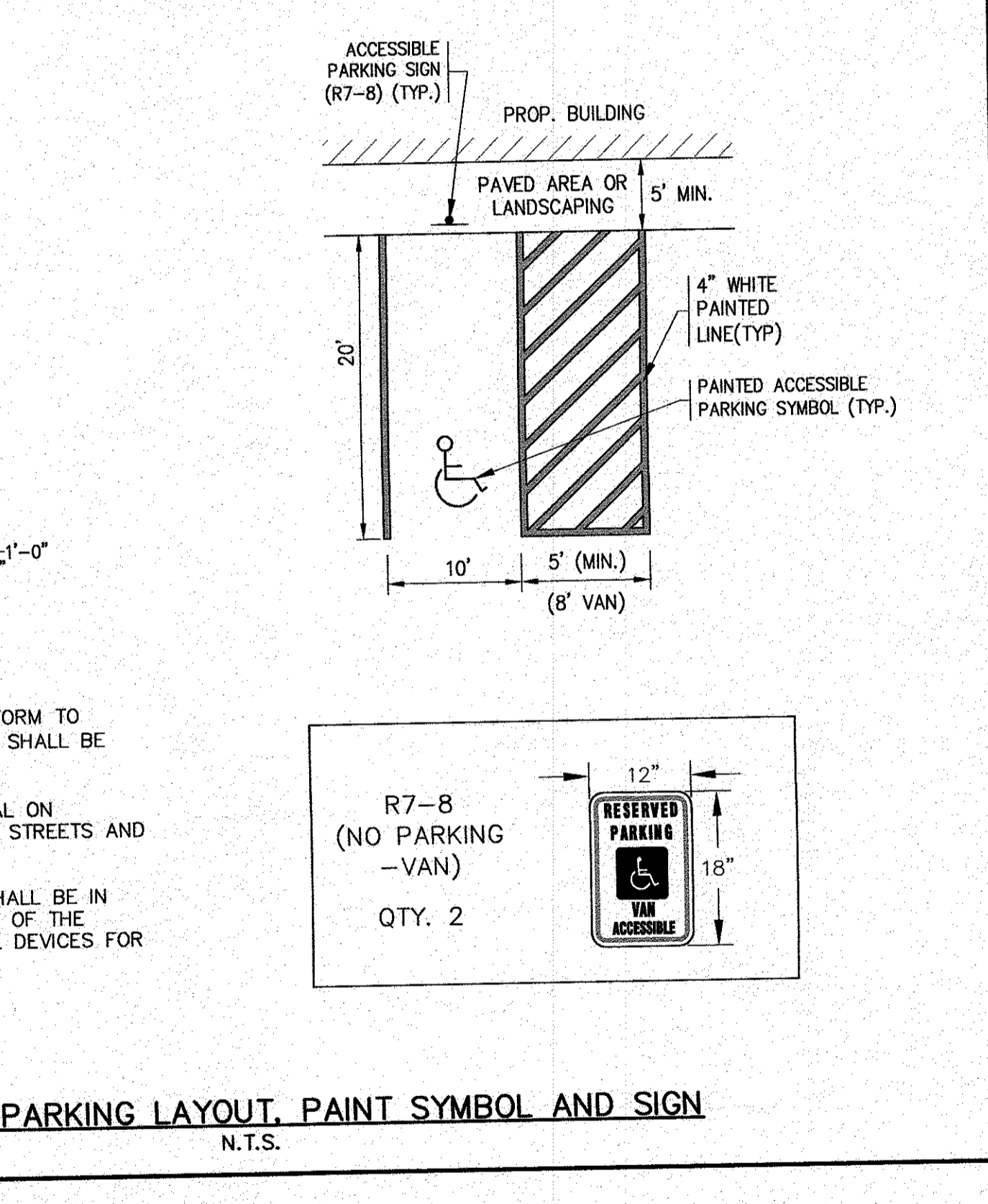
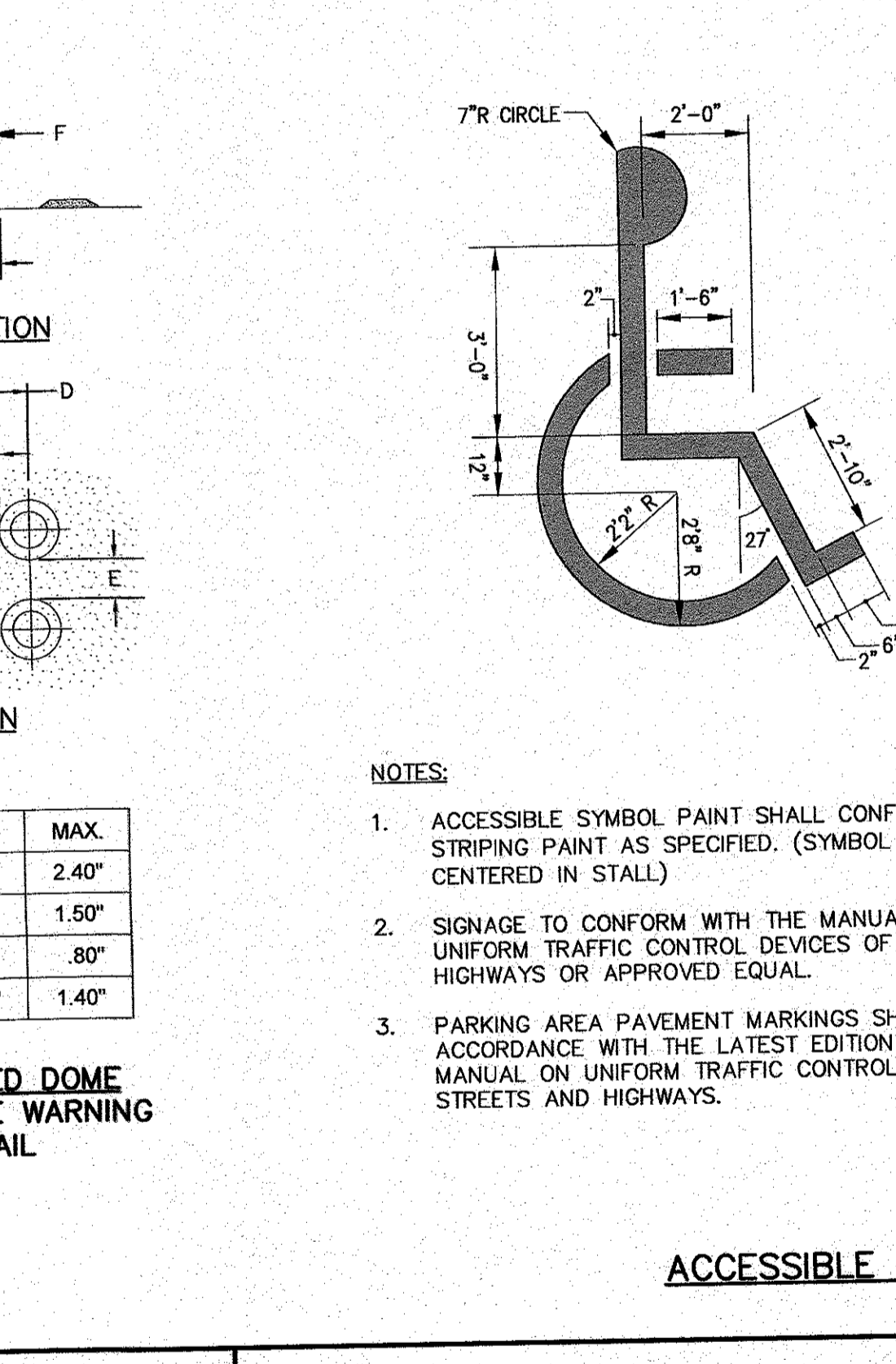
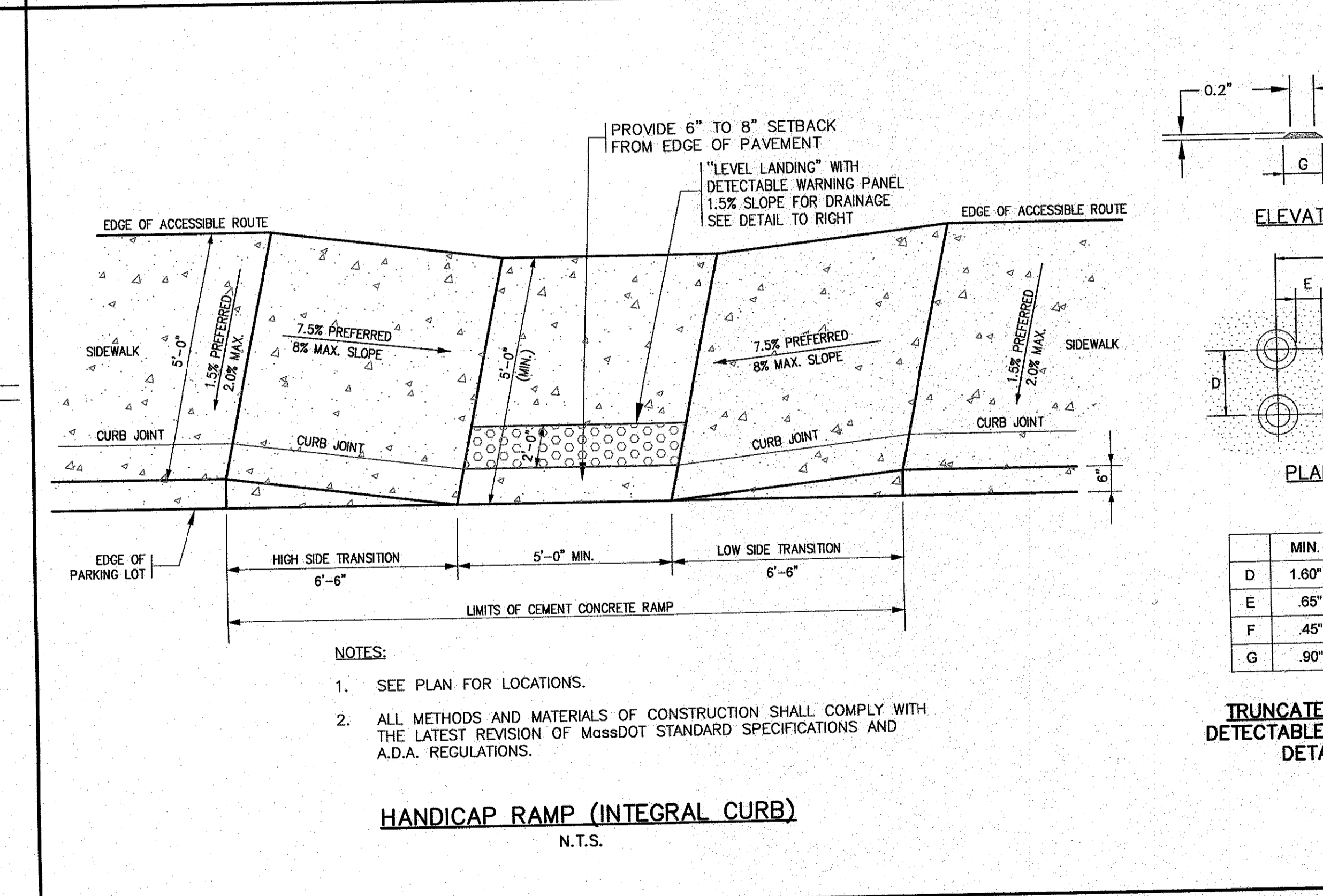
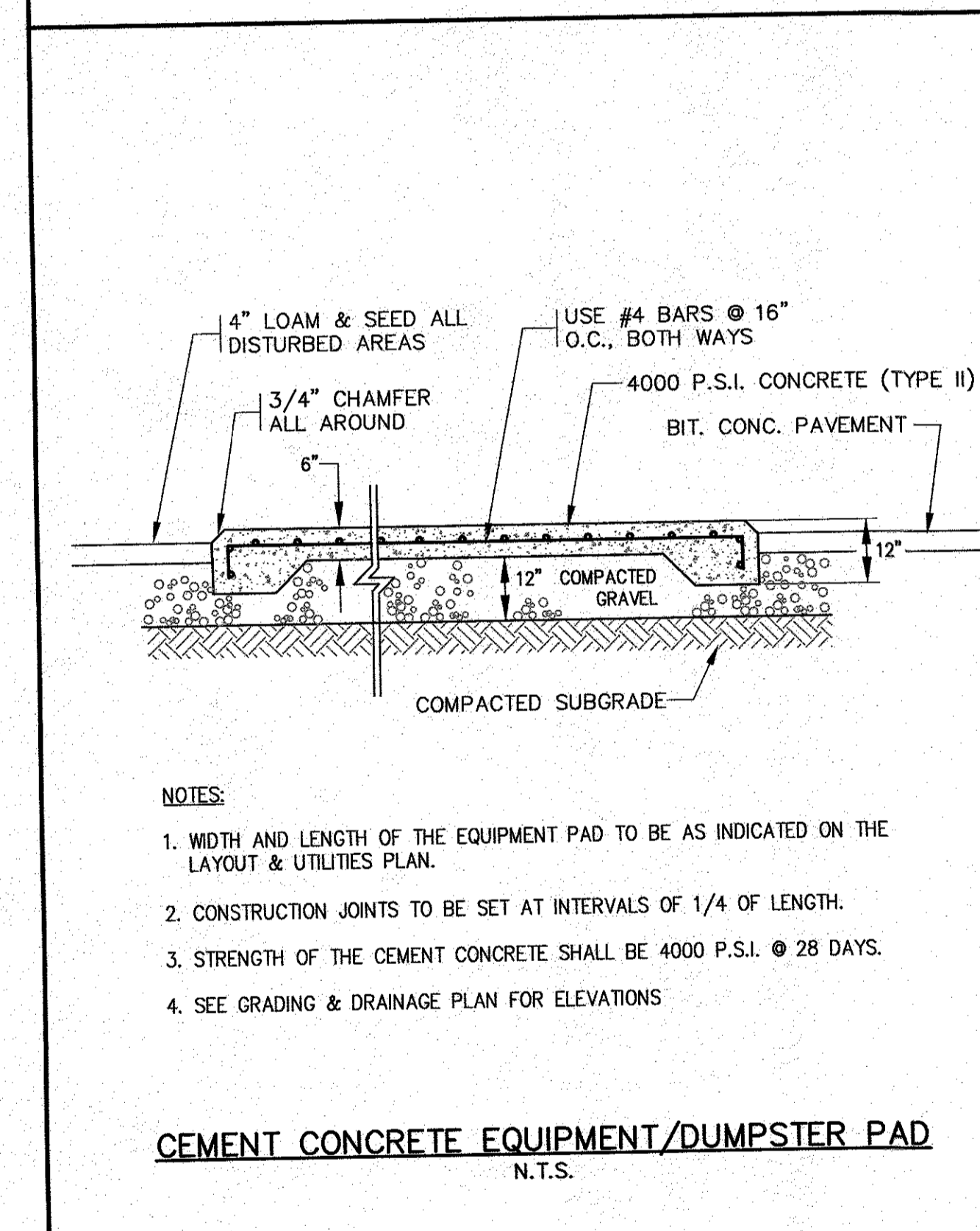
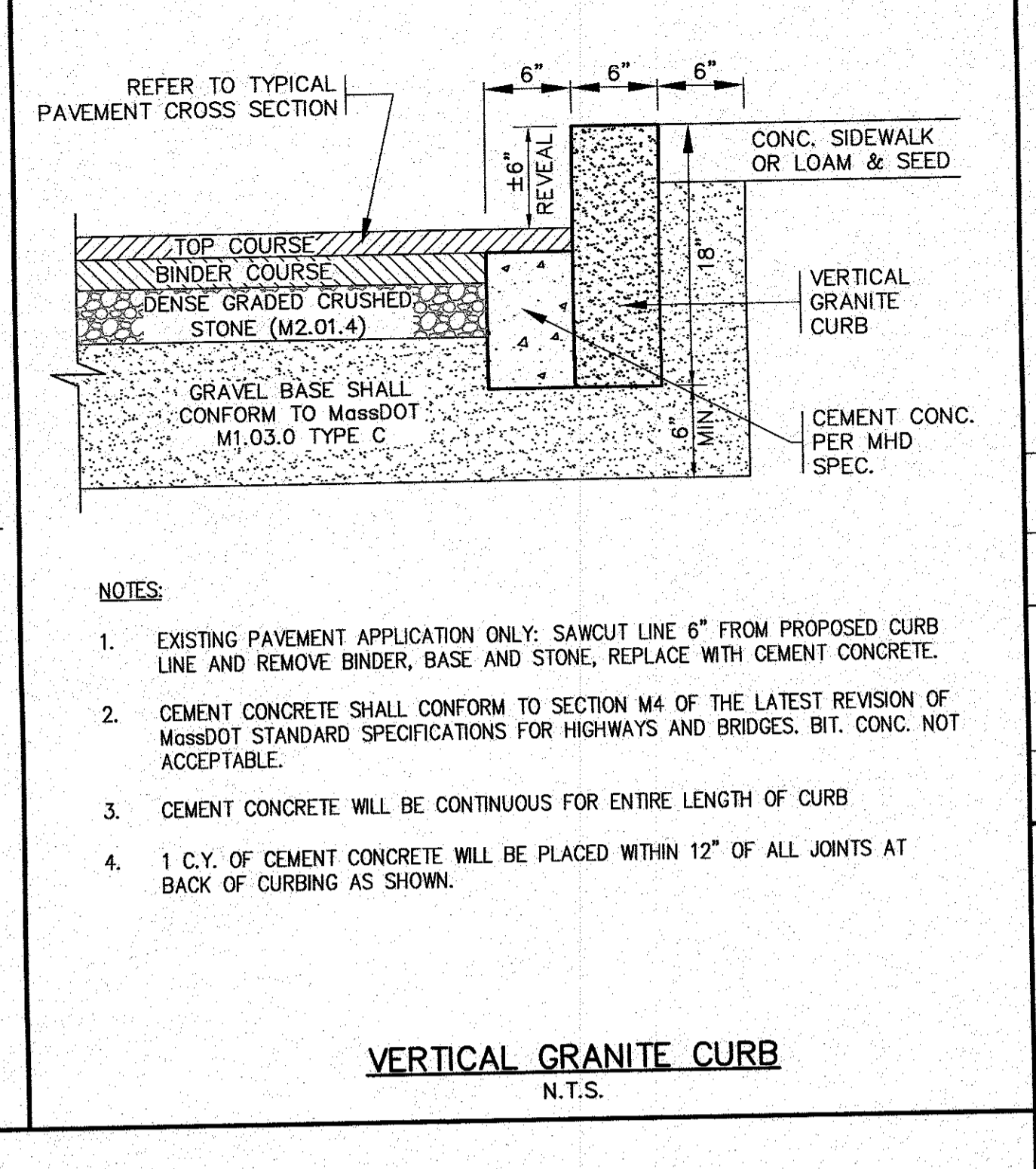
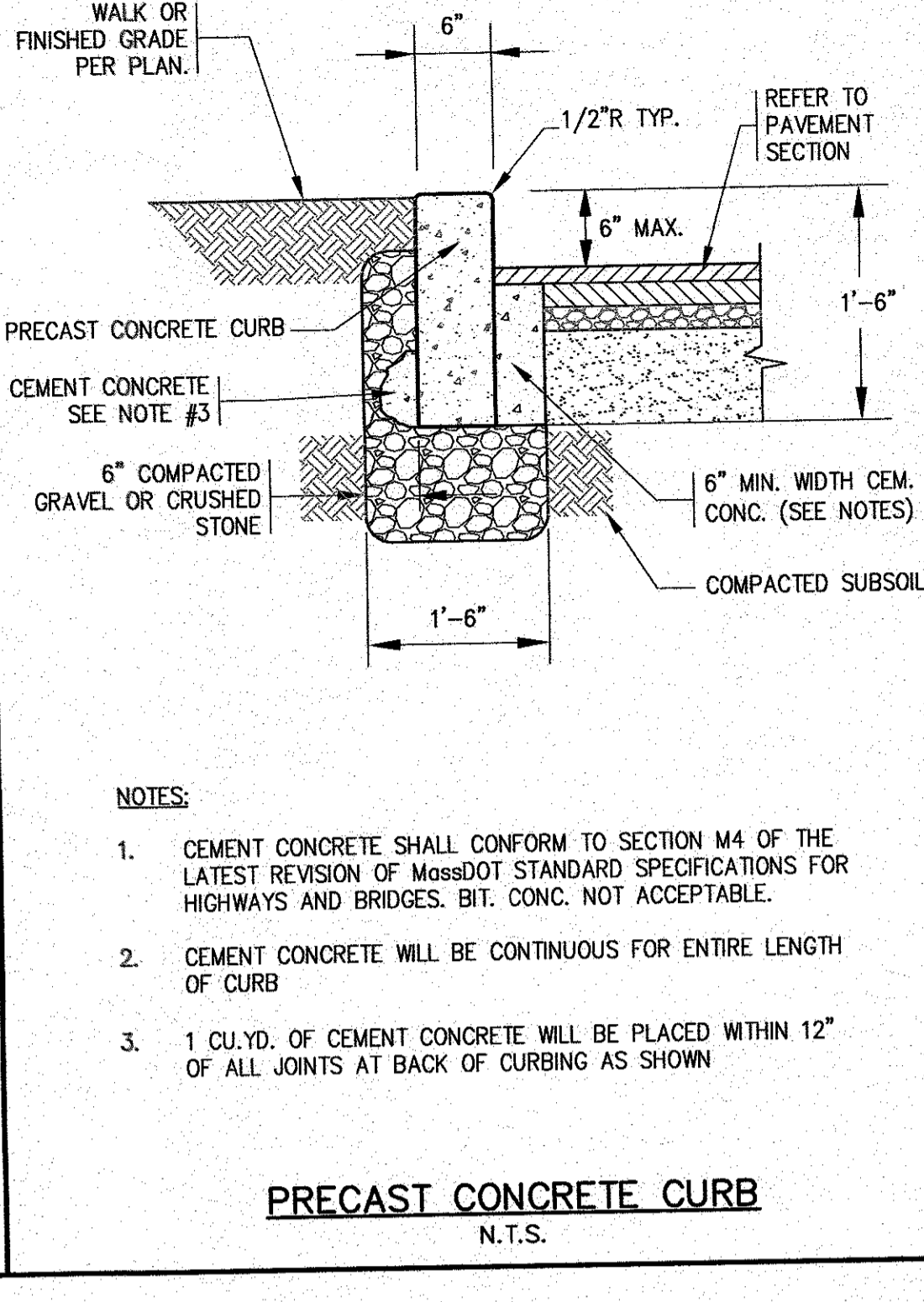
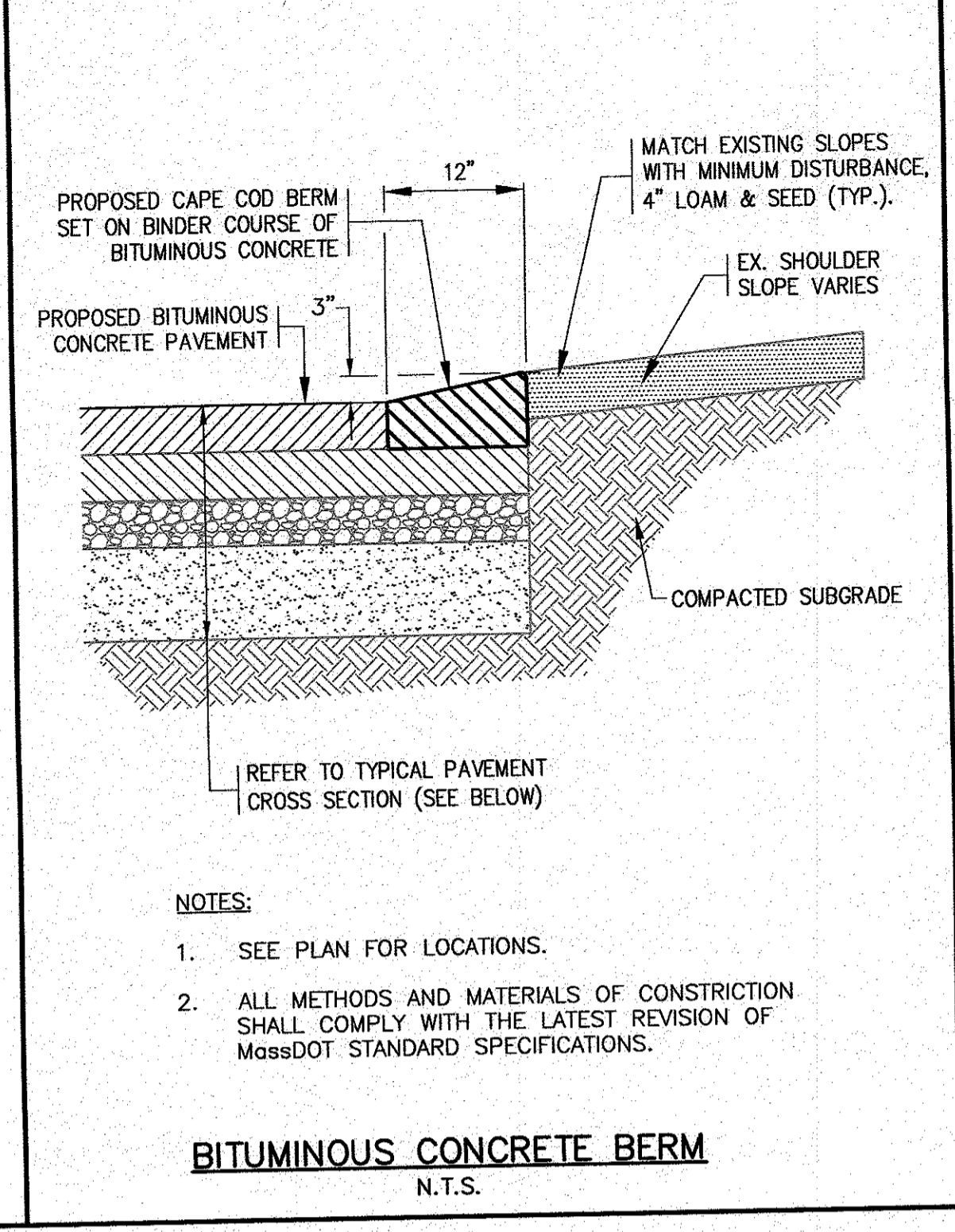
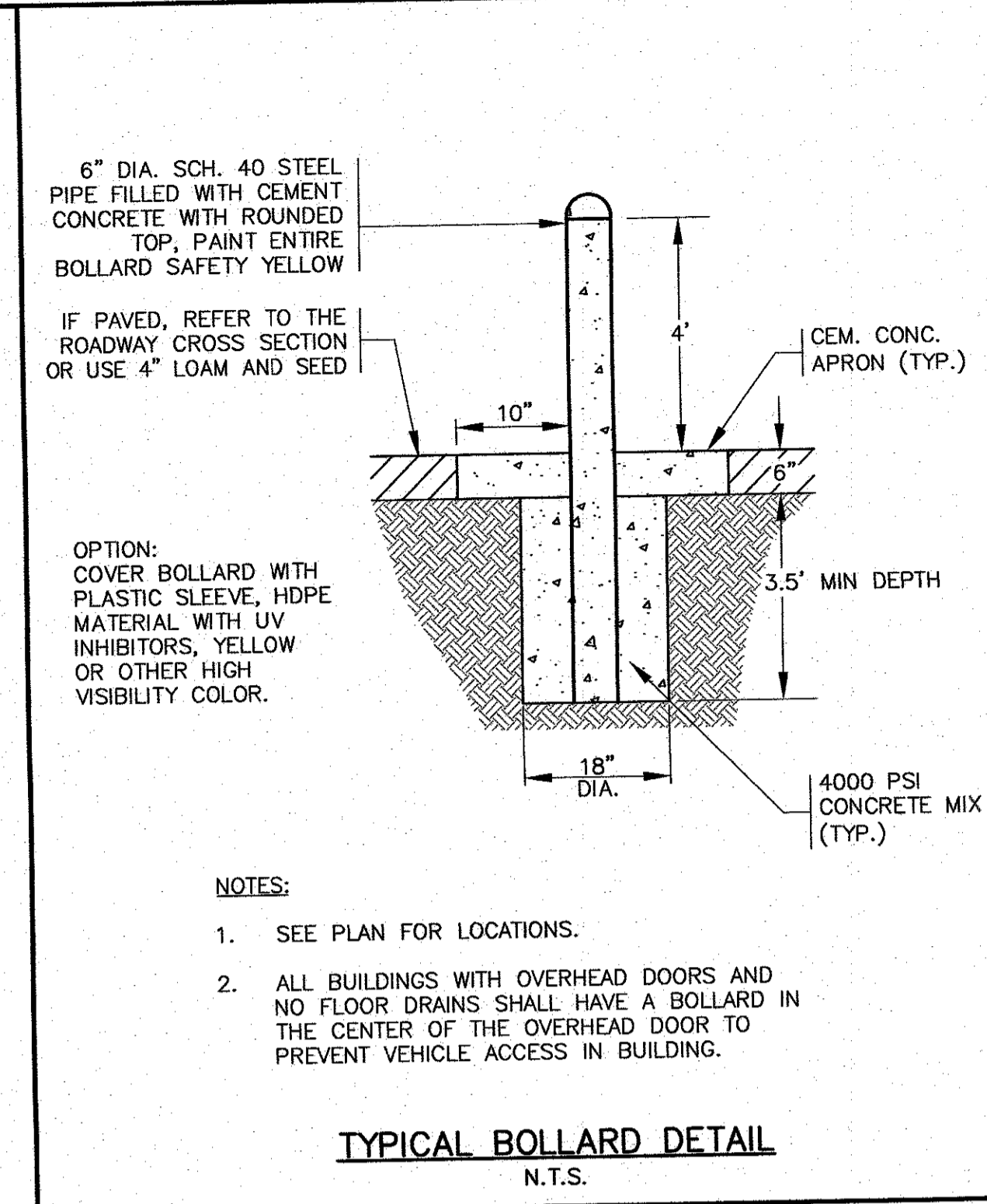
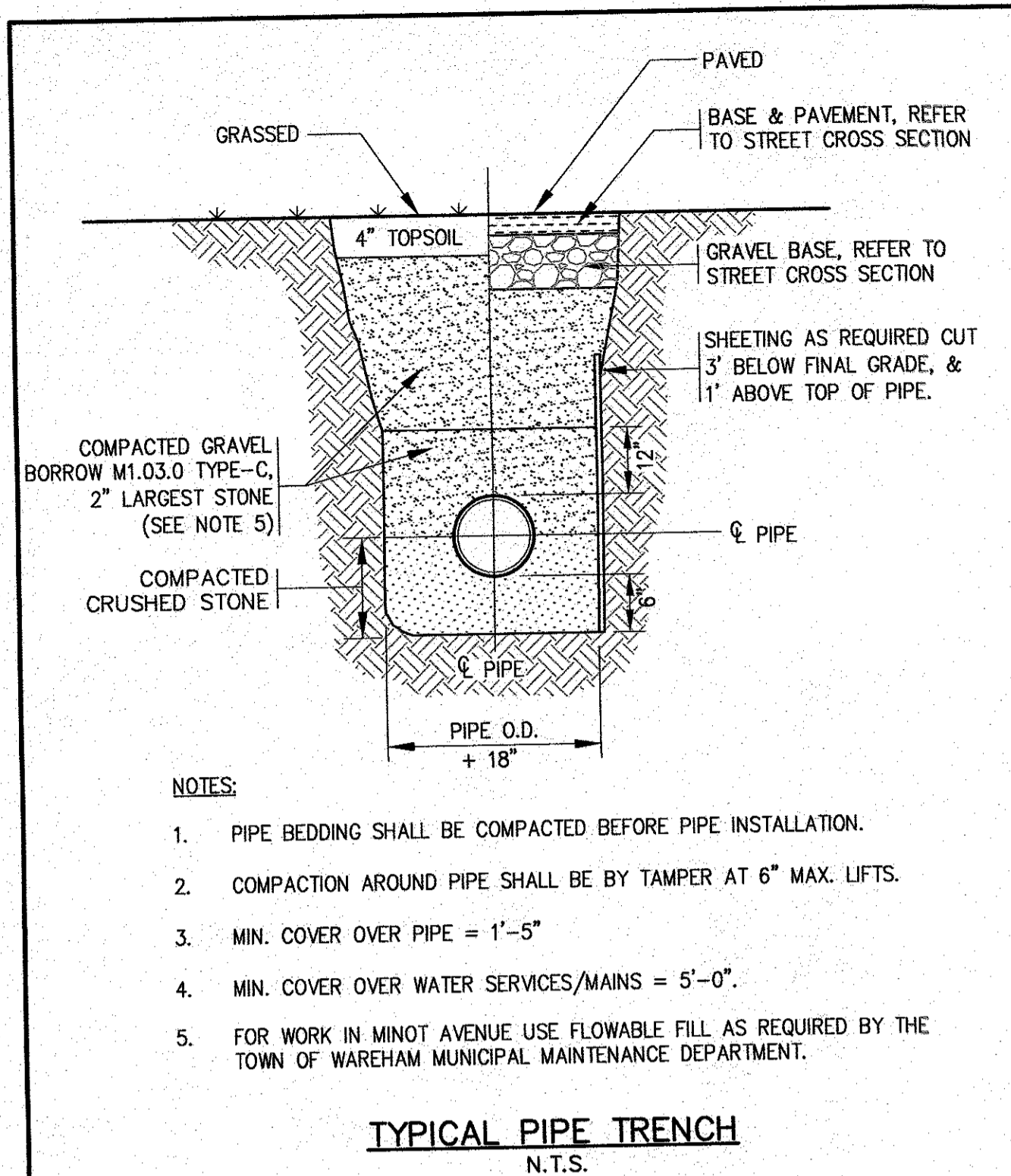
G.A.F. ENGINEERING, INC.
 PROFESSIONAL ENGINEERS & LAND SURVEYORS
 266 MAIN STREET - WAREHAM, MA 02571
 TEL: (508) 295-6600 FAX: (508) 295-6634
 E-MAIL: gaf@gaf-eng.com

**SITE DEVELOPMENT PLAN
 LANDSCAPING & LIGHTING PLAN**
 WAREHAM, MA
 72 MINOT AVE.

GIANCOLA PROPERTIES MINOT LLC
 EAST WAREHAM, MA
 P.O. BOX 570

JOB NO.: 16-B842
 DWG. 7 OF 13

H:\GAF DRAWINGS\2018 DRAWINGS\16-B842 (GIANCOLA)\0842\0842 SITE PLAN 2018_REV-2.dwg



DATE: AUG. 2, 2018
 DRAWN BY: J.M.P.
 CHECKED BY: W.F.M.
 JOB NO.: 16-BB42
 SCALE: N.T.S.

APPROVED BY: [Signature]

G.A.F. ENGINEERING, INC.
 PROFESSIONAL ENGINEERS & LAND SURVEYORS
 286 MAIN STREET - WAREHAM, MA 02571
 TEL: (508) 295-6600 FAX: (508) 295-6634
 E-MAIL: gae@gafe.com

APPROVED FOR: [Signature]

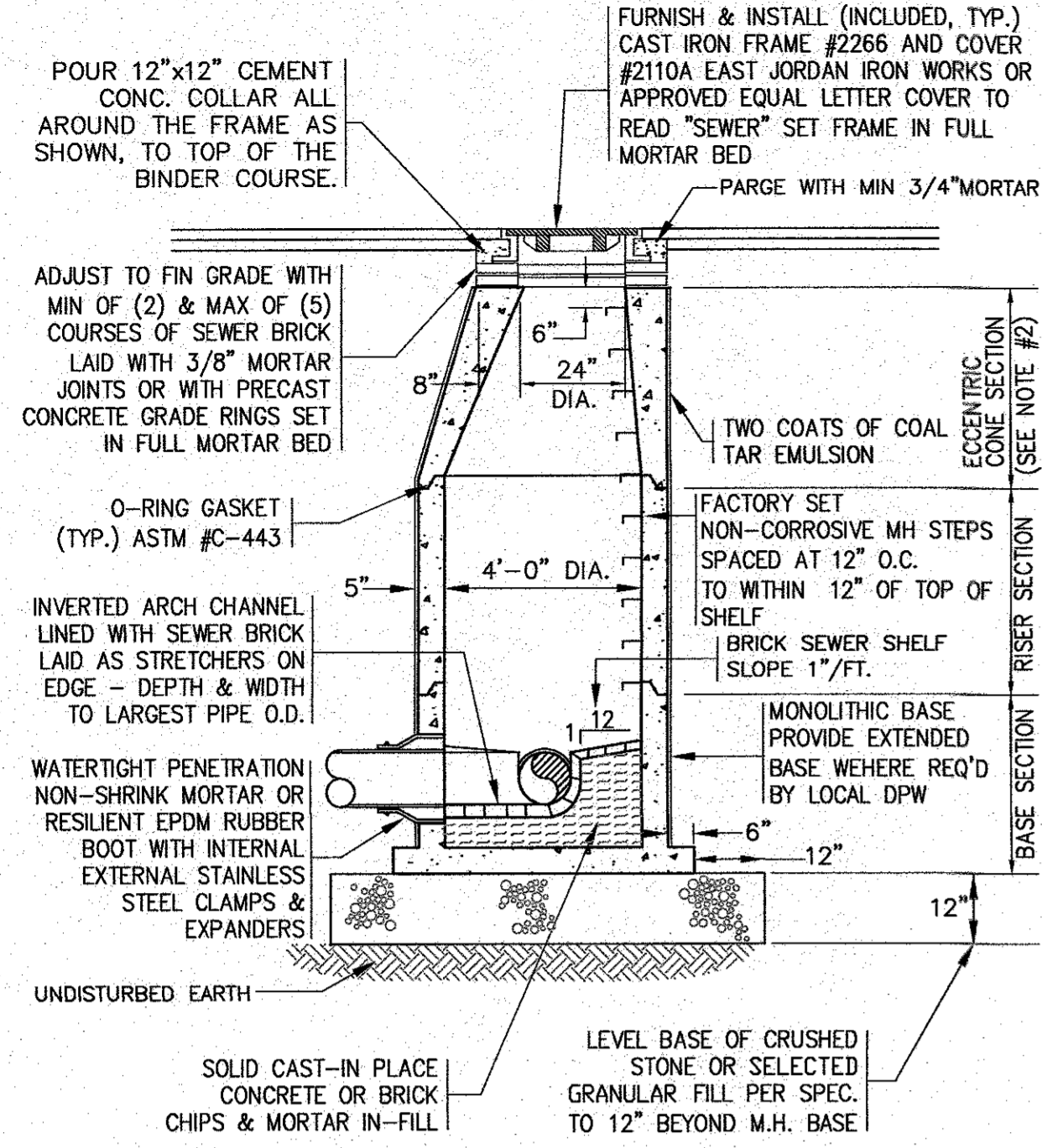
GIANCOLA PROPERTIES MINOT LLC
 72 MINOT AVE. WAREHAM, MA
 P.O. BOX 570 EAST WAREHAM, MA

NO CHANGES THIS SHEET
 NO CHANGES THIS SHEET
 PER PEER REVIEW COMMENTS

DATE BY REV. DESCRIPTION

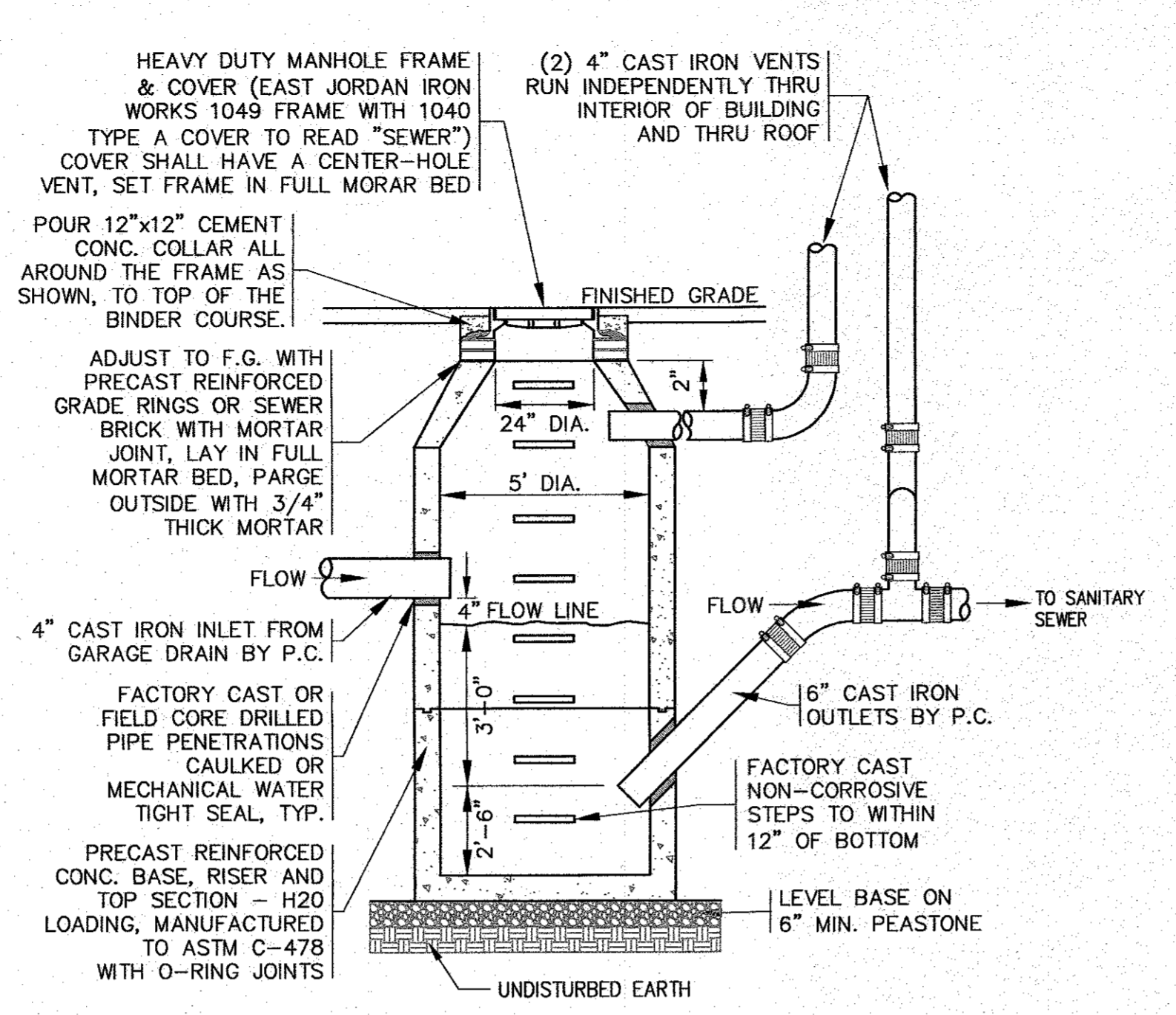
DATE: 11/12/20 J.M.P.
 DATE: 6/16/20 J.M.P.
 DATE: 8/29/18 J.M.P.

JOB NO.: 16-8842
 DWG. 8 OF 13



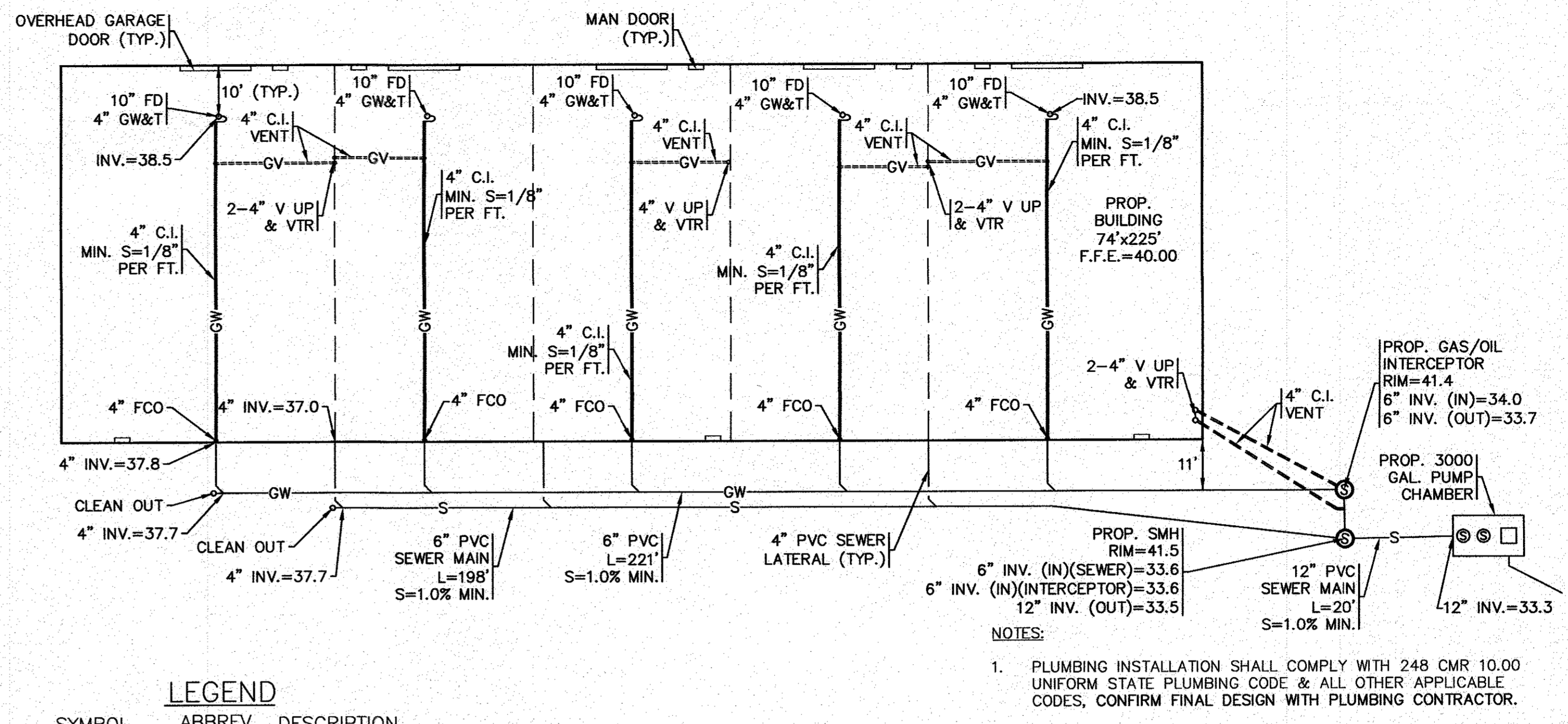
- NOTES:**
1. ALL STRUCTURES SHALL BE PRECAST CONC. IN ACCORDANCE WITH ASTM C-478 WITH H-20 LOADING. SECTION HEIGHTS VARY.
 2. FOR SHALLOW INSTALLATION AND WHEN APPROVED BY THE ENGINEER, FLAT TOP H-20 SLAB ALLOWED, SUBMIT SHOP DWGS.
 3. ALL STRUCTURE JOINTS AND PENETRATIONS SHALL BE WATER TIGHT.
 4. REFER TO PLANS FOR PIPE SIZES, INVERTS, RIMS AND LOCATIONS.

SEWER MANHOLE
N.T.S.



- NOTES:**
1. INTERCEPTOR STRUCTURE AND COMPONENTS TO BE FURNISHED AND SET BY THE GENERAL CONTRACTOR. THE P.C. SHALL FURNISH AND INSTALL INLET, OUTLET AND VENT PIPING, CO-ORDINATE PIPING PENETRATION SIZES AND INVERTS WITH GENERAL CONTRACTOR.
 2. ALL PIPING SHALL BE NO HUB EXTRA HEAVY CAST IRON SOIL PIPE WITH APPROVED STAINLESS STEEL BAND CLAMPS, IN ACCORDANCE WITH STATE PLUMBING CODE AND LOCAL REGULATIONS.
 3. REFER TO PLAN FOR LOCATION AND ELEVATIONS.

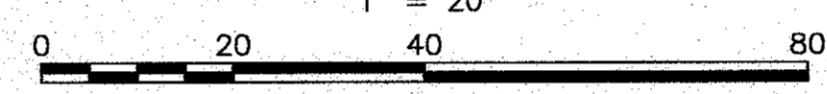
OIL/GAS INTERCEPTOR DETAIL
N.T.S.



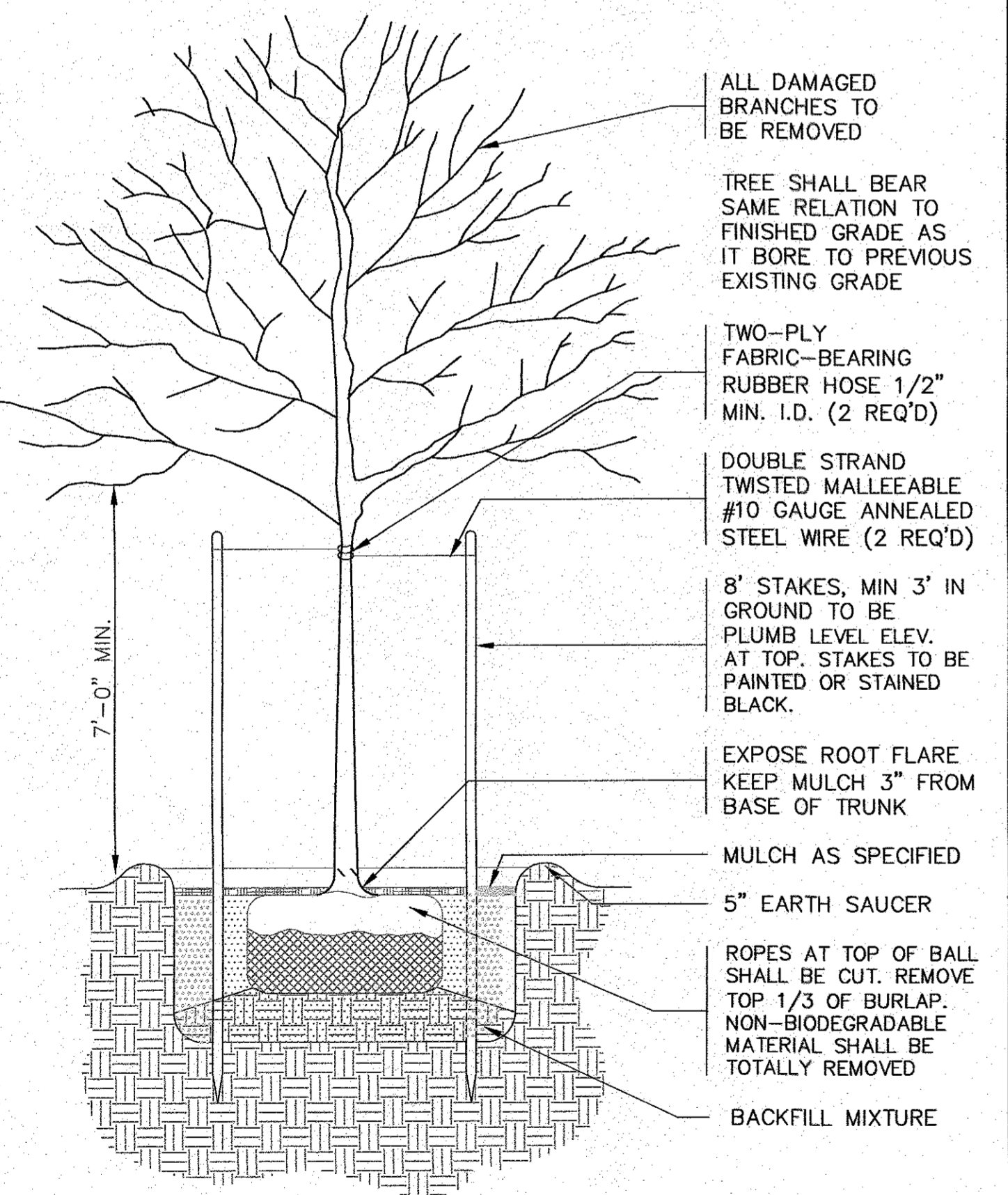
LEGEND

SYMBOL	ABBREV	DESCRIPTION
GW	GW	GARAGE WASTE UNDERGROUND
GV	GV	GARAGE VENT ABV. GROUND
GV	GV	GARAGE VENT UNDERGROUND
UP	UP	PIPE RISE OR UP
FCO	FCO	FLOOR CLEANOUT
VTR	VTR	VENT THROUGH ROOF
FD	FD	FLOOR DRAIN
C.I.	C.I.	CAST IRON
V	V	VENT
S	S	SEWER LINE UNDERGROUND

FLOOR DRAIN PLAN
1" = 20'

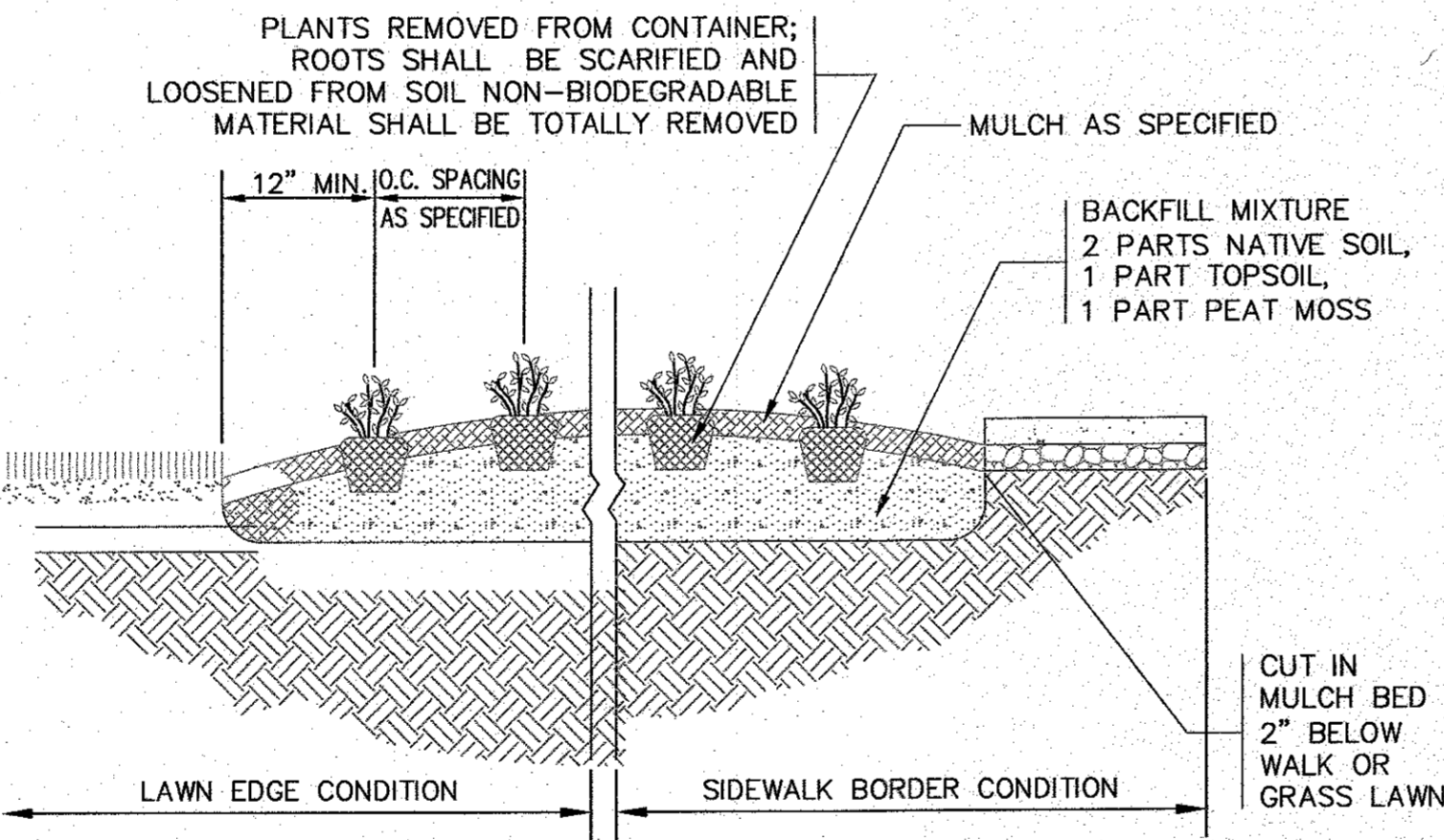


- NOTES:**
1. PLUMBING INSTALLATION SHALL COMPLY WITH 248 CMR 10.00 UNIFORM STATE PLUMBING CODE & ALL OTHER APPLICABLE CODES, CONFIRM FINAL DESIGN WITH PLUMBING CONTRACTOR.
 2. IN GENERAL, THIS PART PLAN IS DIAGRAMMATIC AND IS NOT INTENDED TO SHOW EVERY FITTING, CHANGE IN DIRECTION OR DETAIL OF CONSTRUCTION.
 3. ALL INTERIOR PIPING SHALL BE NO HUB EXTRA HEAVY CAST IRON SOIL PIPE AND FITTINGS WITH APPROVED STAINLESS STEEL BAND CLAMPS.
 4. CONTRACTOR SHALL VERIFY LOCATIONS OF FOOTINGS & PIERS PRIOR TO THE START OF WORK.
 5. FLOOR DRAINS SHALL BE JOSAM 35170-2 10-INCH TRACTOR GRATE & SEDIMENT BUCKET. NO HUB OUTLET.
 6. CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING, PATCHING & CORING ASSOCIATED WITH THE WORK.

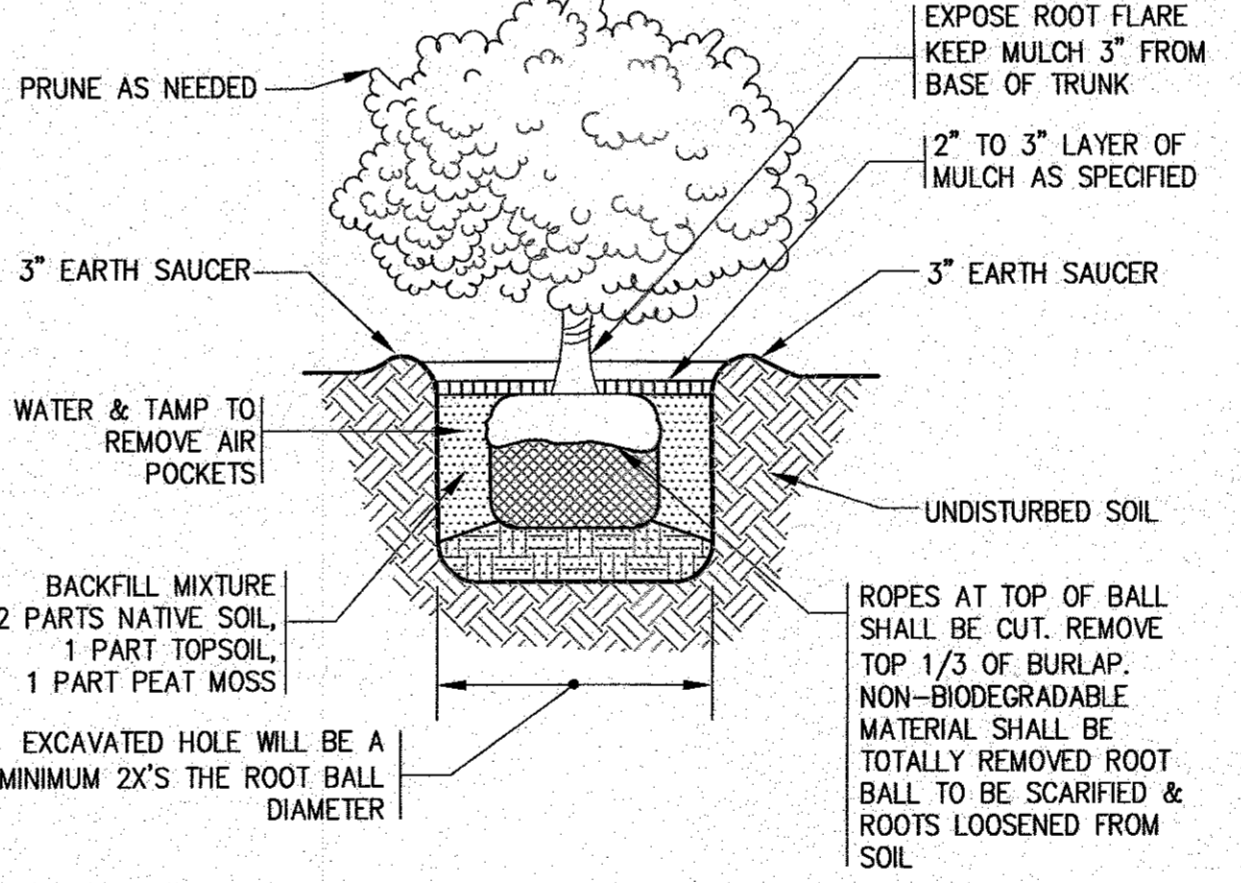


- ALL DAMAGED BRANCHES TO BE REMOVED
- TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS EXISTING GRADE
- TWO-PLY FABRIC-BEARING RUBBER HOSE 1/2" MIN. I.D. (2 REQ'D)
- DOUBLE STRAND TWISTED MALLEEABLE #10 GAUGE ANNEALED STEEL WIRE (2 REQ'D)
- 8" STAKES, MIN 3' IN GROUND TO BE PLUMB LEVEL ELEV. AT TOP. STAKES TO BE PAINTED OR STAINED BLACK.
- EXPOSE ROOT FLARE KEEP MULCH 3" FROM BASE OF TRUNK
- MULCH AS SPECIFIED
- 5" EARTH SAUCER
- ROPES AT TOP OF BALL SHALL BE CUT. REMOVE TOP 1/3 OF BURLAP. NON-BIODEGRADABLE MATERIAL SHALL BE TOTALLY REMOVED
- BACKFILL MIXTURE

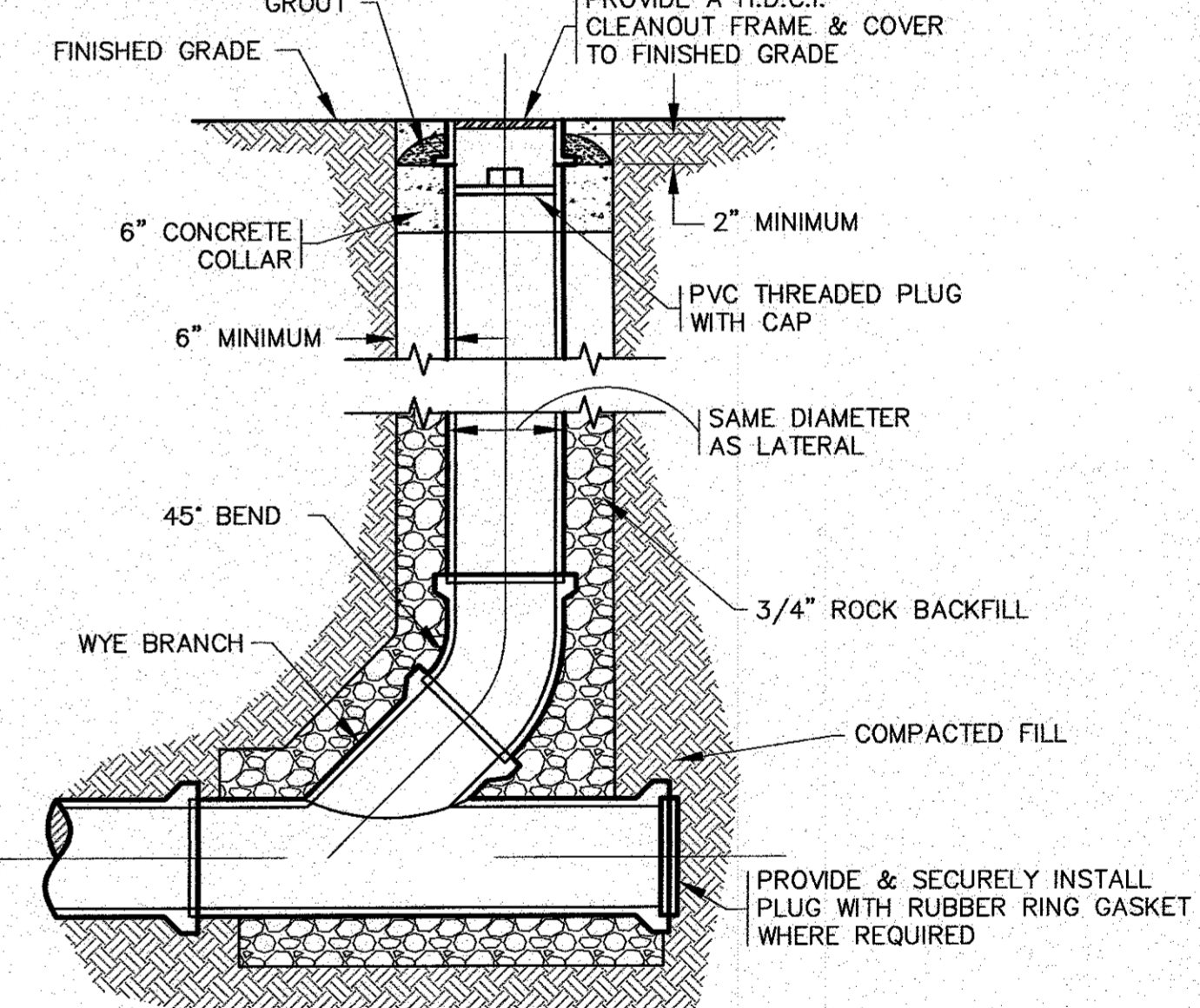
SHADE TREE PLANTING DETAIL
N.T.S.



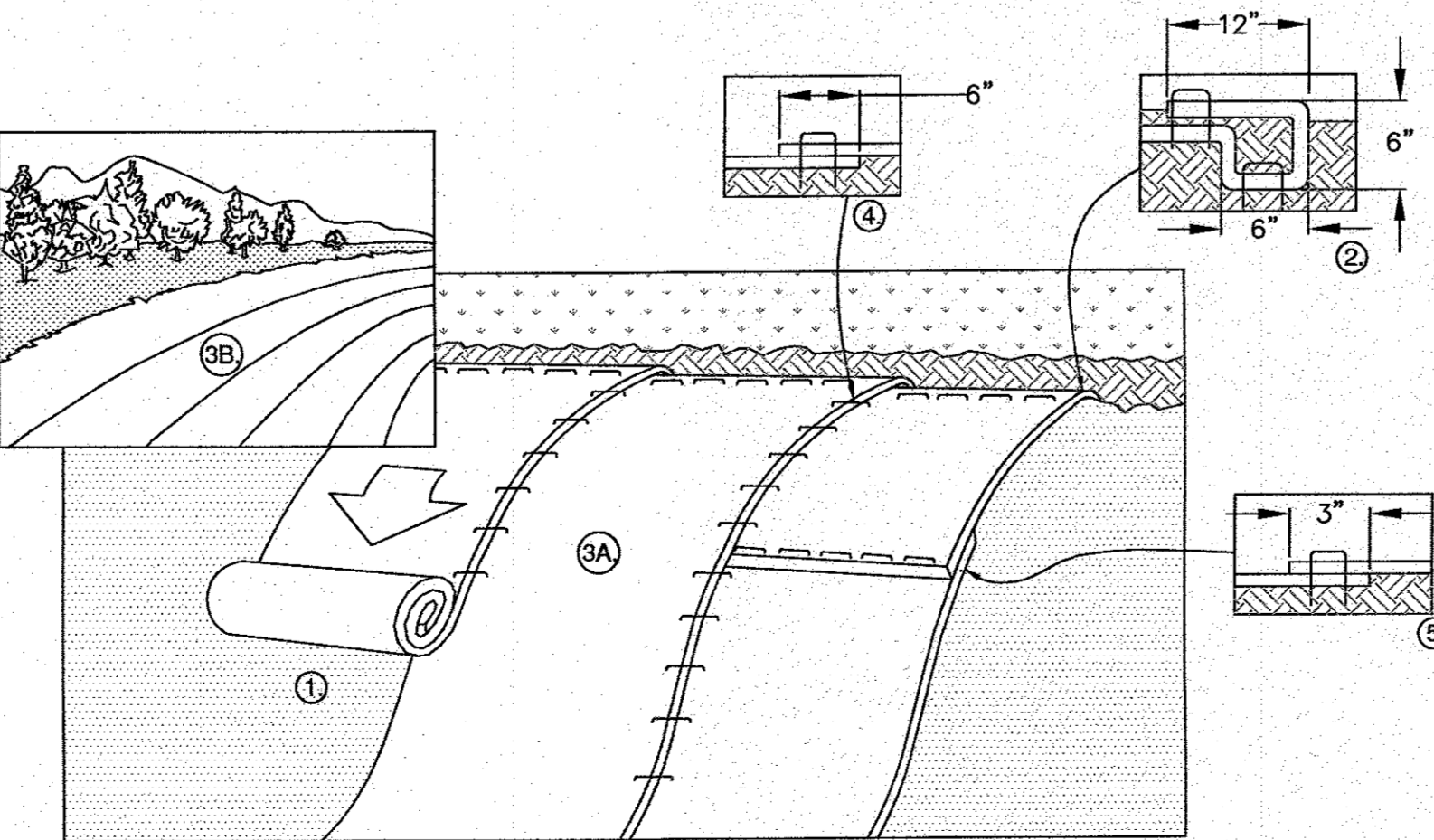
GROUNDCOVER PLANTING DETAIL
N.T.S.



SHRUB PLANTING
N.T.S.



STANDARD CLEANOUT
N.T.S.



EROSION CONTROL BLANKET SLOPE DETAIL
N.T.S.

- NOTES:**
1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
 2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP's.
 3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
 4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 6" OVERLAP.
 5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP's WIDTH. NOTE: *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.
 6. REFER TO NORTH AMERICAN GREEN FOR INSTALLATION METHODS AND STAPLE CONFIGURATION FOR PRODUCT #C125BN.

PERMIT SET
(NOT FOR CONSTRUCTION)

G.A.F. ENGINEERING, INC.
PROFESSIONAL ENGINEERS & LAND SURVEYORS
266 MAIN STREET - WAREHAM, MA 02571
TEL: (508) 295-6600 FAX: (508) 295-6634
E-MAIL: gae@gaef-inc.com

DATE: AUG. 2, 2018
DRAWN BY: JMP
CHECKED BY: WFM
JOB NO.: 16-BB42
SCALE: AS NOTED

APPROVED BY: [Signature]

DATE: 11/12/20
DATE: 6/16/20
DATE: 8/29/18

NO CHANGES THIS SHEET

PROP. BLDG. F.F.E., SEWER INVERTS

PROP. GAS/OIL INTERCEPTOR RIM=41.4
6" INV. (IN)=34.0
16" INV. (OUT)=33.7

PROP. 3000 GAL. PUMP CHAMBER!
12" PVC SEWER MAIN L=20'
S=1.0% MIN.

PROP. SMH RIM=41.5
6" INV. (IN)(SEWER)=33.6
6" INV. (IN)(INTERCEPTOR)=33.6
12" INV. (OUT)=33.5

REV. 1
DATE 8/29/18
BY WFM
APP'D WFM

DESCRIPTION

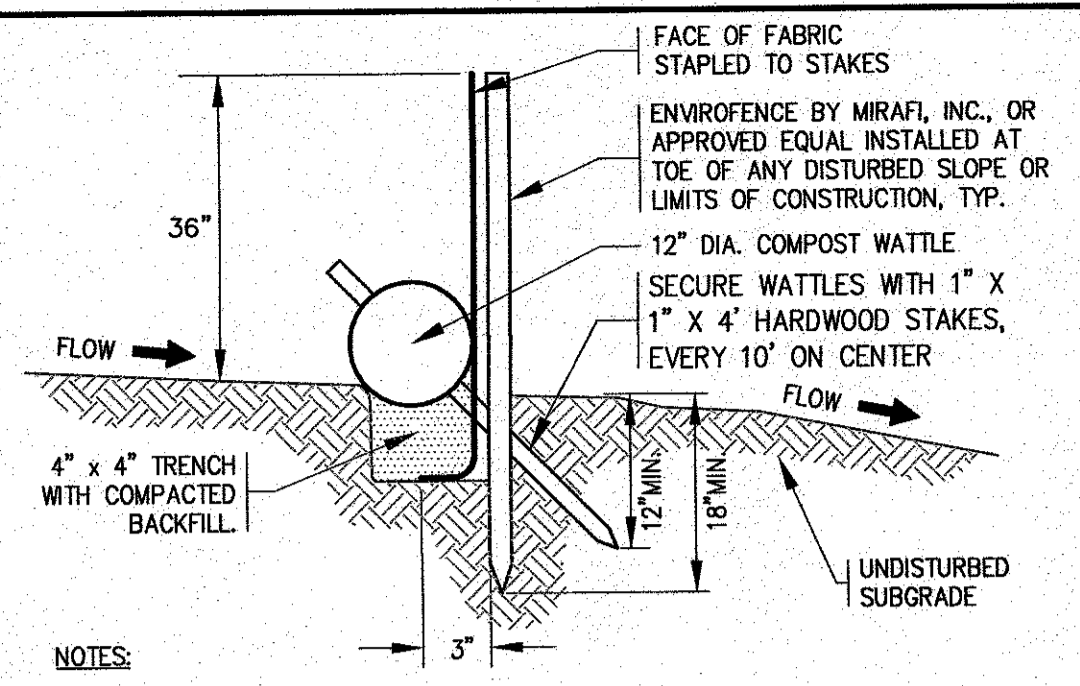
11 OF 13

SITE DEVELOPMENT PLAN
DETAILS SHEET 4

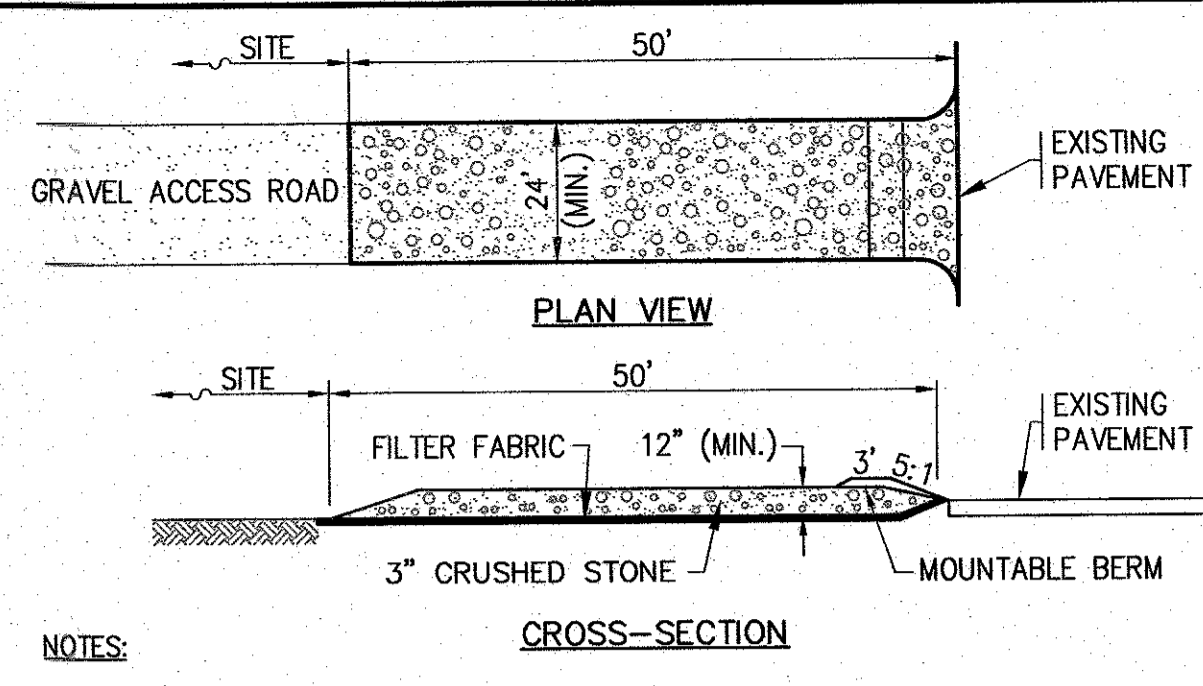
WAREHAM, MA

PREPARED FOR: GIANCOLA PROPERTIES MINOT LLC
72 MINOT AVE. WAREHAM, MA
P.O. BOX 570 EAST WAREHAM, MA

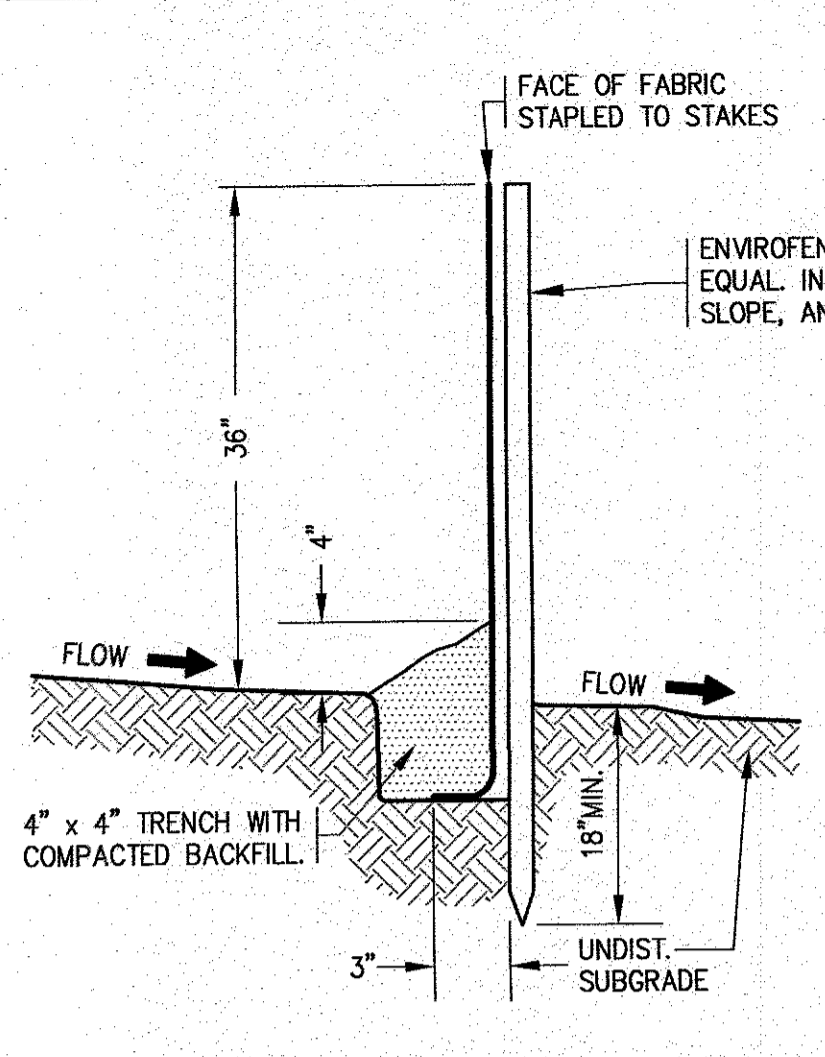
JOB NO.: 16-8842
DWG.: 11 OF 13



- COMPOST WATTLE / SILTATION FENCE BARRIER**
N.T.S.
- NOTES:**
- SILTATION FENCE SHALL BE "ENVIROFENCE" AS MANUFACTURED BY MIRAFI, INC. OR APPROVED EQUAL.
 - SILTATION FENCING SHALL BE INSTALLED DOWNSLOPE OF ALL PROPOSED AND EXISTING DISTURBED AREAS, OR AS SHOWN ON THE PLANS.
 - EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL VEGETATIVE OR STABILIZED COVER HAS BEEN FIRMLY ESTABLISHED.
 - EROSION CONTROL MEASURES SHALL FOLLOW THE PERFORMANCE STANDARDS OF THE USDA SOIL CONSERVATION SERVICE, AND ANY APPLICABLE STATE/LOCAL CONSERVATION AUTHORITY.

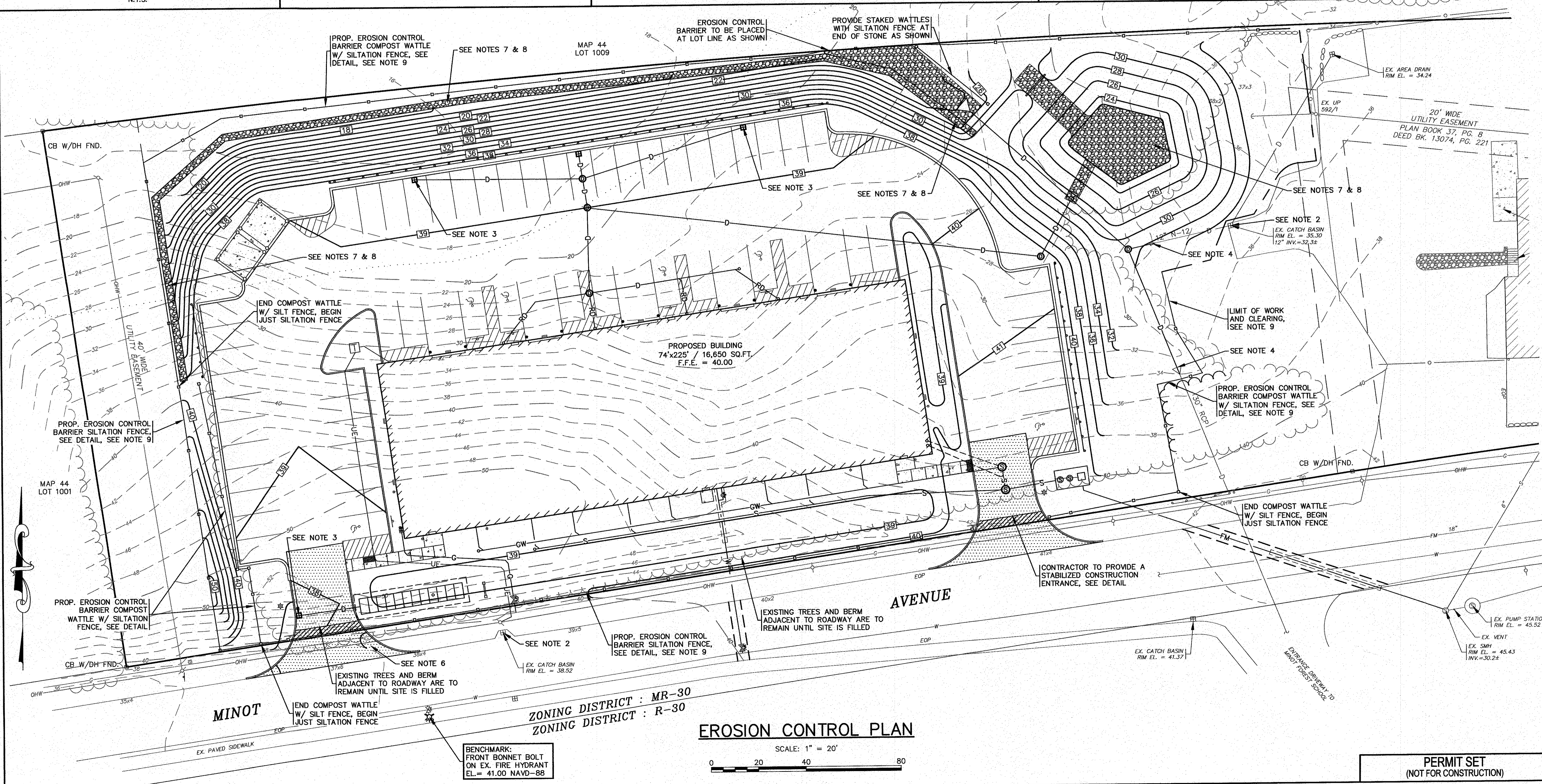


- TEMPORARY STABILIZED ACCESS ROAD**
N.T.S.
- NOTES:**
- ENTRANCE WIDTH SHALL BE A 24 FEET MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
 - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.



- EROSION CONTROL BARRIER-SILTATION FENCE**
N.T.S.
- NOTES:**
- SILTATION FENCE SHALL BE "ENVIROFENCE" AS MANUFACTURED BY MIRAFI, INC. OR AN APPROVED EQUAL.
 - SILTATION FENCING SHALL BE INSTALLED DOWNSLOPE OF ALL PROPOSED AND EXISTING DISTURBED AREAS, OR AS SHOWN ON THE PLANS.
 - EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL VEGETATIVE OR STABILIZED COVER HAS BEEN FIRMLY ESTABLISHED.
 - EROSION CONTROL MEASURES SHALL FOLLOW THE PERFORMANCE STANDARDS OF THE USDA SOIL CONSERVATION SERVICE, AND ANY APPLICABLE STATE/LOCAL CONSERVATION AUTHORITY.

- NOTES:**
- A CONSTRUCTION ENTRANCE WILL NEED TO BE INSTALLED BEFORE ANY CONSTRUCTION ACTIVITY OCCURRING ON-SITE.
 - THE CONTRACTOR SHALL PROTECT EXISTING DRAINAGE STRUCTURES BY USING A SILT SACK OR AN APPROVED EQUAL WITHIN NEARBY CATCH BASINS. CONTRACTOR SHALL REMOVE DEBRIS AND SWEEP CLEAN THE WORK AREA DURING THE PROJECT AND UPON COMPLETION OF WORK. CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT SACKS AND PUMP CLEAN THE EXISTING CATCH BASINS UPON COMPLETION OF CONSTRUCTION.
 - ALL PROP. CATCH BASINS SHALL HAVE TEMPORARY SILT SACK OR AN APPROVED EQUAL INSTALLED IN THEM AS SOON AS THE STRUCTURE IS SET. CONTRACTOR SHALL REMOVE AND DISPOSE OF THEM AT THE COMPLETION OF CONSTRUCTION.
 - CONTRACTOR SHALL PROTECT EXISTING FLARED ENDS DURING CONSTRUCTION BY KEEPING THEM CLEARED FROM THE BUILD UP OF DEBRIS.
 - NO ADDITIONAL TREE CLEARING SHALL BE DONE FOR STOCKPILE AREAS.
 - PROVIDE A SECOND CONSTRUCTION ENTRANCE ONCE THE LOT HAS BEEN FILLED AND THE EXISTING BERM AND TREES HAVE BEEN REMOVED.
 - COVER STONE TRENCHES AND STONE AT THE BOTTOM OF THE DRAINAGE BASIN WITH AN ADDITIONAL TEMPORARY LAYER OF FILTER FABRIC UNTIL THE ABOVE GRADIENT SLOPE IS STABILIZED.
 - CONTRACTOR TO INSPECT STONE TRENCHES AT THE BASE OF SLOPES AND IN THE INFILTRATION BASIN DAILY AND AFTER ALL RAIN EVENTS.
 - LIMIT OF WORK AND CLEARING LIMITS SHALL ALSO BE SET AT THE OUTER MOST LIMITS OF THE EROSION CONTROL BARRIER.



APPROVED BY: [Signature]

DATE: AUG. 2, 2018

DRAWN BY: JH/JMP

CHECKED BY: WFM

JOB NO.: 16-8842

SCALE: 1" = 20'

APPROVED BY: [Signature]

G.A.F. ENGINEERING, INC.
PROFESSIONAL ENGINEERS & LAND SURVEYORS
266 MAIN STREET - WAREHAM, MA 02571
TEL: (508) 295-6600 FAX: (508) 295-6634
E-MAIL: gae@gaefirm.com

SITE DEVELOPMENT PLAN

EROSION CONTROL PLAN

PREPARED FOR: GIANCOLA PROPERTIES MINOT LLC

72 MINOT AVE. WAREHAM, MA

PERMIT SET (NOT FOR CONSTRUCTION)

DWG. 12 OF 13

JOB NO.: 16-8842

DATE: AUG. 2, 2018

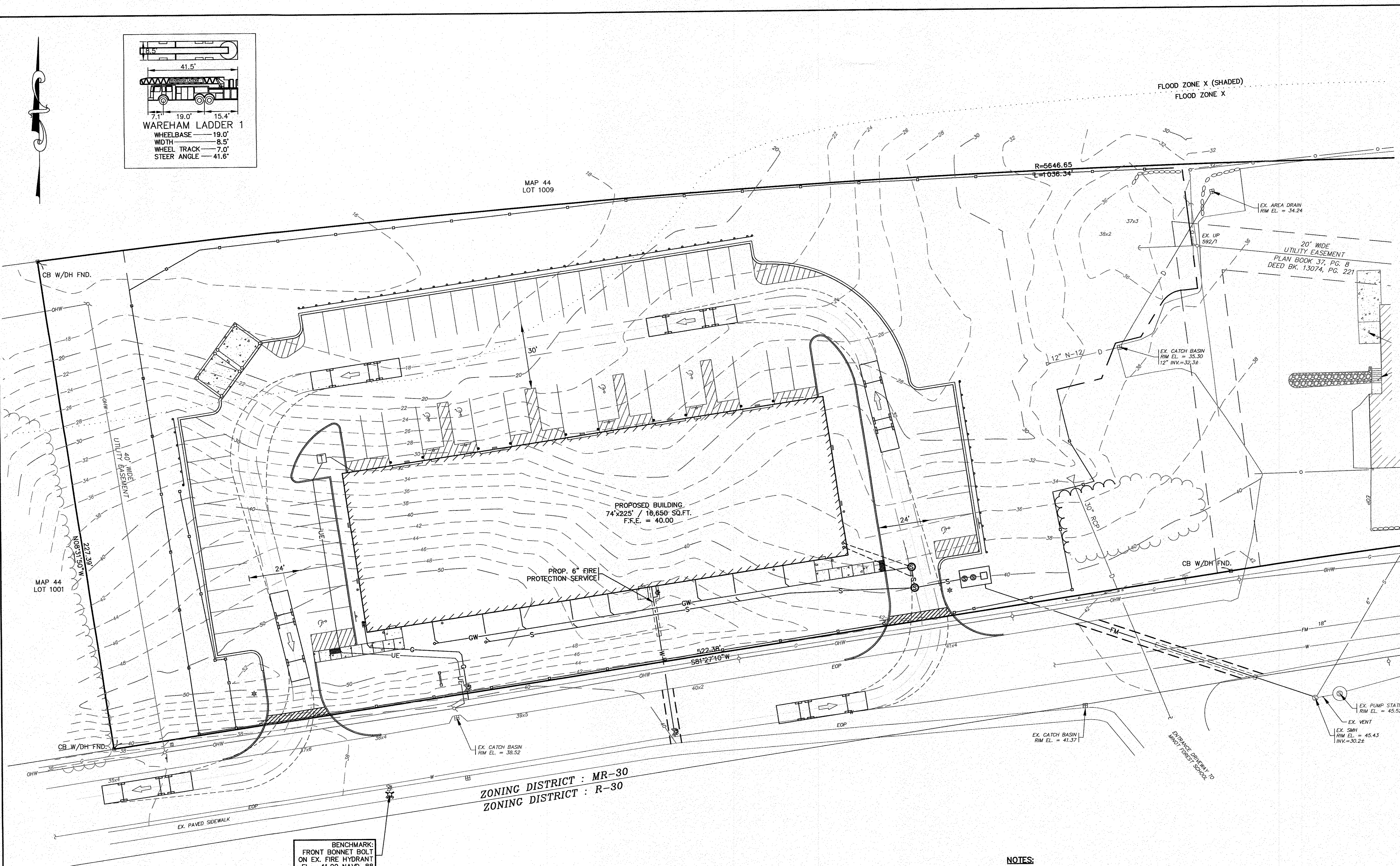
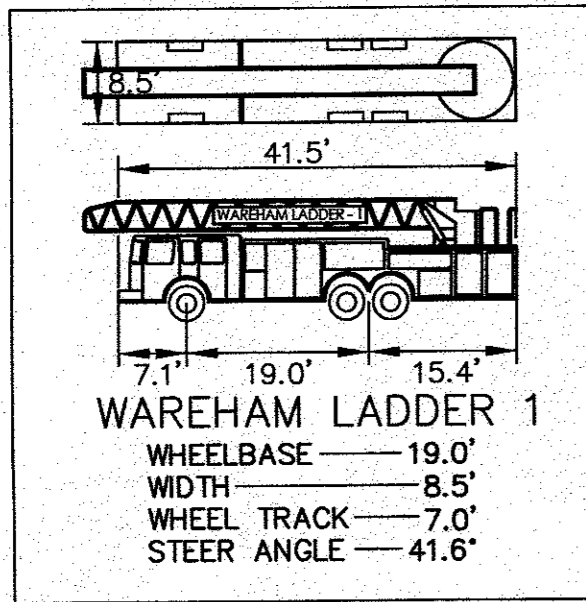
EXTEND RIP RAP AT 30' F.F.S.

REV. DRAINAGE DESIGN, MISC. NOTES

PER PEER REVIEW COMMENTS

REV. DATE BY APP'D

3	11/12/20	JMP	WFM
2	6/16/20	JMP	WFM
1	8/29/18	JMP	WFM

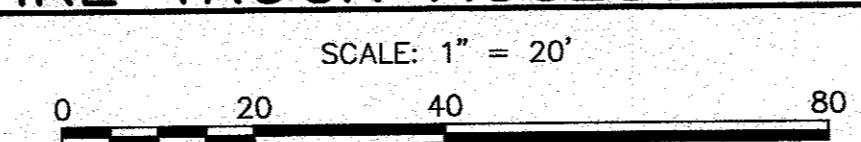


ZONING DISTRICT : MR-30
 ZONING DISTRICT : R-30

BENCHMARK:
 FRONT BONNET BOLT
 ON EX. FIRE HYDRANT
 EL. = 41.00 NAVD-88

- NOTES:**
- THIS PLAN HAS BEEN PREPARED FOR THE WAREHAM FIRE DISTRICT, TO INDICATE VEHICULAR MOVEMENTS. THE DESIGN VEHICLE DEPICTED IS THE TRUCK SHOWN ABOVE, WAREHAM'S LADDER 1.
 - ALL PAVED SURFACES ARE A MINIMUM OF 24' WIDE.

FIRE TRUCK ACCESS PLAN



PERMIT SET
 (NOT FOR CONSTRUCTION)

DATE: AUG. 2, 2018	APPROVED BY:		G.A.F. ENGINEERING, INC. PROFESSIONAL ENGINEERS & LAND SURVEYORS 266 MAIN STREET - WAREHAM, MA 02571 TEL: (508) 295-6600 FAX: (508) 295-6634 E-MAIL: gaf@gef-eng.com
DRAWN BY: JH	DATE: AUG. 2, 2018		
CHECKED BY: WFM	DATE: 11/12/20		
JOB NO.: 16-8842	DATE: 6/18/20		
SCALE: 1" = 20'	DATE: 8/29/18		

REV.	DATE	BY	DESCRIPTION
1	8/29/18	JH	ADDED THIS SHEET
2	6/18/20	JMP	NO CHANGES THIS SHEET
3	11/12/20	JMP	NO CHANGES THIS SHEET

PREPARED FOR: GIANCOLA PROPERTIES MINOT LLC 72 MINOT AVE. WAREHAM, MA P.O. BOX 570 EAST WAREHAM, MA	DWG. 13 OF 13
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