Single Family Subdivision Amherst, New York

AGENCIES

ENGINEERING DEPARTMENT

NAME/TITLE: JEFFERY BURROUGHS, P.E. - TOWN ENGINEER TOWN OF AMHERST ENGINEERING DEPARTMENT COMPANY/DEPT: 1100 NORTH FOREST ROAD ADDRESS:

WILLIAMSVILLE, NEW YORK 14221

TELEPHONE 716-631-7154

PLANNING & ZONING DEPARTMENT

DANIEL HOWARD - PLANNING DIRECTOR NAME/TITLE: TOWN OF AMHERST PLANNING DEPARTMENT

COMPANY/DEPT: 5583 MAIN STREET

WILLIAMSVILLE, NEW YORK 14221

TELEPHONE 716-631-7051

BUILDING DEPT.

NAME/TITLE: BERKE, MARK S. - COMMISSIONER OF BUILDING

TOWN OF AMHERST BUILDING DEPT. COMPANY/DEPT.:

5583 MAIN ST.

AMHERST, NEW YORK 14221 ADDRESS:

716-631-7080 **TELEPHONE**

<u>ECDOH</u> NAME/TITLE:

ADDRESS:

ERIE COUNTY DEPARTMENT OF HEALTH COMPANY/DEPT:.

503 KENSINGTON AVE BUFFALO, NEW YORK 14214

716-961-6854 TELEPHONE

<u>NYSDEC</u> NAME/TITLE:

COMPANY/DEPT:

NEW YORK STATE DEPT. OF ENVIRONMENTAL

CONSERVATION ADDRESS: 700 DELAWARE AVE.

BUFFALO, NEW YORK 14209

TELEPHONE 716-851-7070 UTILITIES

NATURAL GAS

COMPANY/DEPT:. NATIONAL FUEL GAS CORP. 6363 MAIN STREET

WILLIAMSVILLE, NEW YORK 14221

TELEPHONE 716-857-7000

TELEPHONE COMPANY

COMPANY/DEPT: ADDRESS:

VERIZON 65 FRANKLIN STREET BUFFALO, NEW YORK 14203

TELEPHONE 716-840-8748

CABLE COMPANY

COMPANY/DEPT: ADDRESS:

TIME WARNER 789 CHURCH ROAD WEST SENECA, NEW YORK

TELEPHONE 716-558-8615

ELECTRIC COMPANY

COMPANY/DEPT: ADDRESS:

NATIONAL GRID 144 KENSINGTON AVENUE BUFFALO, NEW YORK 14214

TELEPHONE 716-236-2738

<u>WATER</u>

COMPANY/DEPT:. ADDRESS:

ERIE COUNTY WATER AUTHORITY 3030 UNION ROAD CHEEKTOWAGA, NEW YORK 14227

716-684-1510 TELEPHONE

DIG SAFELY NEW YORK

TELEPHONE 1-800-962-7962

DESIGN CONSULTANTS

PROJECT SURVEYOR

COMPANY/DEPT: ADDRESS:

NUSSBAUMER & CLARKE, INC 3556 LAKESHORE ROAD, SUITE 500 BUFFALO, NEW YORK 14219

TELEPHONE

716-827-8000

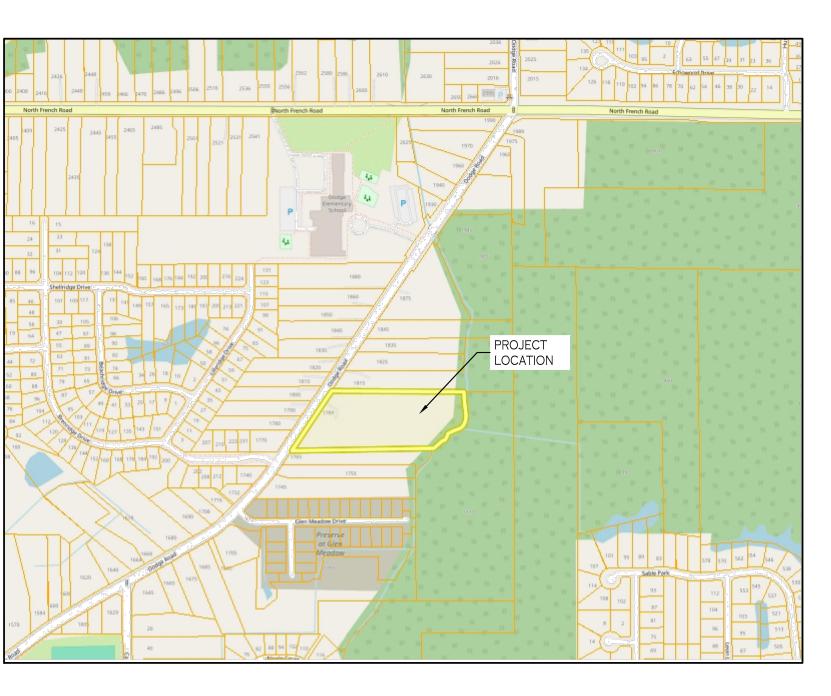
OWNER/DEVELOPER

NAME: **JOE RUBINO**

5500 MAIN STREET, SUITE 343 **ADDRESS**

WILLIAMSVILLE, NY 14221

JOE RUBINO CONTACT: TELEPHONE 716-510-4338





CARMINAWOOD DESIGN

FEBRUARY 2025 **REV. MAY 2025**

LAND SURVEY (PREPARED BY NUSSBAUMER & CLARKE) DEMOLITION & EROSION CONTROL PLAN DEMOLITION & EROSION CONTROL DETAILS LAYOUT PLAN C-101 SITE DETAILS C-200 GRADING PLAN C-201 ROAD PROFILE STORM WATER MANAGEMENT PLAN BASIN DETAILS STORM DRAINAGE DETAILS STORM DRAINAGE DETAILS UTILITY PLAN UTILITY PROFILES SANITARY SEWER DETAILS SANITARY SEWER DETAILS SANITARY SEWER NOTES WATER DETAILS WATER DETAILS LIGHTING DETAILS C-408 LIGHTING DETAILS C-409 LIGHTING DETAILS

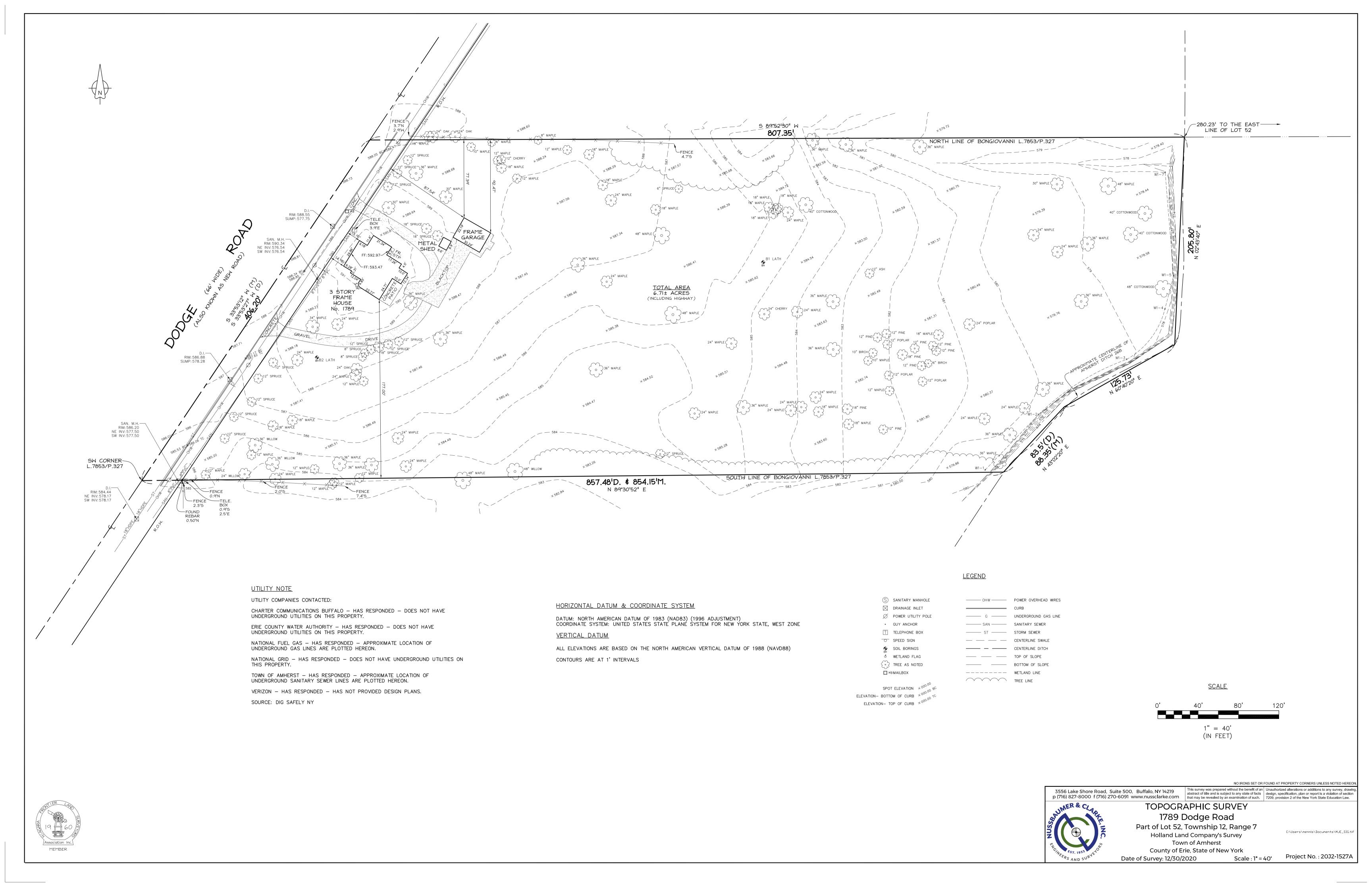
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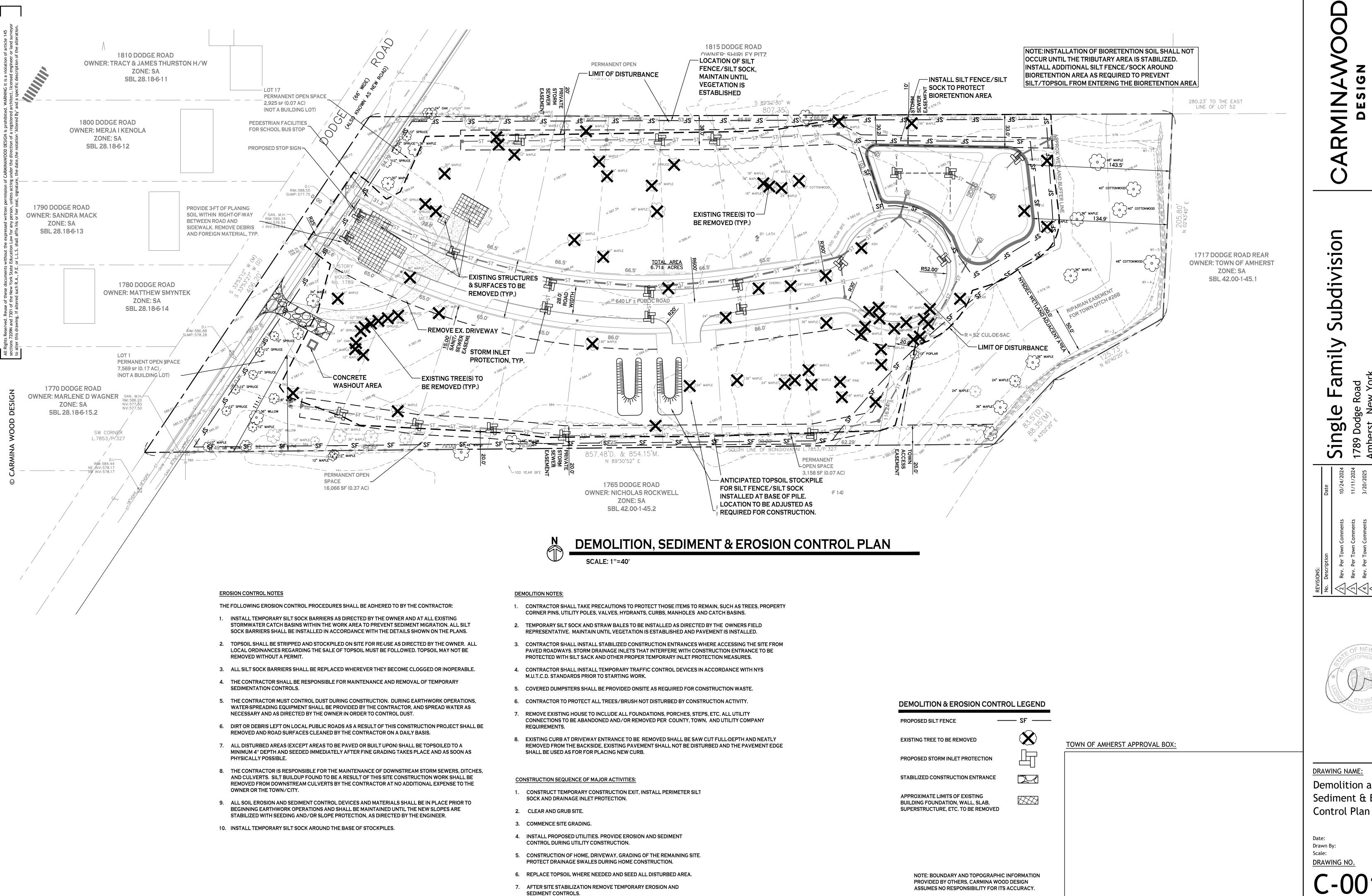
DRAWING TITLE

1 Rev. Per Town Comments 9/19/2024 2\ Rev. Per Town Comments 10/24/2024 Rev. Per Town Comments 11/11/2024 3/20/2025 Rev. Per Town Comments 4/16/2025 Rev. Per Town Comments 5/13/2025 6\ Rev. Permanent Open Space 7\ Rev. Per Town Comments 5/23/2025

REV #

Single Family Subdivision 1789 Dodge Road Amherst, New York





NOTE: SWALE PROTECTION AND EROSION AND SEDIMENT CONTROLS FOR THIS PROJECT ARE ALSO REQURED DURING HOME CONSTRUCTION.

DRAWING NAME: Demolition and Sediment & Erosion

As Noted

01/29/25

C. Wood

CONSTRUCTION SPECIFICATIONS

FOR

DEWATERING

HARDWARE CLOTH TO ALLOW

DRAINAGE AND RESTRICT

SEDIMENT MOVEMENT.

- 1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
- 2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
- 3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
- 4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.

MAXIMUM DRAINAGE AREA 1 ACRE

BELOW TOP OF INLET.

INLET PROTECTION DETAIL NOT TO SCALE

- GATHER EXCESS CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM

- APPLICATIONS.
- 2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
- 3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.

SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES

- DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
- 5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
- 6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

MAXIMUN DRAINAGE AREA 1 ACRE

INLET PROTECTION DETAIL 2

INLET PROTECTION DETAIL 3

CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR

2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.

3. USE CLEAN STONE OR GRAVEL 1/2-3/4 INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK

4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST

- CONCRETE BLOCK

STONE & BLOCK PLAN VIEW

2'MAX.

FINE GRAVEL FACE —

ON A 2:1 SLOPE OR FLATTER.

MAXIMUM DRAINAGE AREA 1 ACRE

THE 3 INCH STONE AS SHOWN ON THE DRAWINGS.

(1'MIN. THICKNESS)

TEMPORARY SEDIMENT POOL -

TEMPORARY

— SEDIMENT POOL

- 2:1 SLOPE GRAVEL FILTER

---- WIRE SCREEN

STONE & BLOCK DETAIL

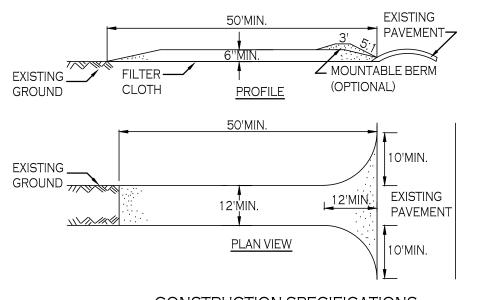
WIRE MESH (OPTIONAL)

DEWATERING

DROP INLET WITH GATE

NOT TO SCALE

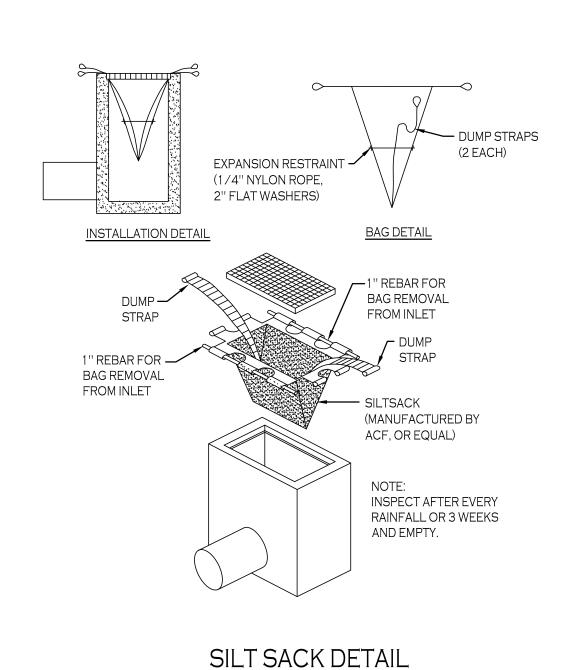
NOTE: INSTALL ONE OF THE INLET PROTECTION OPTIONS SHOWN PRIOR TO CONSTRUCTION



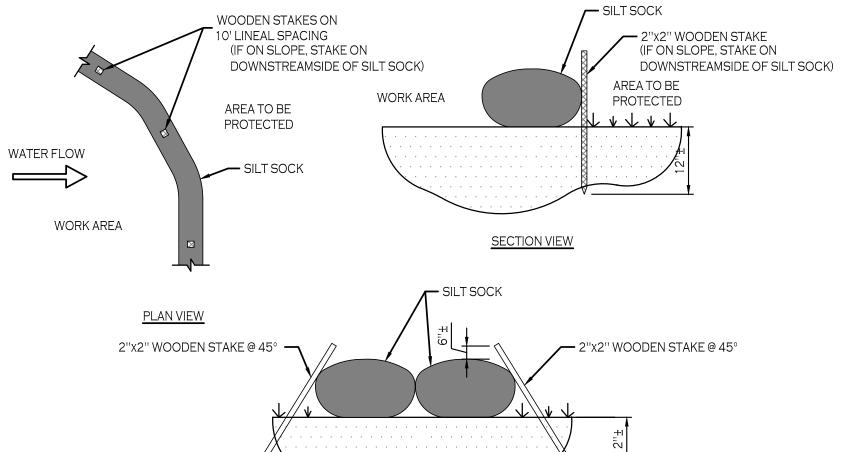
CONSTRUCTION SPECIFICATIONS

- 1. STONE SIZE USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- 2. LENGTH NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
- 3. THICKNESS NOT LESS THAN SIX (6) INCHES.
- 4. WIDTH-TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO
- 5. FILTER CLOTH WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
- 6. SURFACE WATER ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
- 7. MAINTENANCE THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- 8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- 9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH

STABILIZED CONSTRUCTION ENTRANCE DETAIL NOT TO SCALE



NOT TO SCALE



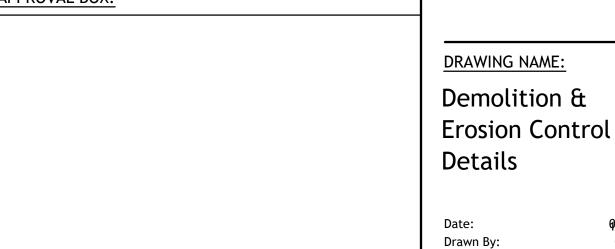
CONTRACTOR SHALL INSPECT AND MAINTAIN SILT SOCK AS NEEDED DURING THE DURATION OF CONSTRUCTION PROJECT.

CONTRACTOR SHALL REMOVE SEDIMENT COLLECTED AT THE BASE OF THE SILT SOCK WHEN IT HAS REACHED \$ OF THE EXPOSED HEIGHT OF THE SILT SOCK. ALTERNATIVELY, RATHER THAN CREATE A SOIL DISTURBING ACTIVITY, THE ENGINEER MAY CALL FOR ADDITIONAL SILT SOCK TO BE ADDED AT AREAS OF HIGH SEDIMENTATION, PLACED IMMEDIATELY ON TOP OF THE EXISTING SEDIMENT LADEN SILT SOCK.

SILT SOCK SHALL BE OVERLAPPED 12" AT JOINTS AND STAKED ON EACH SIDE OF THE SOCK AT A 45° ANGLE

SILT SOCK DETAIL

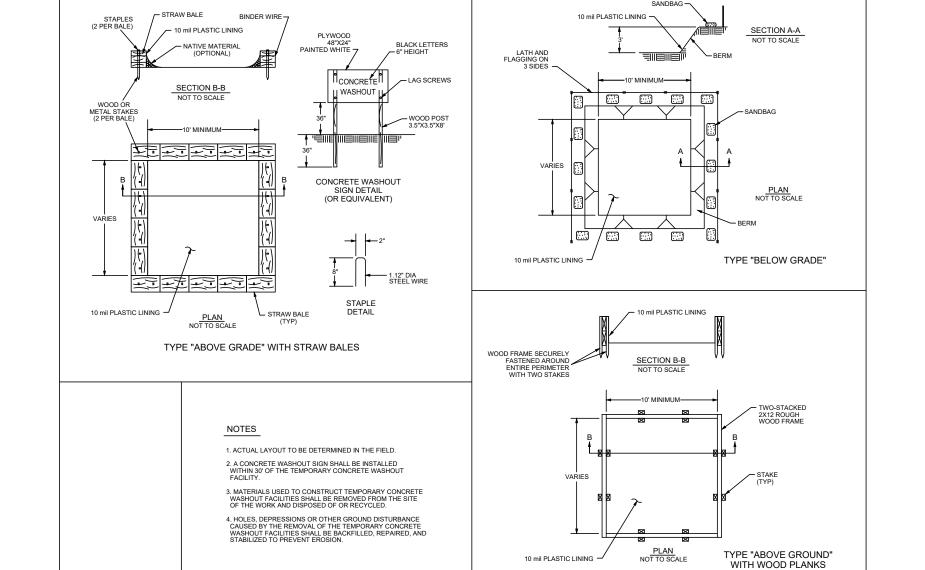




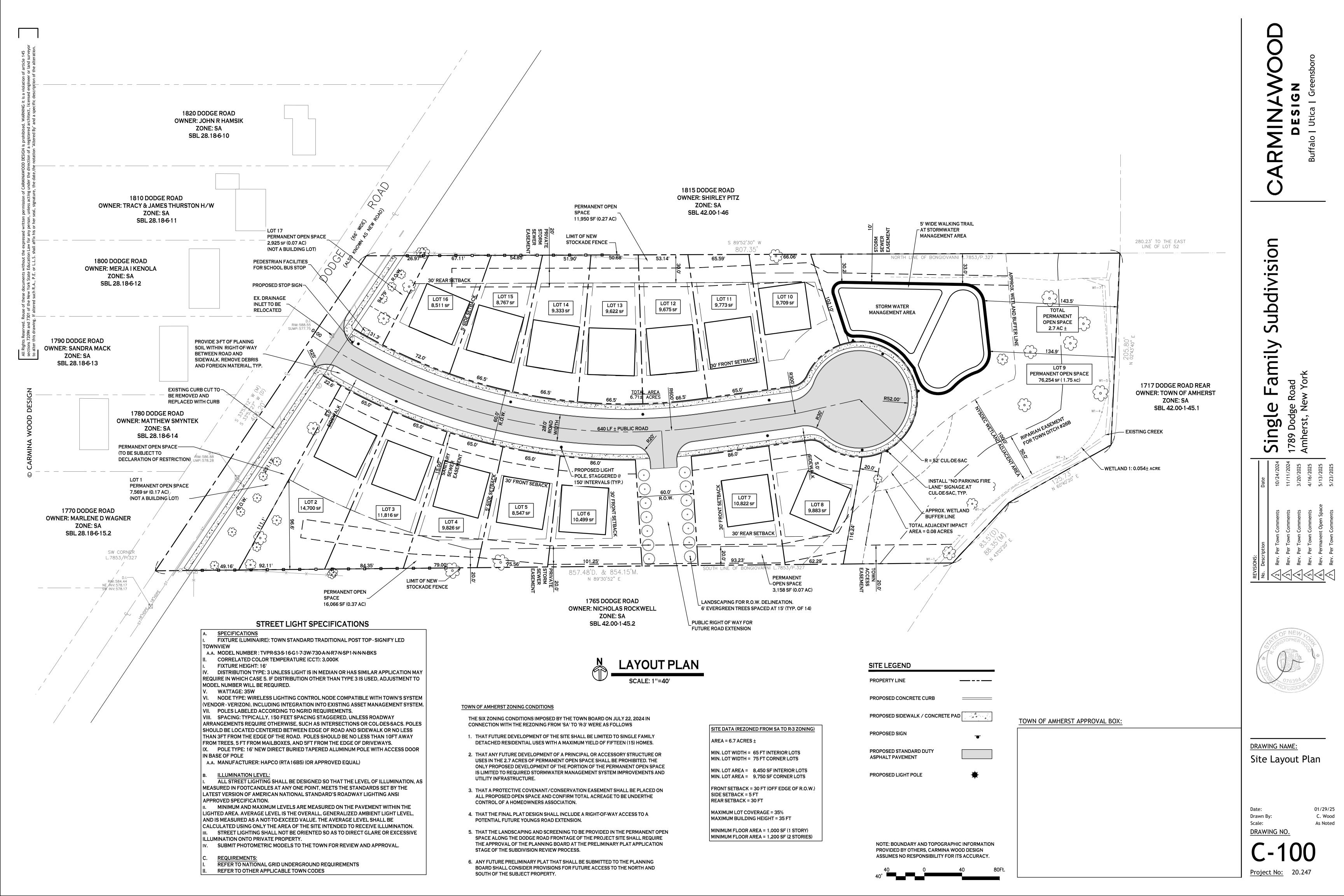
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C. Wood





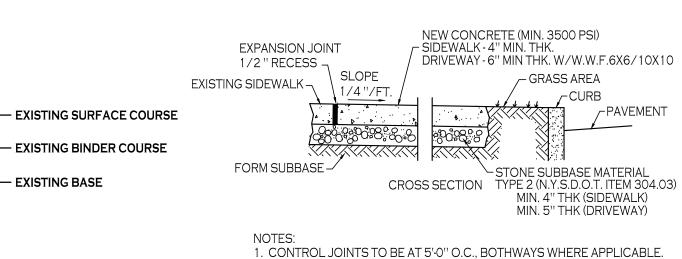


01/29/25

C. Wood

As Noted

Project No: 20.247



PLAN VIEW

SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700. 2. CONCRETE SIDEWALK AND DRIVEWAY MATERIAL SHALL CONFORM TO NYSDOT STANDARD SPECIFICATION 501 AND CONSTRUCTION METHODS SHALL CONFORM

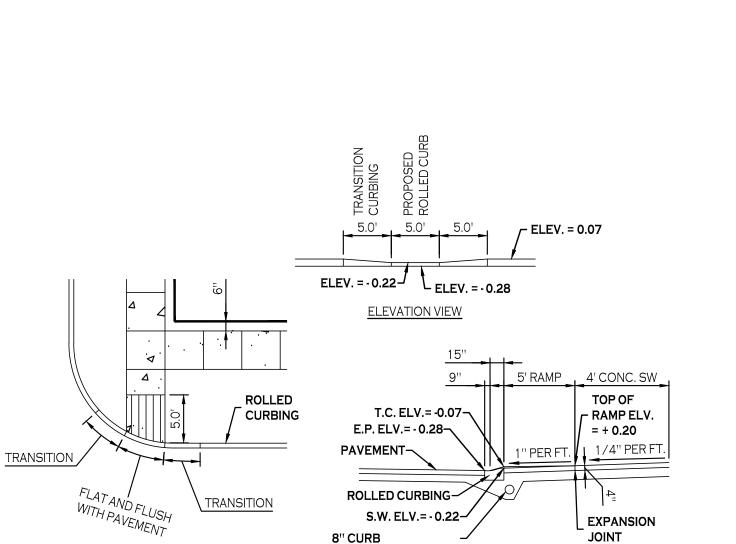
TO NYSDOT STANDARD SPECIFICATION 608-3. 3. SUBBASE GRADE SHALL FOLLOW THE PROPOSED GRADE OF THE SIDEWALK AND SLOPE AWAY FROM BUILDING WHERE APPLICABLE, PROVIDE CONTINUOUS STONE PATH

4. FULL DEPTH EXPANSION JOINTS SHALL BE INSTALLED EVERY 20' O.C., BOTHWAYS WHERE APPLICABLE. SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.

5. SEE CURB DETAIL FOR DOWLING REQUIREMENTS WHERE ABUTTING CURB 6. INSTALL 6" LONG #3 DOWELS @ 12" O.C. WHERE SIDEWALK ABUTS A BUILDING WALL AT AN ENTRANCE, THICKEN SIDEWALK TO 6" AT BUILDING WALL AND INSTALL DOWEL CENTERED IN THE 6" DEPTH. DOWELS AND THICKENING OF SIDEWALK SHALL EXTEND 18" EITHER SIDE OF ENTRANCE.

BUILDING OR OTHER STRUCTURE

CONSTRUCTION JOINT



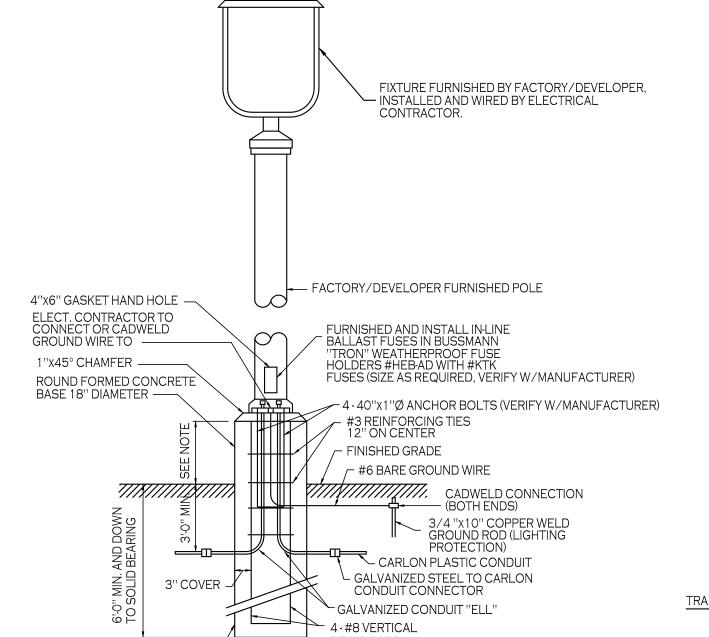
SIDEWALK RAMP DETAILS NOT TO SCALE

DROP CURB DETAIL

UNDERDRAIN

CONCRETE SIDEWALK

NOT TO SCALE



€ PAVEMENT

THE WIDTH OF SPREAD SHOULD BE PLANNED TO PROVIDE FOR

PAVEMENT OVERLAPPING DETAIL

NOT TO SCALE

THE OFFSETTING OF LONGITUDINAL JOINTS IN THE SEVERAL

NEW SURFACE COURSE—

NEW ASPHALT

LONGITUDINAL JOINT-

CONCRETE BASE

— LONGITUDINAL JOINT

1. FOR LOCATIONS OF FOUNDATIONS SEE SITE PLAN 2. FOR LIGHT FIXTURE, POLE & BASE ORDERING INFORMATION SEE LIGHTING PLAN VERIFY INFORMATION WITH OWNER PRIOR TO ORDERING. 3. LIGHT POLE BASE EXPOSURE ABOVE GRADE SHALL BE: IN CURBED ISLANDS: 6" ABOVE TOP OF CURB ELEVATION IN PAVEMENT: 3' ABOVE GRADE IN NON-CURBED GRASS AREAS: 6" ABOVE GRADE

> LIGHT POLE FOUNDATION

CONCRETE

ALL CONCRETE WORK AND

BY GENERAL CONTRACTOR —

REINFORCING SHALL BE

-1-1/2" TOP, NYSDOT ITEM 403.18, PROPOSED 6" THICK TYPE 7 OR 7F CONCRETE APPROACH **FORMED** 2-1/2" BINDER, NYSDOT ITEM 403.13, TYPE 3 * — CONSTRUCTION PROPOSED 4" THICK 4" 1-A BASE, NYSDOT ITEM 403.12, TYPE 2 CONCRETE SIDEWALK ∼11" COMPACTED R.O.C. STONE BASE UNDISTURBED EARTH -NOTE: THE BINDER AND BASE COURSES MAY CONSIST OF RECYCLED ASPHALT MATERIAL CONSTRUCTION 4" CLEAN NO. 2 TOWN OF AMHERST CRUSHED STONE TYPICAL PAVEMENT SECTION

TYPICAL DRIVEWAY APRON & SIDEWALK NOT TO SCALE

12" #3 DOWEL @ 24" O.C., LOCATE AT MID-POINT OF - FINISH GRADE 1" BELOW TOP OF CURB IN ALL LAWN AREAS. TOP OF SOD TO BE FLUSH WITH -DEPTH OF SIDEWALK, EMBED 4" INTO CURB TOP OF CURB AS SHOWN —SIDEWALK, SEE DETAIL 1" RADIUS — 1" RADIUS -4" LAYER TOPSOIL SIDEWALK SUBBASE TACK COAT PRIOR TO PAVING → 3,500 PSI CONCRETE 3,500 PSI CONCRETE PAVEMENT ELEVATION & DIMENSION — REFER TO THIS POINT WRAP TRENCH W/ GEOTEXTILE WRAP TRENCH W/ GEOTEXTILE FABRIC, OVERLAP FABRIC 1 FT.— FABRIC, OVERLAP FABRIC 1 FT. 4" PERFORATED HDPE UNDERDRAIN W/ SOCK | 8" |4" |4" |4" |4" |4" | ~UNDERDRAIN `_UNDERDRAIN FILTER, TYPE II FILTER, TYPE II

ABUTTING SIDEWALK ABUTTING LANDSCAPE/GRASS

NOTES:
1. CONTROL JOINTS TO BE 2" DEEP AT 15'-0" O.C. - SEE SPECIFICATIONS FOR FURTHER JOINT REQUIREMENTS NYSDOT 702-0700.

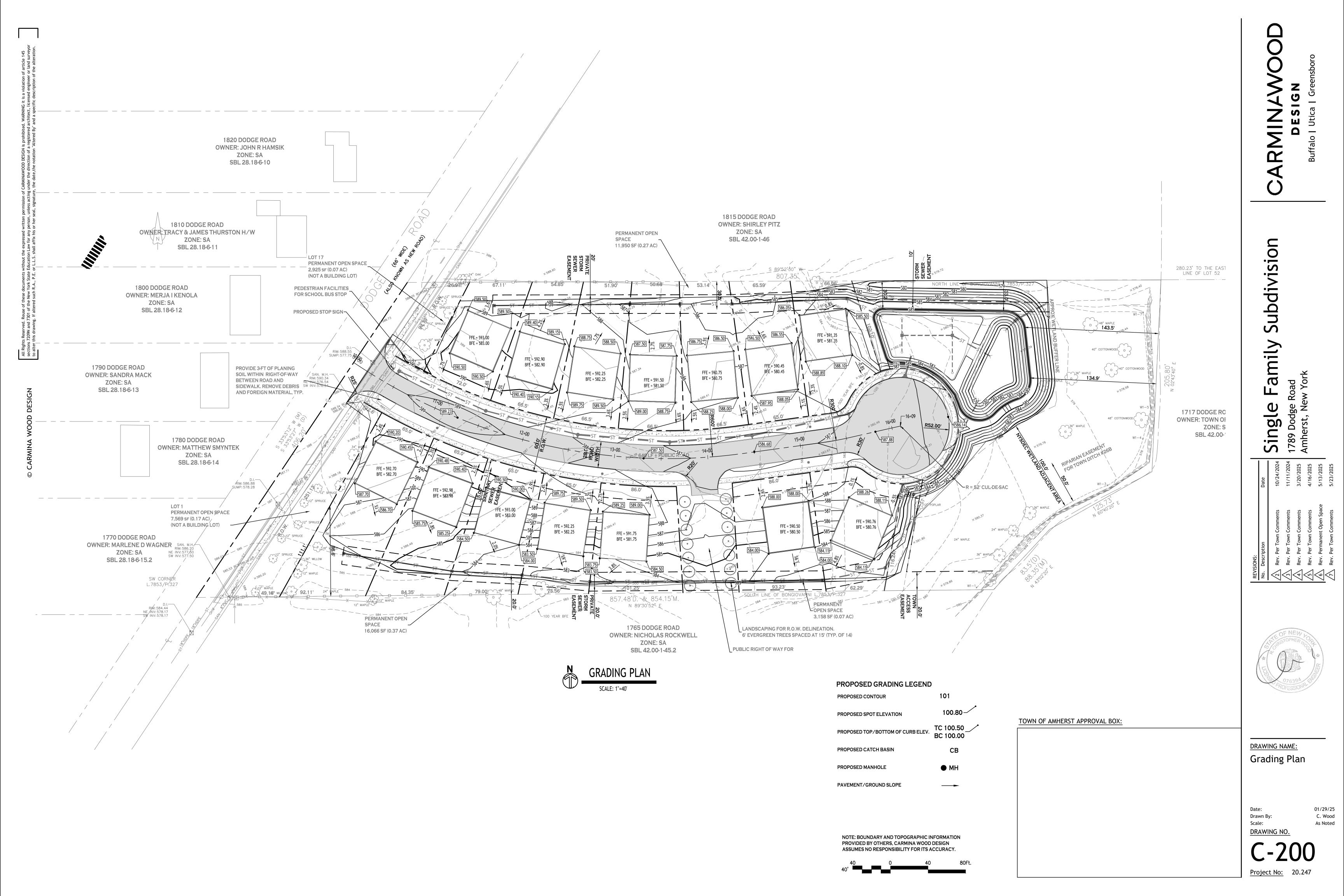
2. WHERE THE CURB DROPS (IS FLUSH WITH ASPHALT) THE DEPTH OF CURB BELOW GRADE SHALL BE INCREASED TO 1'-6" AND OTHER DIMENSIONS ADJUSTED ACCORDINGLY. 3. TIE UNDERDRAINS INTO CLOSEST DRAINAGE SYSTEM OR OUTLET TO DAYLIGHT UNLESS

OTHERWISE INDICATED, SLOPE OF UNDERDRAIN TO FOLLOW BOTTOM OF CURB SLOPE.

TYPE "A" CONCRETE CURB

TOWN OF AMHERST APPROVAL BOX:

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.



Subdivision amily

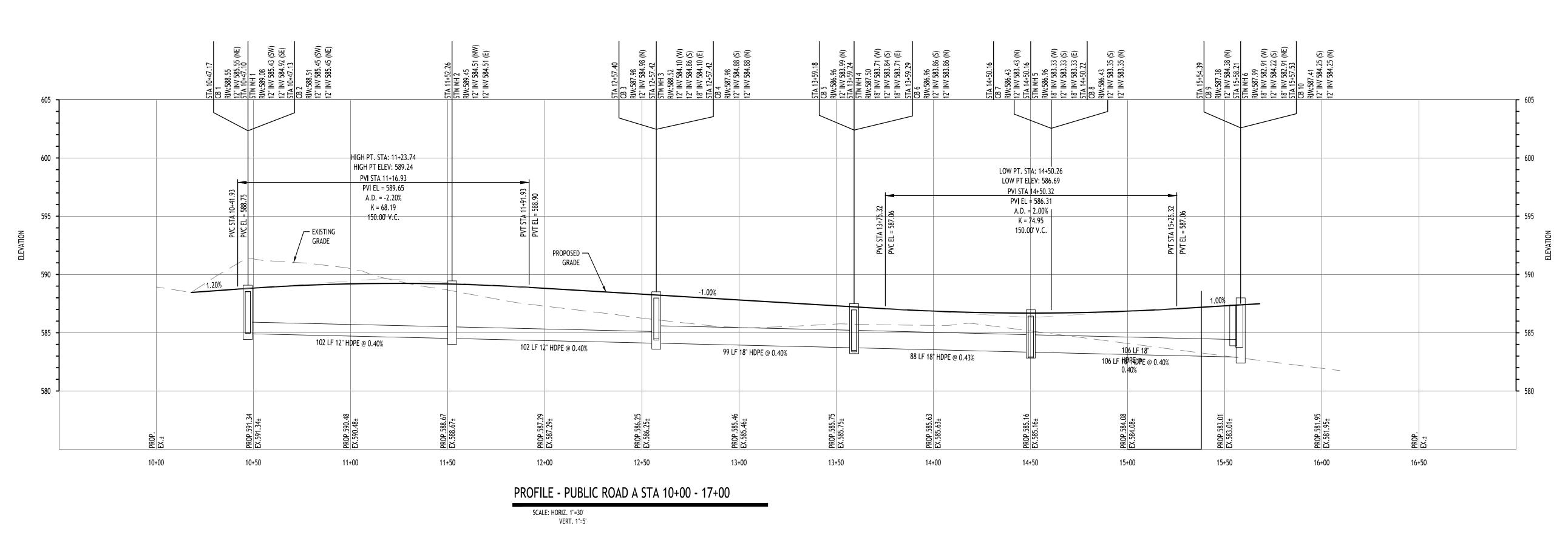
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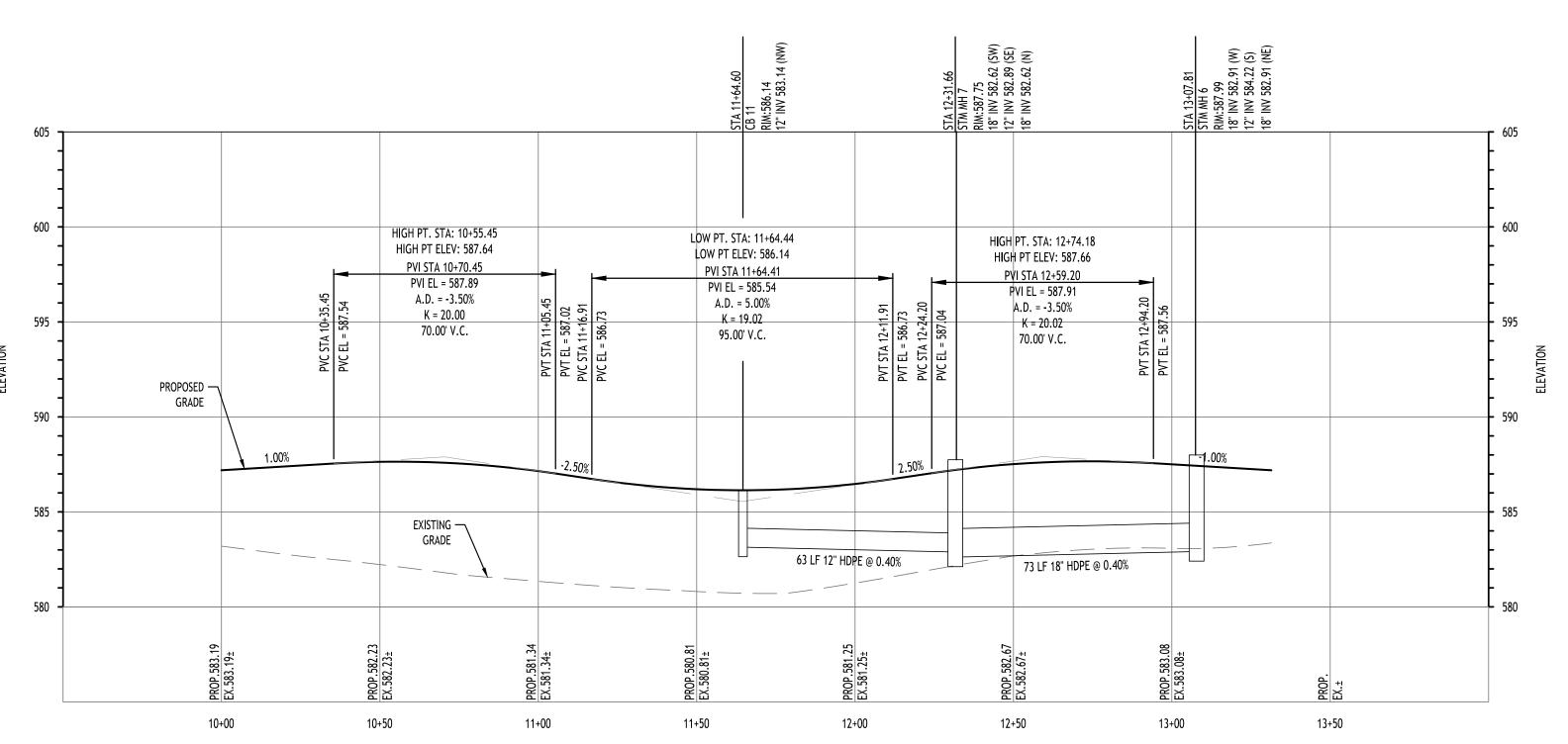
01/29/25

C. Wood

As Noted

Date: Drawn By: Scale: DRAWING NO.



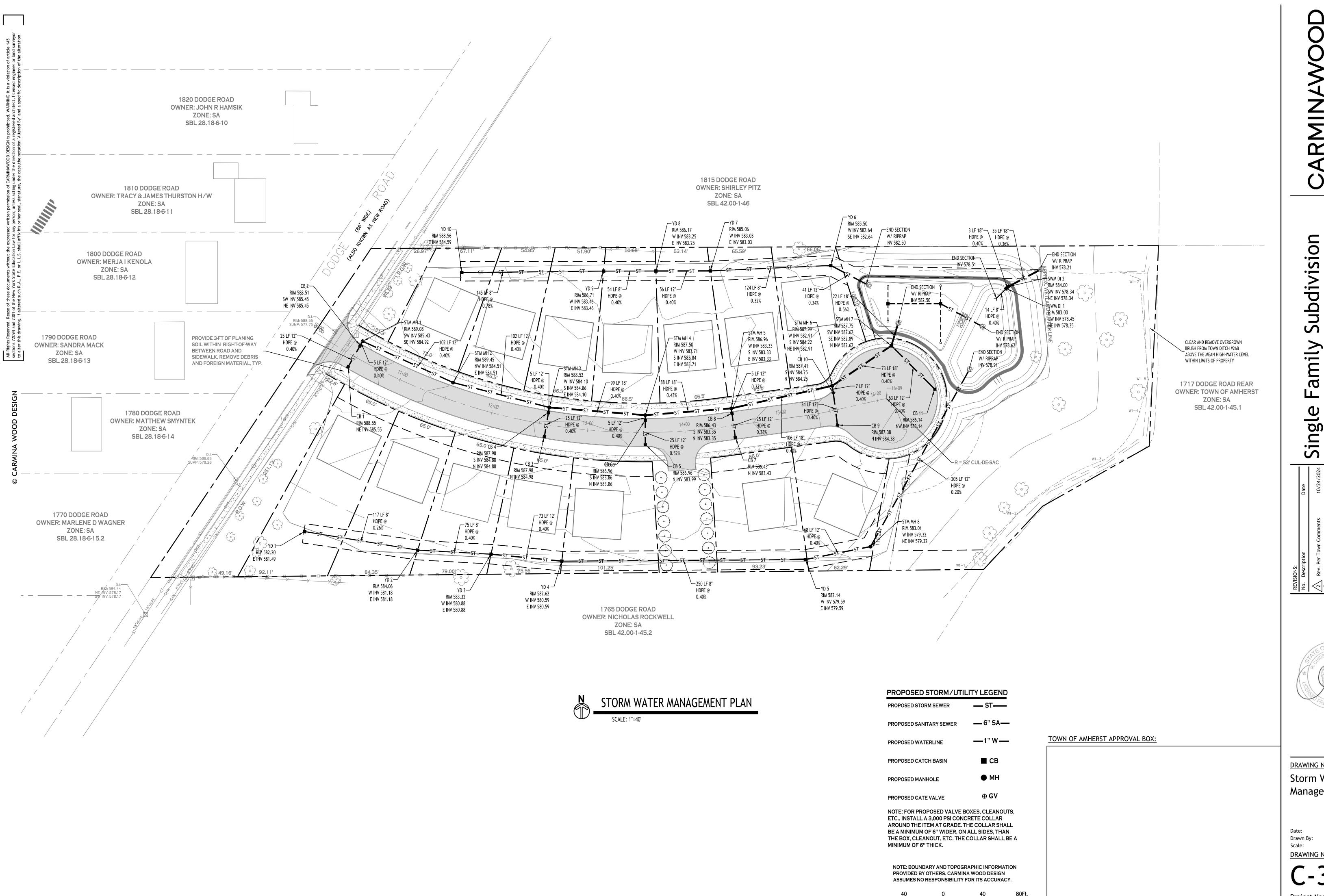


PROFILE - PUBLIC ROAD A CUL-DE-SAC STA 10+00 - 14+00

SCALE: HORIZ. 1"=30" VERT. 1"=5'

> NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

TOWN OF AMHERST APPROVAL BOX:



DRAWING NAME: Storm Water Management Plan

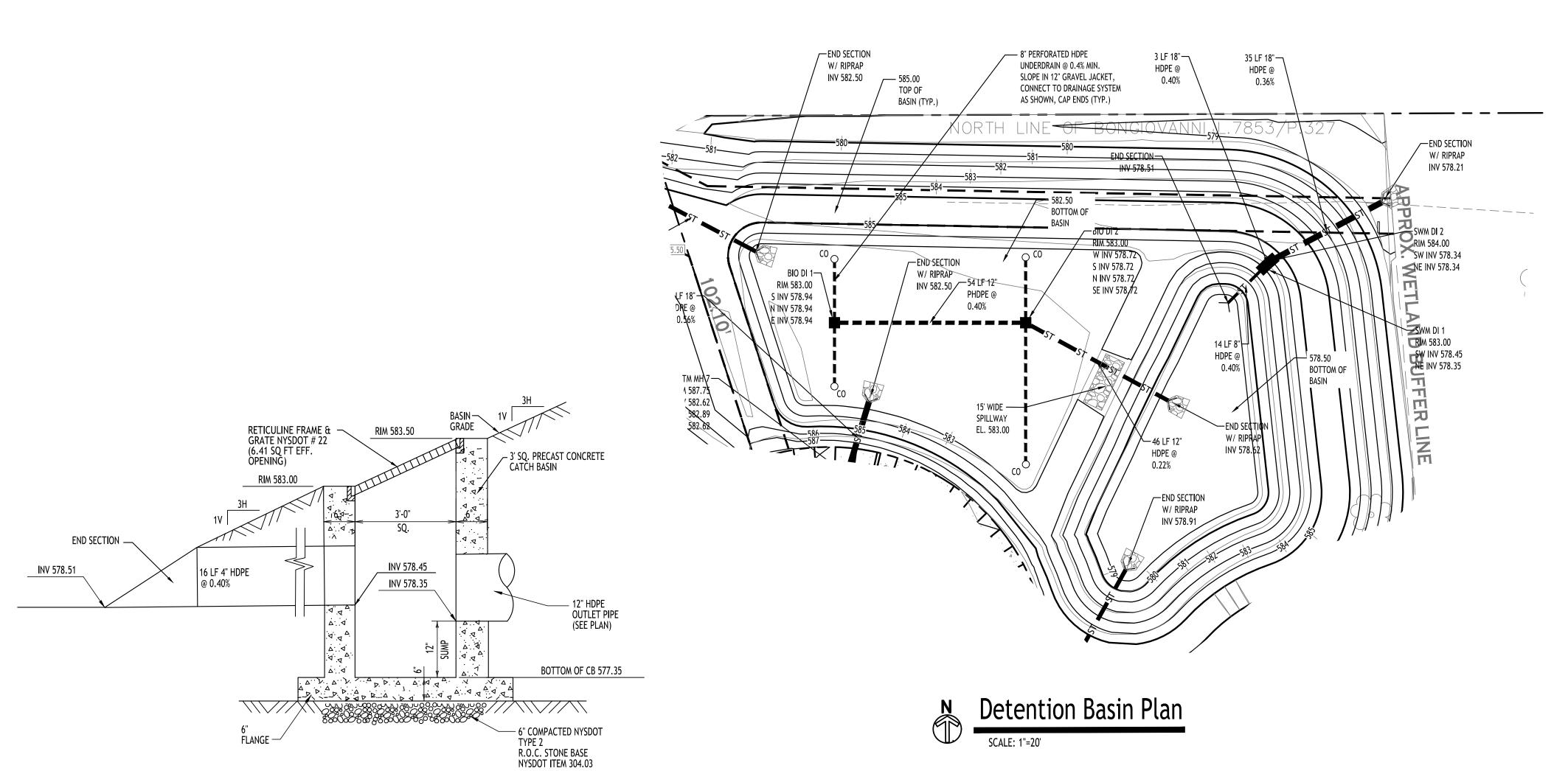
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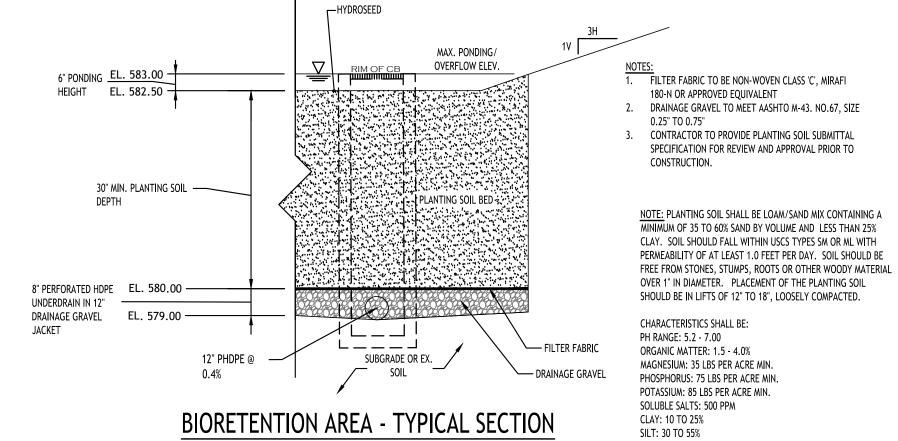
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As Noted

Project No: 20.247

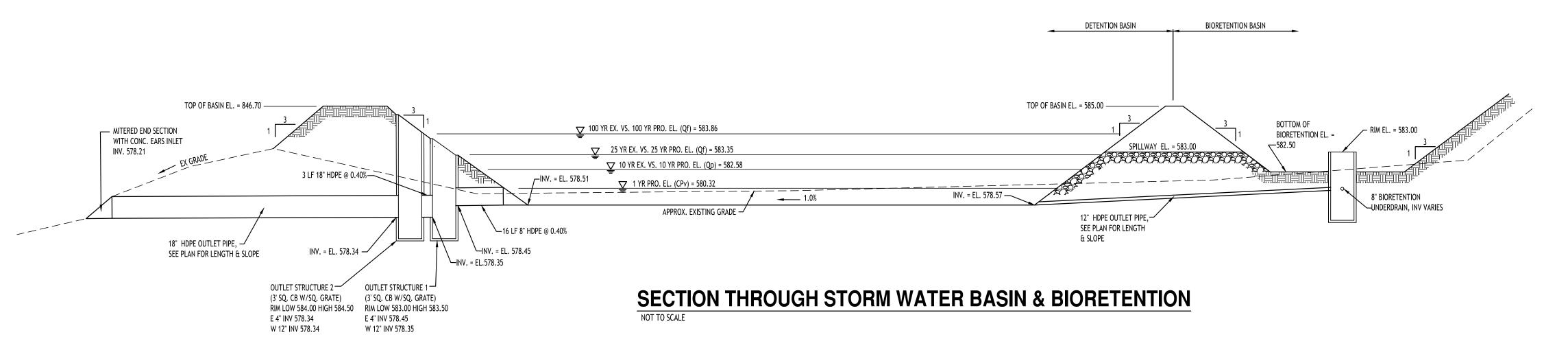


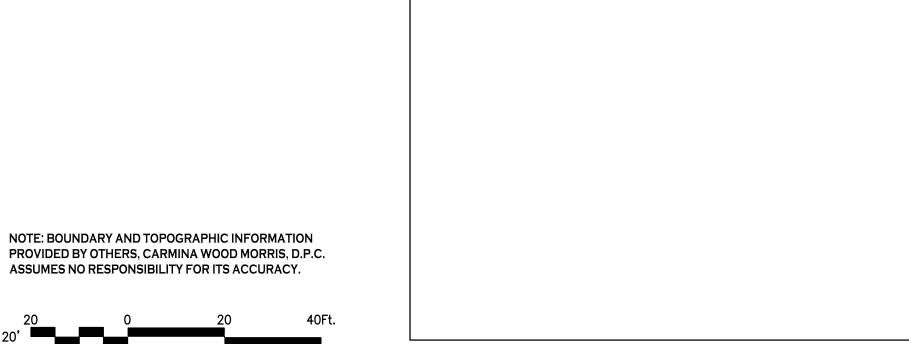
RETENTION BASIN OUTLET STRUCTURE - SWM DI 1



d M	Market	B 11 11 CC 1
Seed Mixture	<u>Variety</u>	Percent by No. of Seeds
Creeping Bentgrass	Agrostis stolonifera	63.0
Rough Bluegrass	Poa trivialis	17.0
Meadow Foxtail	Alopecurus arundinaceus	11.0
Annual Ryegrass	Lolium multiflorum	4.5
Deertongue	Panicum clandestinum	45

SAND: 35 TO 60%





TOWN OF AMHERST APPROVAL BOX:

DRAWING NAME: **Detention Basin**

> Drawn By: DRAWING NO.

01/29/25

C. Wood

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING. C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.

D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION)

NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER.

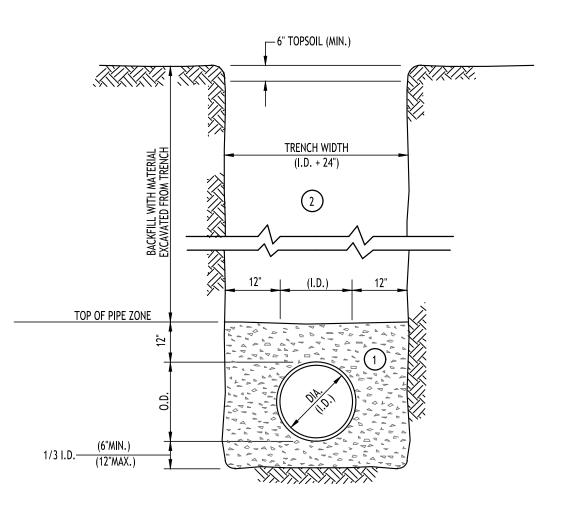
NO SLAG SHALL BE ALLOWED FOR MATERIAL

TYPE 2 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 304-2.02 TYPE 2. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN TWO INCHES AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE

NO SLAG SHALL BE ALLOWED FOR MATERIAL

STORM SEWER TRENCH SECTION IN PAVED AREAS

NOT TO SCALE



MANUFACTURER.

A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

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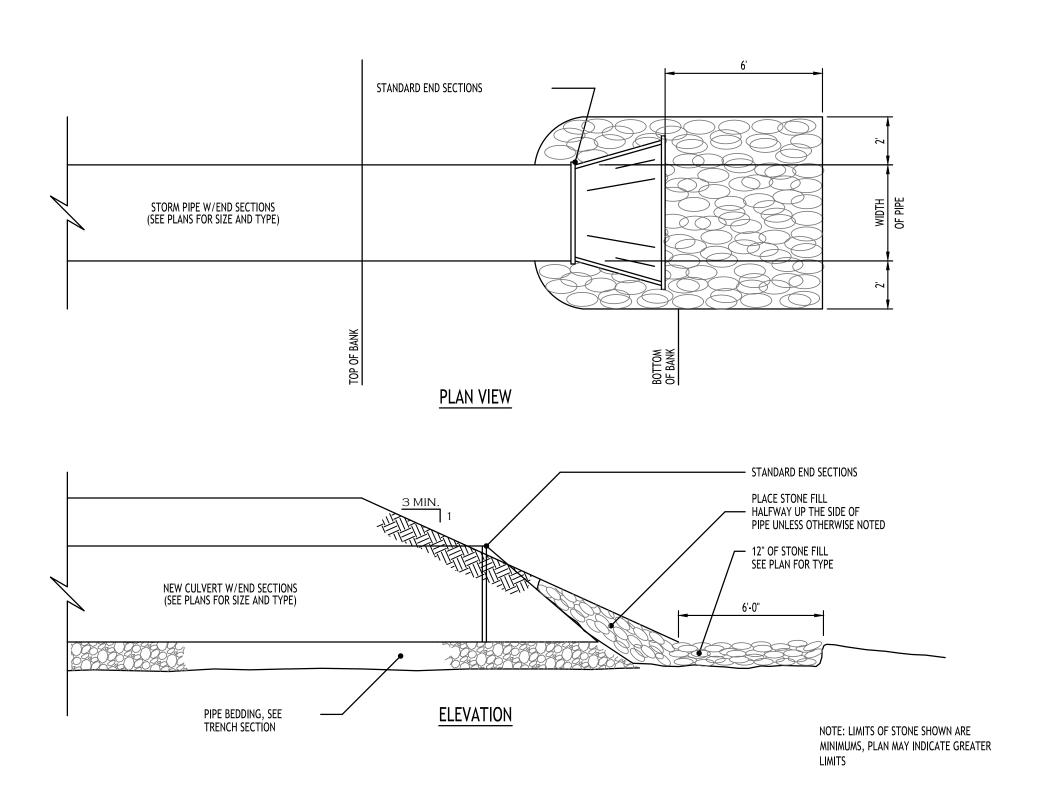
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PIPE BEDDING MATERIAL (NYSDOT 1985 EDITION) NO. 1 CRUSHED STONE OR CRUSHED GRAVEL WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE MATERIAL SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE

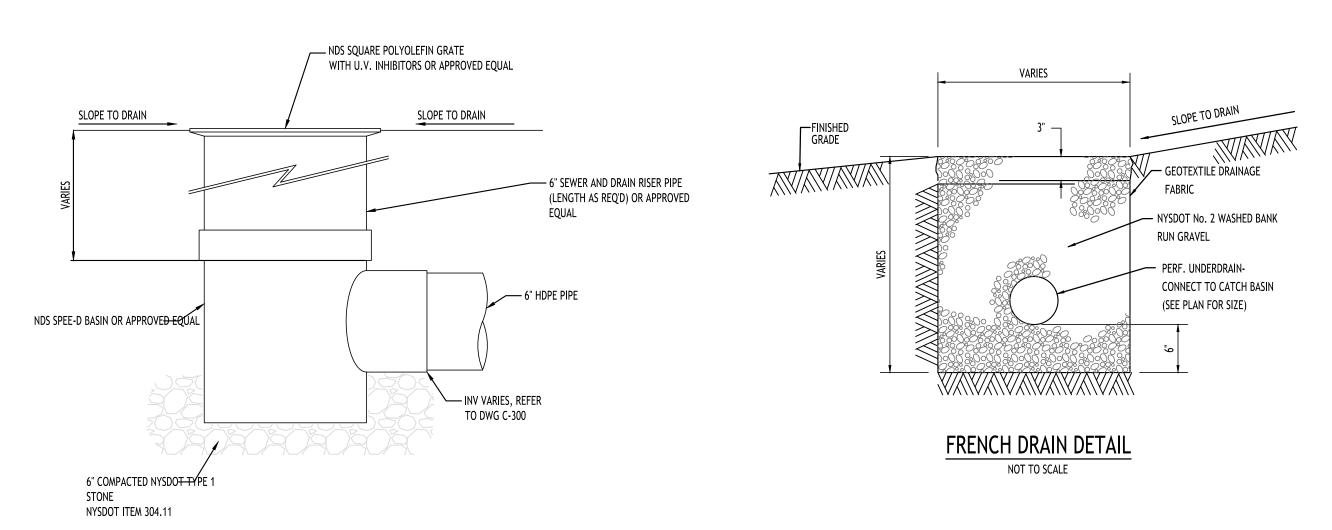
NO SLAG SHALL BE ALLOWED FOR MATERIAL

(2) BACKFILL MATERIAL SHALL BE NATIVE SOIL CONTAINING NO UNSUITABLE MATERIAL COMPACTED IN 6" LIFTS.

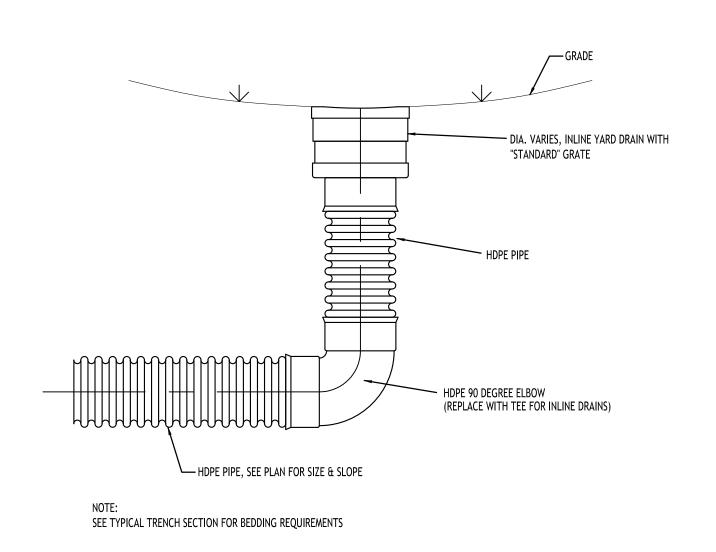
STORM SEWER TRENCH SECTION IN UNPAVED AREAS NOT TO SCALE



TYPICAL PIPE OUTLET W/ END SECTION & RIP RAP NOT TO SCALE



TYPICAL AREA DRAIN DETAIL



TYPICAL YARD DRAIN DETAIL NOT TO SCALE



TOWN OF AMHERST APPROVAL BOX:

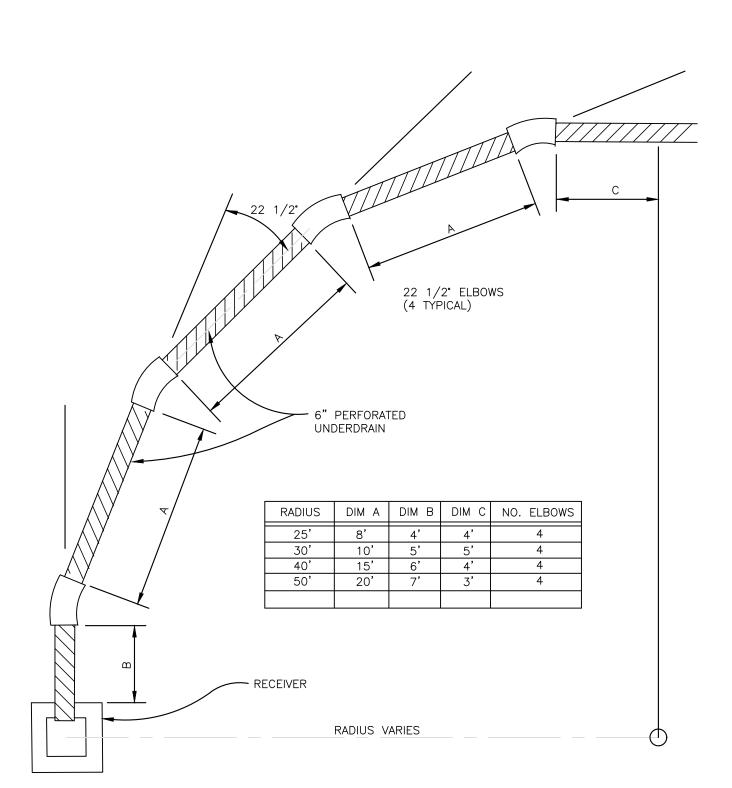
DRAWING NAME: Storm Drainage **Details**

> Date: Drawn By: Scale: DRAWING NO.

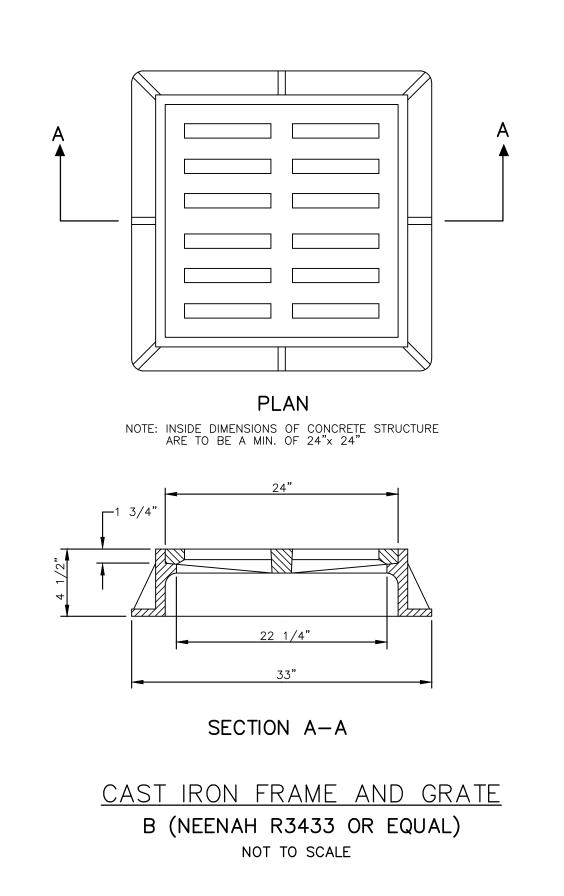
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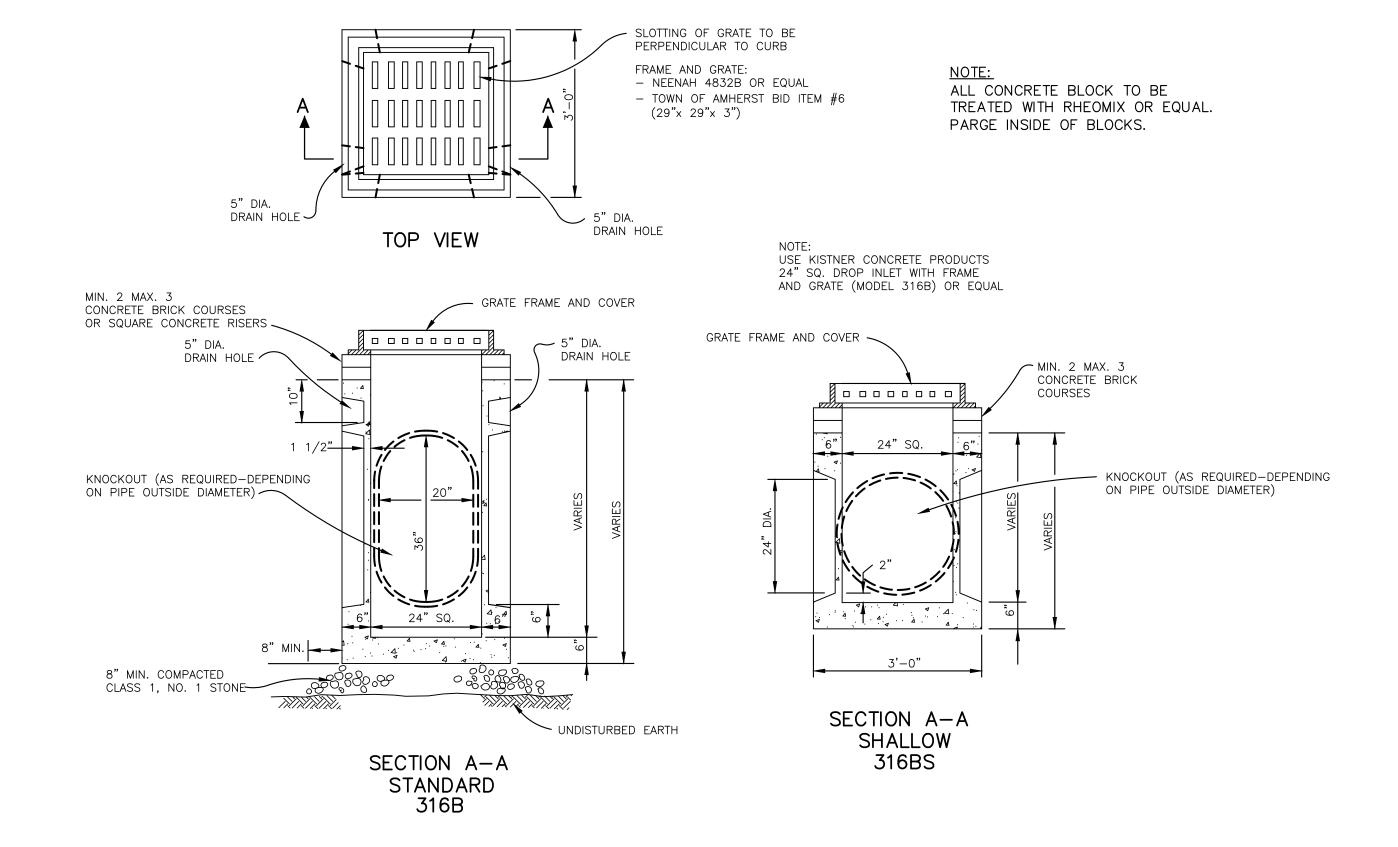
C. Wood

STANDARD STORM MANHOLE NOT TO SCALE

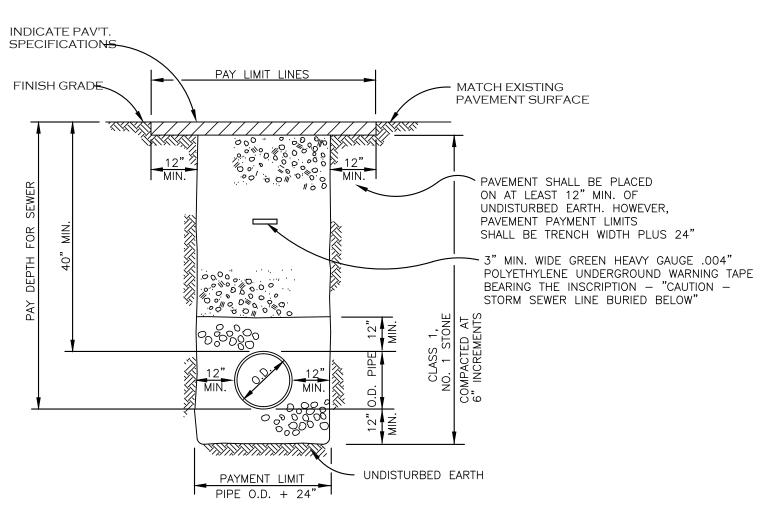


TYPICAL UNDERDRAIN INSTALLED AROUND CURVE NOT TO SCALE



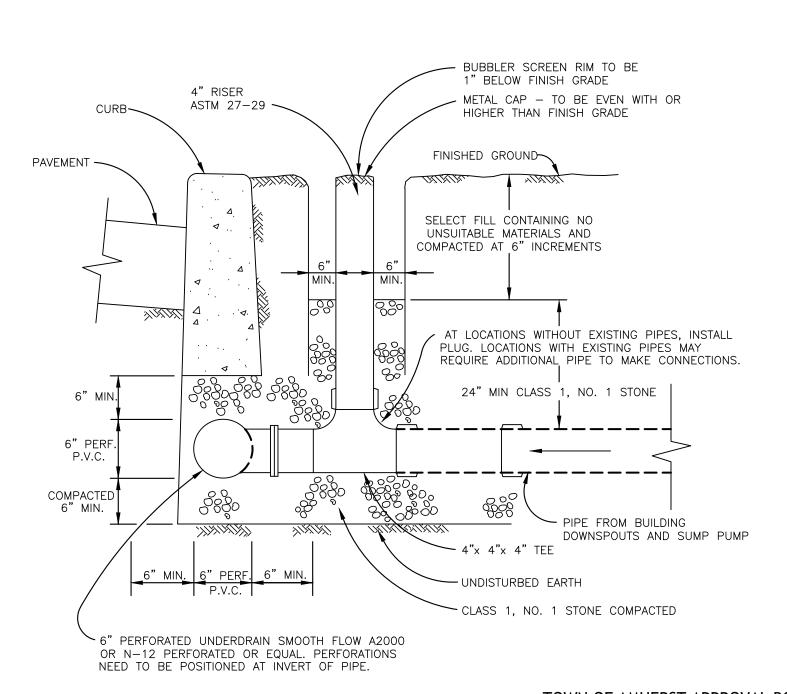




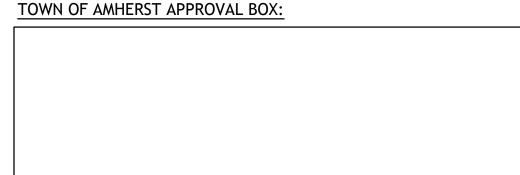


WHERE THE CONTRACTOR EXCAVATES BEYOND THE PAY LIMITS SHOWN: SELECT FILL AND PAVEMENT, SIDEWALK & DRIVEWAY REPLACEMENT OUTSIDE THE PAY LIMITS SHALL BE FURNISHED AND PLACED AT THE CONTRACTOR'S EXPENSE (TYP.)

> TYPICAL TRENCH DETAIL TOWN ROAD CROSSING NOT TO SCALE



CURB BUBBLER DETAIL NOT TO SCALE



DRAWING NAME: Storm Drainage **Details**

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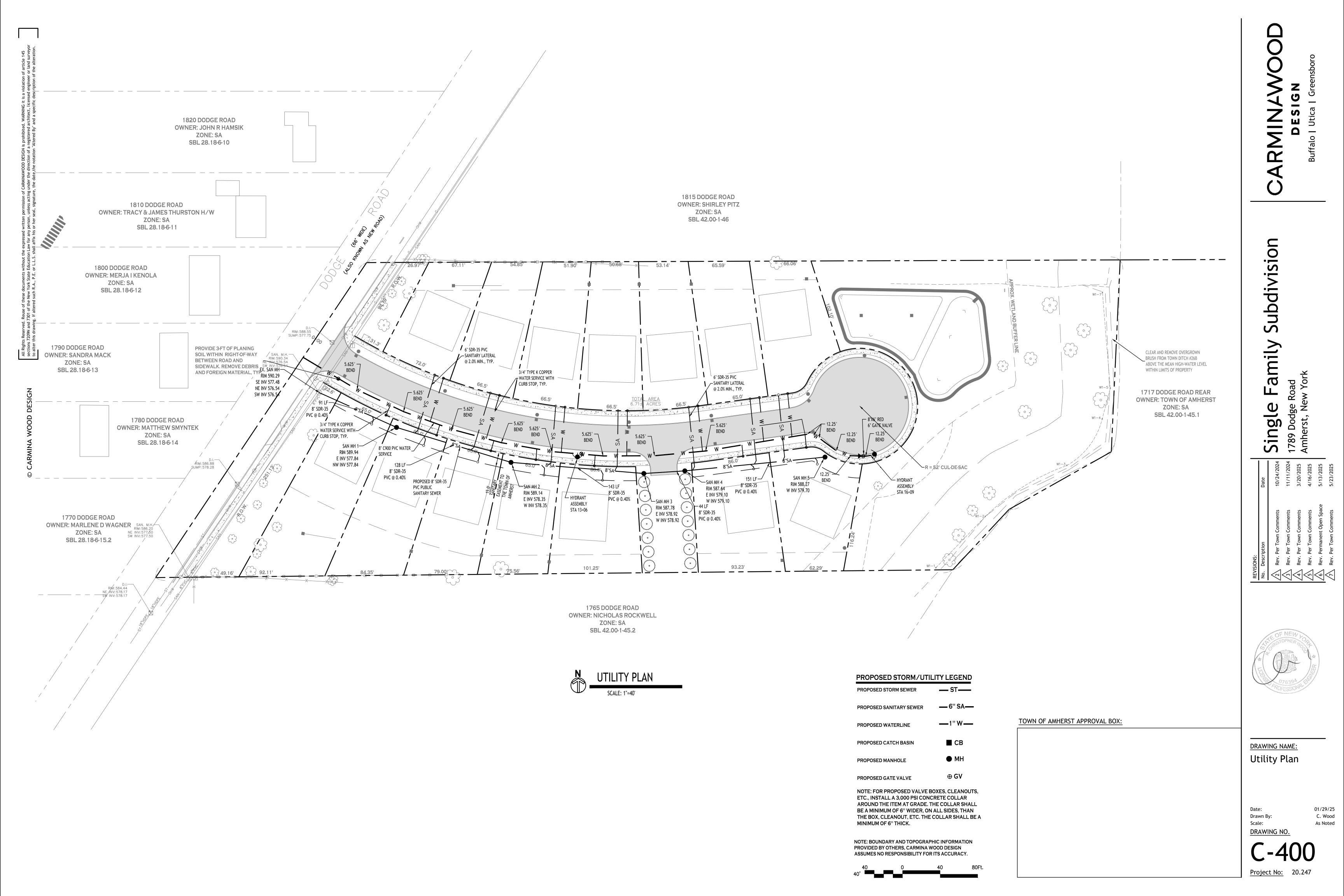
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Date: Drawn By: Scale: DRAWING NO.

01/29/25

C. Wood

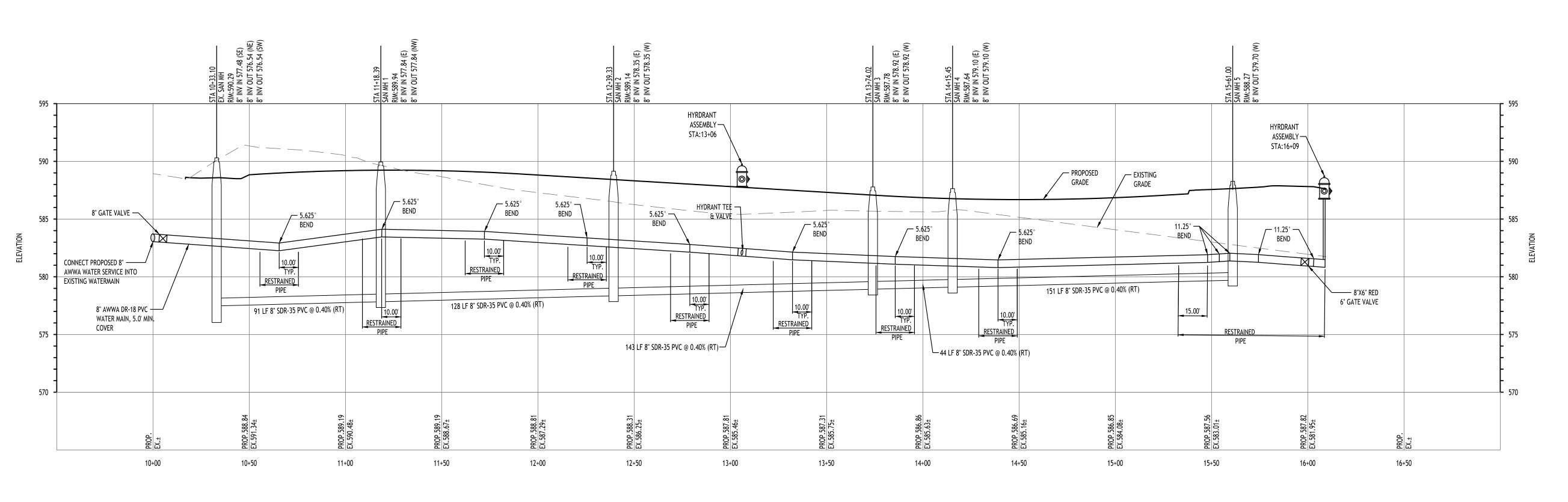


Drawn By: Scale:

01/29/25 C. Wood As Noted DRAWING NO.

NOTE: BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY OTHERS, CARMINA WOOD DESIGN, D.P.C. ASSUMES NO RESPONSIBILITY FOR ITS ACCURACY.

TOWN OF AMHERST APPROVAL BOX:



PROFILE - ROAD A SCALE: HORIZ. 1"=30' VERT. 1"=5'

RIM ELEVATION TO BE AT FINISH GRADE

ADJACENT GROUND IN UNDEVELOPED AREAS

(TYP. FOR, ALL M.H.'S)

48" OR 60" DIA.

PAY LIMIT = O.D. AT BOTTOM +24"

MANHOLE WALL -

JUNCTIONS

FLOW CHANNELS MUST ALLOW PLACEMENT, REMOVAL AND PASSAGE OF T.V. CAMERAS. THE CAMERA DIMENSIONS ARE APPROXIMATELY 26" LONG x 6 1/2" SQUARE. A BLOCK OF WOOD OF THESE

DIMENSIONS MAY BE USED TO SIMULATE THE SIZE OF THE CAMERA.

THIS WILL SIMPLIFY THE FORMATION OF FLOW CHANNELS AND

SMOOTH & UN-OBSTRUCTED FLOW ALL INVERTS TO BE FLUSH

FLOW CHANNEL DETAIL

SANITARY SEWERS

NOT TO SCALE

DEPTH OF ALL CHANNELS TO BE 75% OF PIPE DIAMETER.

FINISH ALL CHANNELS AT PROPER GRADE AS TO ALLOW

PRECAST CONCRETE MANHOLE

NOT TO SCALE

INVERT POURED TO

75% PIPE DIAMETER

3-WAY JUNCTION

RIGHT ANGLE

- FORM INVERT WITH CLASS "C" CONC.

8" MIN. COMPACTED CLASS 1,

CONCAVE

MUST ALLOW FOR PLACEMENT,

PASSAGE AND REMOVAL OF

TELEVISION CAMERA'S

ON THIS SHEET

NO. 1 STONE

SEE NOTE AND FLOW CHANNEL DETAIL

-|----

EXCEPT WHERE OTHERWISE DIRECTED BY

IN DEVELOPED AREAS, 6" MIN. ABOVE

PRECAST CONCRETE ECCENTRIC

THE ENGINEER.

CONE SECTION -

UNDISTURBED EARTH

STRAIGHT THROUGH

FORM INVERT WITH

BASE SECTION —

CONCRETE

4-WAY JUNCTION

INVERTS.

WITH THE INSIDES.

CLASS "C" CONCRETE

WHERE THE CONTRACTOR EXCAVATES BEYOND THE PAY LIMITS SHOWN;

SELECT FILL AND PAVEMENT, SIDEWALK & DRIVEWAY REPLACEMENT

CONTRACTOR'S EXPENSE. (TYP.)

OUTSIDE THE PAY LIMITS SHALL BE FURNISHED AND PLACED AT THE

Date: Drawn By: Scale:

2'-0" MAXIMUM TO FIRST STEP (TYP. FOR ALL MANHOLES) RIM ELEVATION TO BE AT FINISH GRADE — MANHOLE FRAME AND COVER TO BE IN DEVELOPED AREAS, 6" MIN. ABOVE TOWN OF AMHERST STANDARD FOR MANHOLE FRAME AND COVER TO BE ADJACENT GROUND IN UNDEVELOPED AREAS TOWN OF AMHERST STANDARD FOR SANITARY SEWER, NEENAH R 1726 A EXCEPT WHERE OTHERWISE DIRECTED BY WITH INSCRIPTION "AMHERST SANITARY" SANITARY SEWER, NEENAH R 1726 A THE ENGINEER. WITH INSCRIPTION "AMHERST SANITARY" - ADJUST TO FINISH GRADE WITH - ADJUST TO FINISH GRADE WITH PRECAST CONCRETE EXTENSION PRECAST CONCRETE EXTENSION RINGS, 3 RINGS MAX., NOT LESS RINGS, 3 RINGS MAX., NOT LESS THAN 6" NOR MORE THAN 12" THAN 6" NOR MORE THAN 12" PRECAST CONCRETE ECCENTRIC CONE SECTION -- ALUMINUM OR COPOLYMER PROPYLENE STEPS PRECAST CONCRETE ALCOA 1265A OR M.A. IND. RISER SECTION -INC. MODEL PS-2-PF-S (ASTM 478) OR EQUAL BUTTERED "O" RING PRECAST 60" TO 48" ASTM 443 NEOPRENE GASKET REDUCER SECTION — PRECAST CONCRETE RISER SECTION ALUMINUM OR COPOLYMER PROPYLENE STEPS — EMBEDDED 3" MIN. ALCOA 1265A OR M.A. IND. (TYP. FOR ALL M.H.'S) INC. MODEL PS-2-PF-S (ASTM 478) OR EQUAL AND SEE PRECAST CONC. M.H. DETAIL NOTE: 60" DIA. BARREL IS REQUIRED ON THIS SHEET FOR 18" OR LARGER SEWER LINES -BUTTERED "O" RING ASTM 443 NEOPRENE GASKET 60" DIA. - 4" MIN. PROJECTION FROM INSIDE WALL 2 COATS KOPPERS (TYP. FOR ALL M.H.'S) METALIFE HBP OR EQUAL (22 MILS) → MONOLITHIC PRECAST CONCRETE BASE SECTION - 2-COATS KOPPERS METALIFE HPB FORM INVERT WITH CLASS "C" CONC. SEE NOTE AND FLOW CHANNEL DETAIL OR EQUAL (22 MILS) ON THIS SHEET COMPRESSION TYPE FLEXIBLE PIPE TO MANHOLE CONNECTOR "A-LOK" OR EQUAL

PRECAST CONCRETE MANHOLE OVER EXISTING SEWER (18"-30" DIA.) NOT TO SCALE

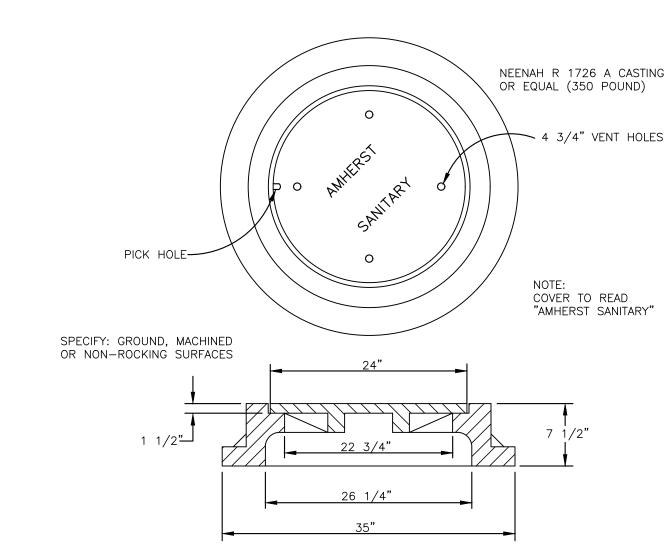
8" MIN. COMPACTED CLASS 1, 600 NO. 1 STONE

PAY LIMIT = O.D. AT BOTTOM +24"

NO. 4 GAGE AT 9" O.C. HORIZONTAL

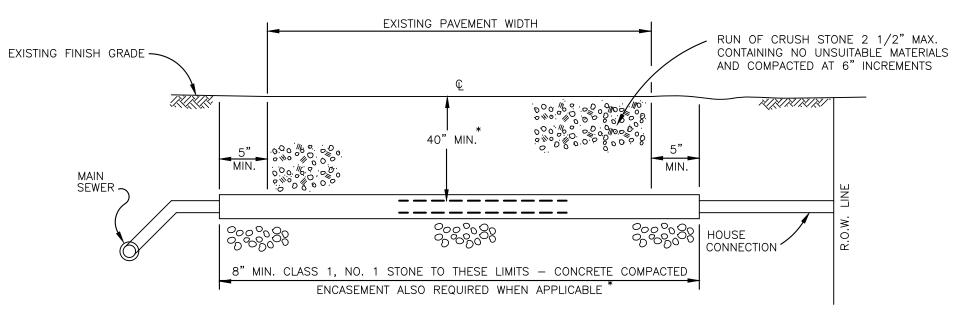
AND LONGITUDINAL OR WELDED WIRE MESH 6"x 6" NO. 10 GAGE

- UNDISTURBED EARTH



STANDARD MANHOLE FRAME AND COVER VENTED COVER

NOT TO SCALE



SANITARY FOR HOUSE CONNECTION

EXISTING PAVEMENT SURFACE (SEE PAVEMENT SECTION DWG. NO. 5, PAGE 3 OF 4) 1100 PAVEMENT SHALL BE PLACED ON AT LEAST 12" MIN. OF UNDISTURBED EARTH. HOWEVER, PAVEMENT PAYMENT LIMITS SHALL BE TRENCH WIDTH PLUS 24" 3" MIN. WIDE GREEN HEAVY GAUGE .004" POLYETHYLENE UNDERGROUND WARNING TAPE BEARING THE INSCRIPTION - "CAUTION -SANITARY SEWER LINE BURIED BELOW" - UNDISTURBED EARTH PAYMENT LIMIT PIPE O.D. + 24" IF CONCRETE ENCASEMENT IS REQUIRED, IT SHALL BE INSTALLED IN PLACE OF (AND TO THE DIMENSIONS OF) THE PIPE BEDDING AND COVER

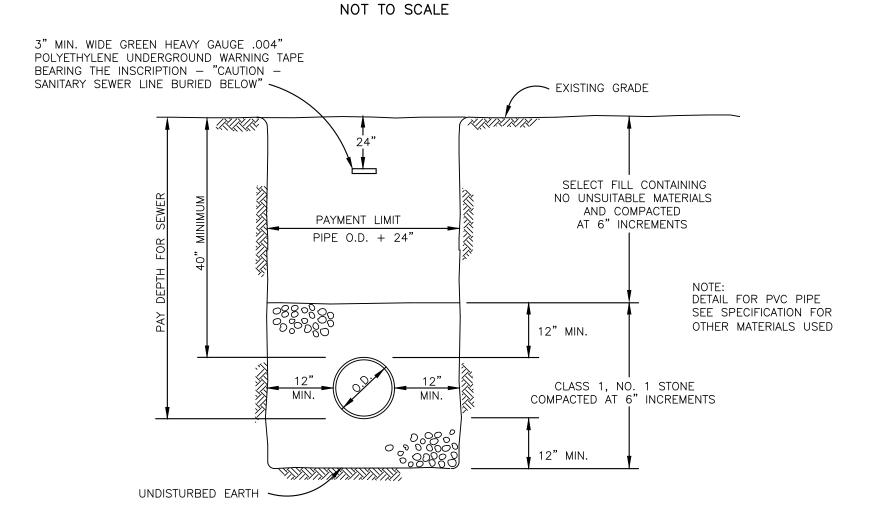
PAY LIMIT LINES

SAW CUT <

SAW CUT

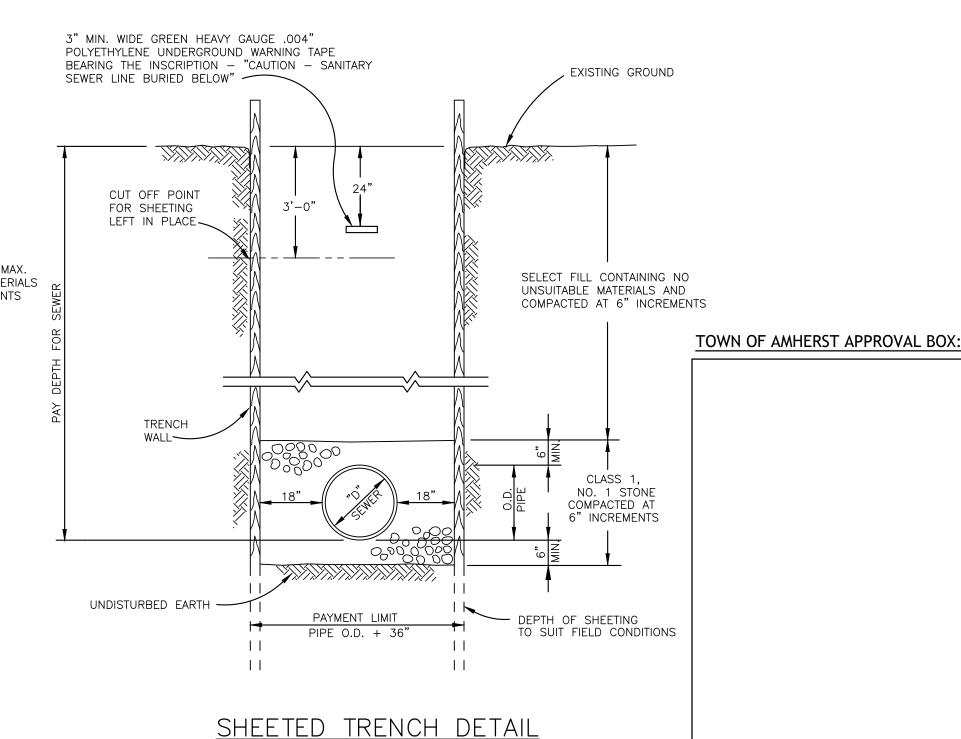
TO 12" MIN. ABOVE AND BELOW THE PIPE (SEE WATER CROSSING DETAIL ON THIS SHEET)

TYPICAL TRENCH DETAIL — TOWN ROAD CROSSING FOR MAIN SEWERS & HOUSE AND BUILDING CONNECTIONS



TYPICAL EARTH TRENCH DETAIL UNPAVED AND UNTRAVELED AREAS

NOT TO SCALE



NOT TO SCALE

*WHEN DEPTH FROM TOP OF HOUSE CONNECTION PIPE TO SURFACE IS LESS THAN 6.0 FEET, A CONCRETE ENCASEMENT WILL BE REQUIRED TO THE LIMITS SHOWN (SEE WATER CROSSING DETAIL SAN. SEWERS DWG. #4 - PG. #2 OF 4)

TYPICAL PAVEMENT CROSSING

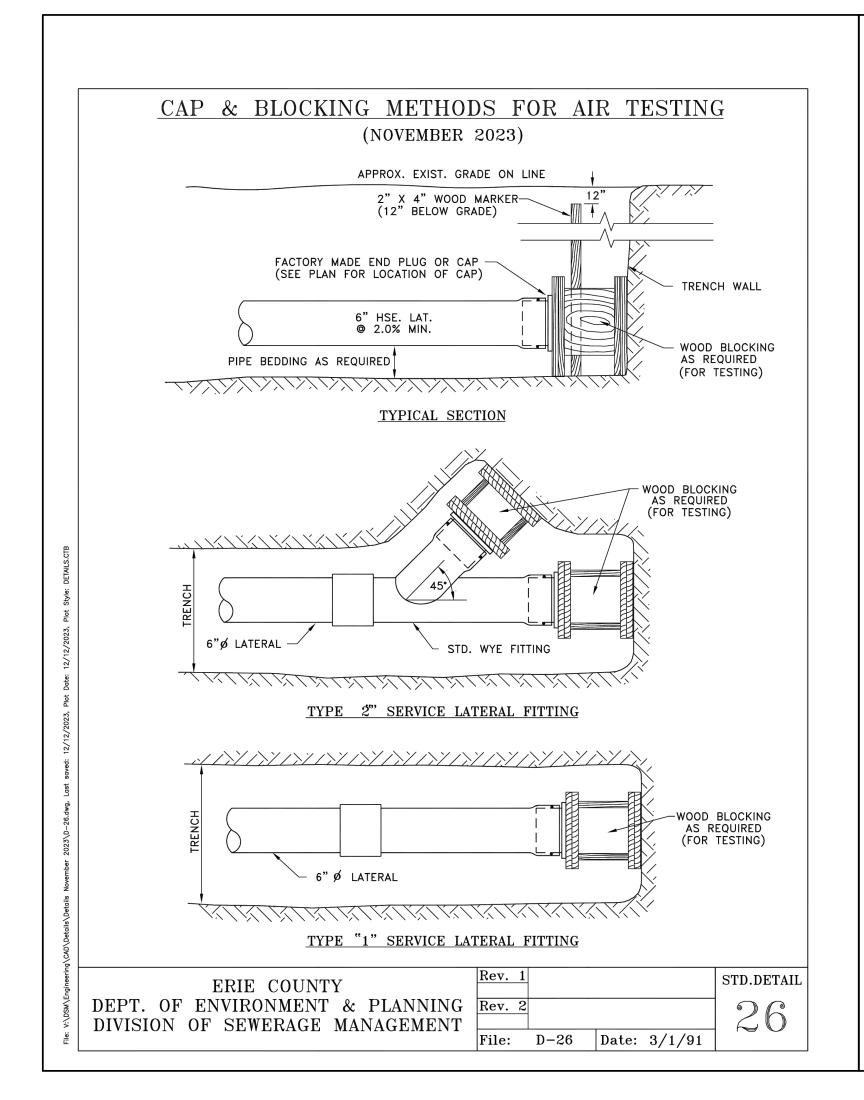
NOT TO SCALE

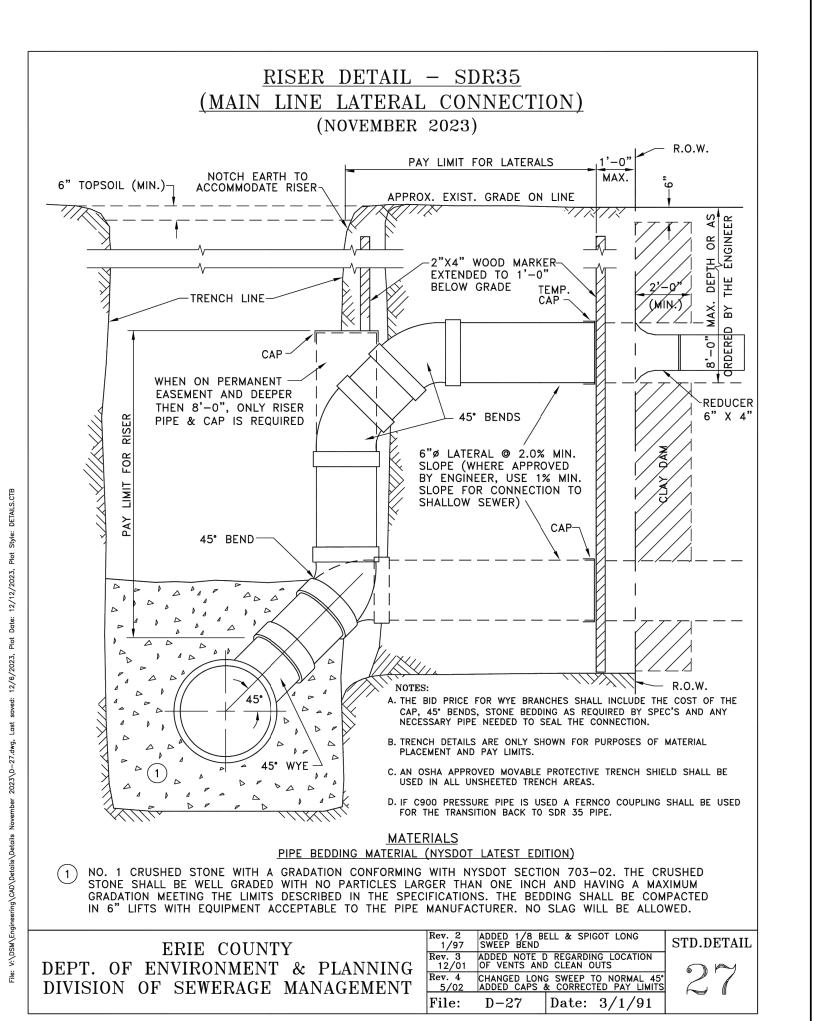
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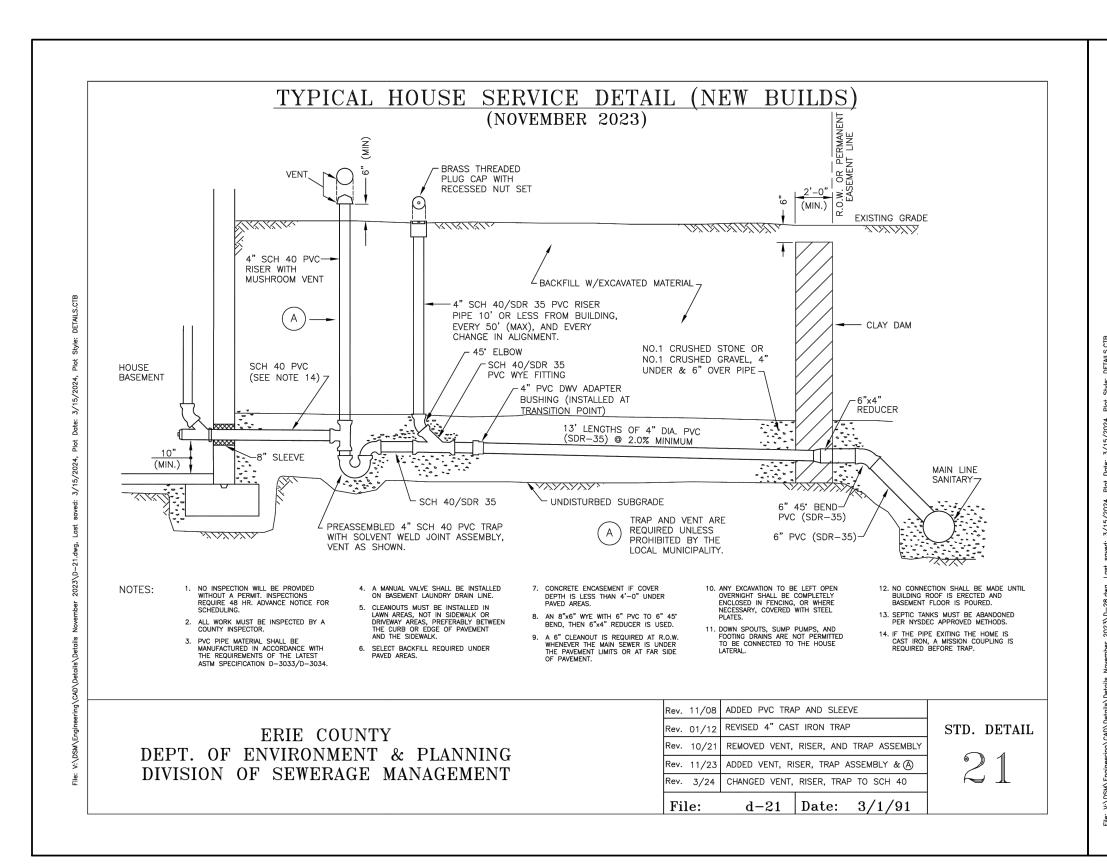
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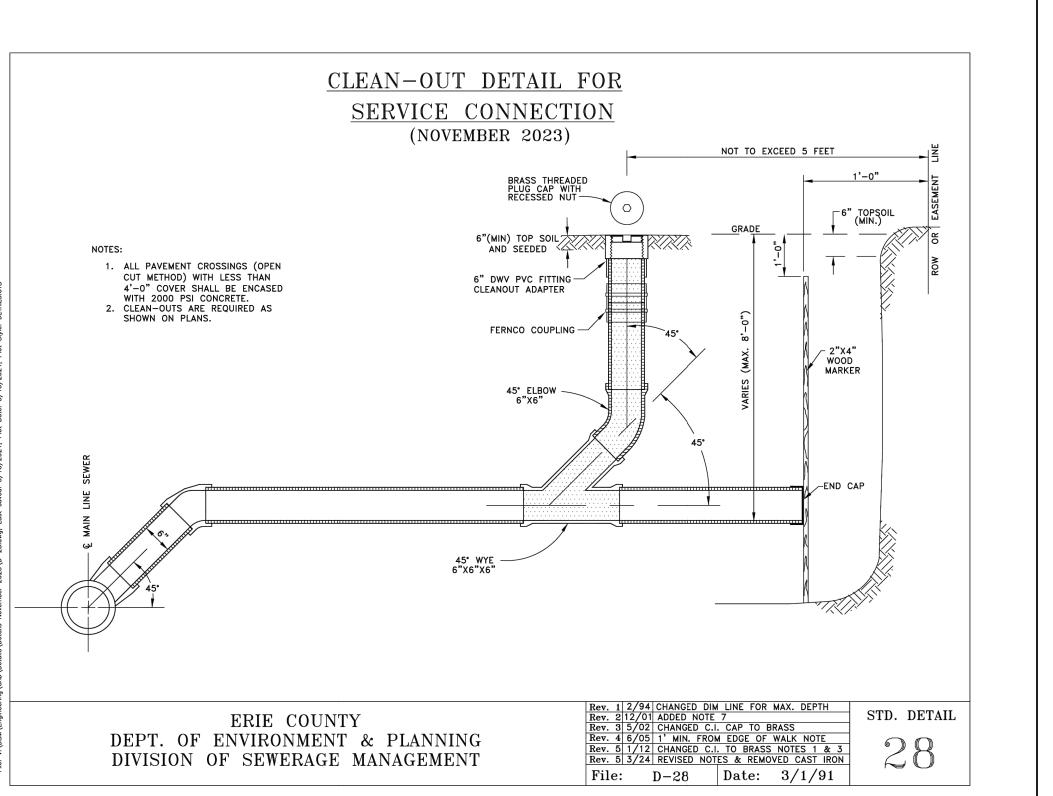
01/29/25

C. Wood









D

TOWN OF AMHERST APPROVAL BOX:

DRAWING NAME: Sanitary Sewer **Details**

> Date: Drawn By: Scale: DRAWING NO.

01/29/25

C. Wood

SANITARY SEWER TESTING METHOD NOTES

(A) <u>LEAKAGE TESTS</u>

- 01. THE TEST PERIOD WHEREIN THE MEASUREMENTS ARE TAKEN SHALL NOT BE LESS THAN 24 HOURS, REGARDLESS OF THE TEST METHOD
- 02. THE TOTAL LEAKAGE OF ANY SECTION TESTED BY ANY TEST METHOD SHALL NOT EXCEED THE RATE OF 200 GALLONS PER MILE OF PIPE PER 24 HOURS PER INCH OF NOMINAL PIPE DIAMETER.
- 03. MANHOLES SHALL BE CONSIDERED AS SECTIONS OF 48" DIAMETER PIPE AND THE EQUIVALENT LEAKAGE ALLOWANCE SHALL BE COMPUTED PER NOTE 02 USING THE SUBMERGED HEIGHT OF MANHOLE AS THE LENGTH.
- 04. WHEN MANHOLES ARE TESTED SEPARATELY, ALL PIPE OPENINGS SHALL BE PLUGGED AND THE TEST PROCEDURES AND CRITERIA SHALL BE APPLIED IN THE SAME MANNER AS FOR TESTS INVOLVING ONLY THE PIPE OR A COMBINATION OF PIPE AND MANHOLES.

(B) <u>INFILTRATION TEST</u> CRITERIA FOR USE

- 01. THIS TEST METHOD MAY ONLY BE USED WHEN GROUND WATER LEVELS ARE AT LEAST TWO (2) FEET ABOVE THE TOP OF THE PIPE FOR THE ENTIRE LENGTH OF THE SECTION TO BE TESTED DURING THE ENTIRE PERIOD OF THE TESTS.
- 02. GROUND WATER LEVELS MAY BE MEASURED IN AN OPEN TRENCH OR IN STANDPIPES PREVIOUSLY PLACED IN BACKFILLED TRENCHES DURING BACKFILLING.
- 03. THE NUMBER OF STANDPIPES REQUIRED AND LOCATION OF THE SAME ARE TO BE AS ORDERED BY THE ENGINEER. STANDPIPES MAY BE OF ANY PIPE MATERIAL BUT MUST BE OF SUCH DIAMETER (2-1/2" MINIMUM) AS TO PERMIT THE INSERTION OF A RULE OR LEVEL ROD. CRUSHED STONE SHALL BE PLACED AROUND THE LOWER OPEN ENDS OF THE STANDPIPES.
- 04. STANDPIPES ARE TO BE REMOVED AT THE SATISFACTORY COMPLETION OF THE TESTS.
- 05. IF IN LIEU OF STANDPIPES, THE TRENCH IS TO BE LEFT OPEN FOR GROUND WATER OBSERVATION, THE LENGTH OF UNBACKFILLED TRENCH AT ANY ONE TIME MAY HAVE TO BE LIMITED FOR REASONS OF SAFETY.

(C) <u>EXFILTRATION TEST</u> CRITERIA FOR USE

- THIS TEST CONSISTS OF FILLING THE PIPE WITH WATER TO PROVIDE A HEAD OF AT LEAST TWO (2) FEET ABOVE THE TOP OF THE PIPE OR ABOVE GROUND WATER WHICHEVER IS HIGHER AT THE HIGHEST POINT OF THE PIPE LINE UNDER TEST, AND THEN MEASURING THE LOSS OF WATER TO MAINTAIN THE ORIGINAL LEVEL.
- 02. IN THIS TEST THE PIPE LINE MUST BE FILLED WITH WATER AND ALLOWED TO REMAIN SO FILLED FOR AT LEAST 24 HOURS PRIOR TO TAKING MEASUREMENTS.
- 03. REGARDING GROUND WATER MEASUREMENTS: SEE NOTES 02 THROUGH 05 ABOVE.
- 04. REGARDING THE TEST STANDPIPE: THERE MUST BE SOME POSITIVE METHOD OF RELEASING ENTRAPPED AIR IN THE SEWER PRIOR TO TAKING MEASUREMENTS.

(D) <u>DEFLECTION TEST FOR PVC SEWER PIPE</u>

- 01. DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE GRAVITY SEWER PIPE. TESTS SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE FOR AT LEAST 30 DAYS.
- 02. NO PIPE SHALL EXCEED DEFLECTION OF 5%. DEFLECTION GAGE MAY BE BORROWED FROM THE TOWN ENGINEER FOR 8" AND 10" PIPE. THE DEFLECTION TEST MUST BE EXECUTED AFTER 30 DAYS OF PLACEMENT OF FINAL BACKFILL. THE TEST WILL ALSO BE DONE WITHOUT MECHANICAL PULLING DEVICES.

MANHOLE PLACEMENT AND MAINTENANCE DURING CONSTRUCTION AND DEVELOPMENT

CONTRACTOR AND/OR DEVELOPERS SHALL CONSTRUCT ALL MANHOLE STRUCTURES IN ACCORDANCE WITH THE TOWN OF AMHERST STANDARD SPECIFICATIONS OR THE SPECIFICATIONS OF THE DESIGN ENGINEER WHEN REQUIRED BY THE

ALL MANHOLES ARE TO BE DESIGNED AND FURNISHED WITH RIM ELEVATIONS AT FINAL FINISHED GRADES. THE CONTRACTOR, DEVELOPER, OR HOME BUILDER SHALL BE RESPONSIBLE FOR ALL CORRECTIONS, ADJUSTMENTS, AND MODIFICATIONS NEEDED FOR RAISING, LOWERING, OR REPLACING ANY AND ALL MANHOLES AS PROPOSED FOR THE FACILITY.

ALL AS-BUILT STATIONING. LINE AND GRADE IMPROVEMENTS, INVERT AND RIM ELEVATIONS, "Y" LOCATIONS, INSPECTION REPORTS, ROADWAY OR STREET NAMES, RIGHT-OF-WAY WIDTHS, AND EASEMENT LINES SHALL BE FURNISHED TO THE TOWN ON A SET OF MYLAR DRAWINGS PRIOR TO TAP-IN APPROVAL, PIP ACCEPTANCE, AND/OR RELEASE OF FINAL PAYMENT.

ALL MANHOLE STRUCTURES SHALL BE MADE ACCESSIBLE TO THE TOWN OF AMHERST TELEVISION/MAINTENANCE CREWS. THE CONTRACTOR AND/OR DEVELOPER SHALL PROVIDE A DRY, WELL COMPACTED, STABLE SURFACE FREE FROM SHOW AND OBSTRUCTIONS FOR SAFE AND OPEN ACCESS WITH TOWN VEHICLES. SHOULD THE CONTRACTOR AND/OR DEVELOPER WISH TV INSPECTIONS DURING WET WEATHER/WET SOFT SOIL CONDITIONS, HE SHALL PROVIDE ALL NECESSARY GRANULAR BACKFILL, DISTRIBUTED AND COMPACTED TO SUPPLY ACCESS TO EACH MANHOLE. THE CONTRACTOR AND/OR DEVELOPER SHALL BEAR ALL COSTS OF TOWING, DOWN TIME, CREW TIME, AND DAMAGE ALONG WITH RESTORATION, SHOULD SUCH ACCESSWAYS FAIL.

SANITARY SEWER NOTES:

- 01. THE CONTRACTOR SHALL COMPLY WITH THE TOWN OF AMHERST STANDARD DRAWINGS AND SPECIFICATIONS.
- 02. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER AND THE TOWN OF AMHERST ENG. DEPT. OF ANY HAZARDOUS SUBSTANCE ENCOUN-TERED DURING THE CONSTRUCTION OF THE WORK. HE SHALL AT HIS EXPENSE, CONFORM TO ALL LAWS, RULES, REGULATIONS AND DIRECTIONS AS PROMULGATED BY THE UNITED STATES DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION. THE NEW YORK STATE DEPARTMENT OF HEALTH AND ANY SUCH LOCAL RULES, ORDINANCES AND LAWS WHEN ENCOUNTERING OR WORKING WITH ANY SUCH HAZARDOUS SUBSTANCE.
- 03. THE CONTRACTOR SHALL COMPLY IN ALL RESPECTS TO THE INDUSTRIAL CODE PART (RULE NO.) 53 RELATING TO CONSTRUCTION, EXCAVATION AND DEMOLITION OPERATIONS AT OR NEAR UNDERGROUND FACILITIES, AS ISSUED BY THE STATE OF NEW YORK DEPARTMENT OF LABOR, BOARD OF STANDARD AND
- 04. SINCE THE ERIE COUNTY WATER AUTHORITY OPERATES AND MAINTAINS THE EXISTING WATER LINES, THEY ARE TO BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF THE START OF CONSTRUCTION. ALL EXISTING VALVES ARE TO BE OPERATED BY THE ERIE COUNTY WATER AUTHORITY PERSONNEL.
- 05. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AHEAD OF THE PIPE LAYING OPERATION, SO THAT, IF MINOR ADJUSTMENTS MUST BE MADE IN ELEVATION AND/OR ALIGNMENT DUE TO INTERFERENCE FROM THESE UTILITIES, SAID CHANGES CAN BE MADE IN ADVANCE OF THE WORK.
- 06. WHERE SUCH FACILITIES ARE UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER, HE SHALL CERTIFY TO THE ENGINEERING DEPARTMENT OF THE TOWN OF AMHERST THAT SAID FACILITIES AS CONSTRUCTED WERE SUPERVISED BY HIMSELF (HERSELF) AND THAT THE WORKS HAVE BEEN FULLY COMPLETED IN ACCORDANCE WITH THE APPROVED ENGINEERING REPORTS, PLANS, SPECIFICATIONS, CONTRACT DOCUMENTS AND ANY AND ALL ADDENDA TO SAME.
- 07. THE CONSTRUCTION OF THE FACILITIES SHALL BE UNDER THE SUPERVISION OF A PERSON OR FIRM QUALIFIED TO PRACTICE PROFESSIONAL ENGINEERING IN NEW YORK STATE UNDER THE EDUCATION LAW OF THE STATE, WHENEVER ENGINEERING SERVICES ARE REQUIRED BY SUCH LAW FOR SUCH PURPOSES.
- 08. A WRITTEN CERTIFICATE OF CONSTRUCTION COMPLIANCE, INCLUDING THE RESULTS OF HYDROSTATIC LEAKAGE TESTS, MADE BY THE PROFESSIONAL ENGINEER SUPERVISING THE CONSTRUCTION, SHALL BE SUBMITTED TO THE ERIE COUNTY DEPART. OF ENVIRONMENT PLANNING AND NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION WITHIN THIRTY (30) DAYS AFTER CONSTRUCTION COMPLETION.
- 09. UNSUITABLE MATERIALS SUCH AS FROZEN ORGANIC AND/OR VEGETABLE MATERIAL, DEBRIS, TREES, LUMBER, LARGE STONES OR CLODS (6.0" OR LARGER), MUCK, PEAT, ORGANIC SILT WILL NOT BE ACCEPTABLE FILL AND CERTAIN MAN-MADE DEPOSITS OF INDUSTRIAL WASTE, SLUDGE OR LANDFILL MAY ALSO BE DETERMINED AS UNSUITABLE HAZARDOUS MATERIAL.
- 10. THE COMPACTION OF ALL MATERIALS WILL OCCUR AT 6" INCREMENTS.
- 11. VERIFICATION OF ALL EXISTING EASEMENTS IS THE RESPONSIBILITY OF THE DESIGN ENGINEER AND THEY MUST BE SHOWN ALONG WITH ALL PROPOSED EASEMENTS ON PLAN DRAWINGS.
- 12. SHOULD A FLUID CONDITION BE ENCOUNTERED AT THE TRENCH BOTTOM, THE CONTRACTOR IS TO INSTALL ADDITIONAL STONE CRADLE AS ORDERED BY THE
- 13. ALL PIPE CROSSING UNDER PAVED AREAS ARE TO BE BACKFILLED TO SUBGRADE WITH COMPACTED SELECT MATERIAL TO FIVE (5) FEET OUTSIDE THE PAVEMENT EDGES.
- 14. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A QUALIFIED TREE EXPERT TO REMOVE, WHERE NECESSARY, BRANCHES WHICH INTERFERE WITH THE CONSTRUCTION OPERATION, OR REPAIR TREES HAVING SUFFERED DAMAGE BY CONSTRUCTION ACTIVITIES. THE COST INVOLVED IN THE ABOVE IS TO BE INCLUDED IN THE VARIOUS ITEMS OF THE CONTRACT.
- 15. SEWERS SHALL BE LAID AT LEAST TEN (10) FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATERMAIN. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IN CASES WHERE IT IS NOT PRACTICAL TO MAINTAIN A TEN FOOT SEPARATION, THE APPROPRIATE REVIEWING AGENCY MAY ALLOW DEVIATION ON A CASE-BY-CASE BASIS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER. SUCH DEVIATION MAY ALLOW INSTALLATION OF THE SEWER CLOSER TO A WATERMAIN, PROVIDED THAT THE WATERMAIN IS IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER AND AT AN ELEVATION SO THE BOTTOM OF THE WATERMAIN IS AT LEAST 18" (46CM) ABOVE THE TOP OF THE SEWER.
- 16. SEWERS CROSSING WATERMAINS SHALL BE LAID TO PROVIDE MINIMUM VERTICAL DISTANCE OF 18" (46CM) BETWEEN THE OUTSIDE OF A WATERMAIN AND THE OUTSIDE OF THE SEWER. THIS SHALL BE THE CASE WHERE THE WATERMAIN IS EITHER ABOVE OR BELOW THE SEWER. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATERMAIN JOINTS. WHERE A WATERMAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER, TO PREVENT DAMAGE TO THE WATERMAIN.
- 17. WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE. THE SEWER SHALL BE DESIGNED AND CONSTRUCTED EQUAL TO WATER PIPE AND SHALL BE PRESSURE TESTED AS TO ASSURE WATERTIGHTNESS PRIOR TO BACKFILLING.
- 18. THE PIPE SHALL BE P.V.C. SEWER PIPE CONFORMING TO THE LATEST REVISIONS OF ASTM DESIGNATION D-3034, SDR-35, INSTALLED IN ACCORDANCE WITH ASTM.
- 19. THE MANHOLE COVERS ARE TO BEAR THE INSCRIPTION "AMHERST SANITARY".

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2024 2025 2025 2025 2025 2025 2025



TOWN OF AMHERST APPROVAL BOX

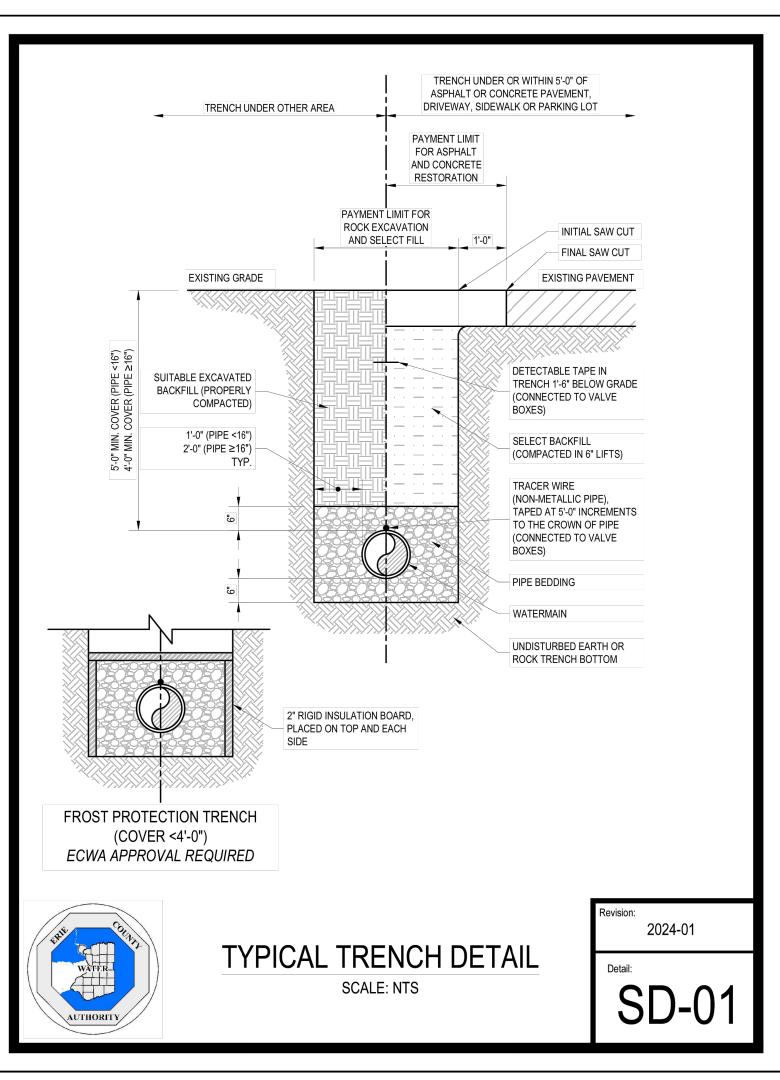
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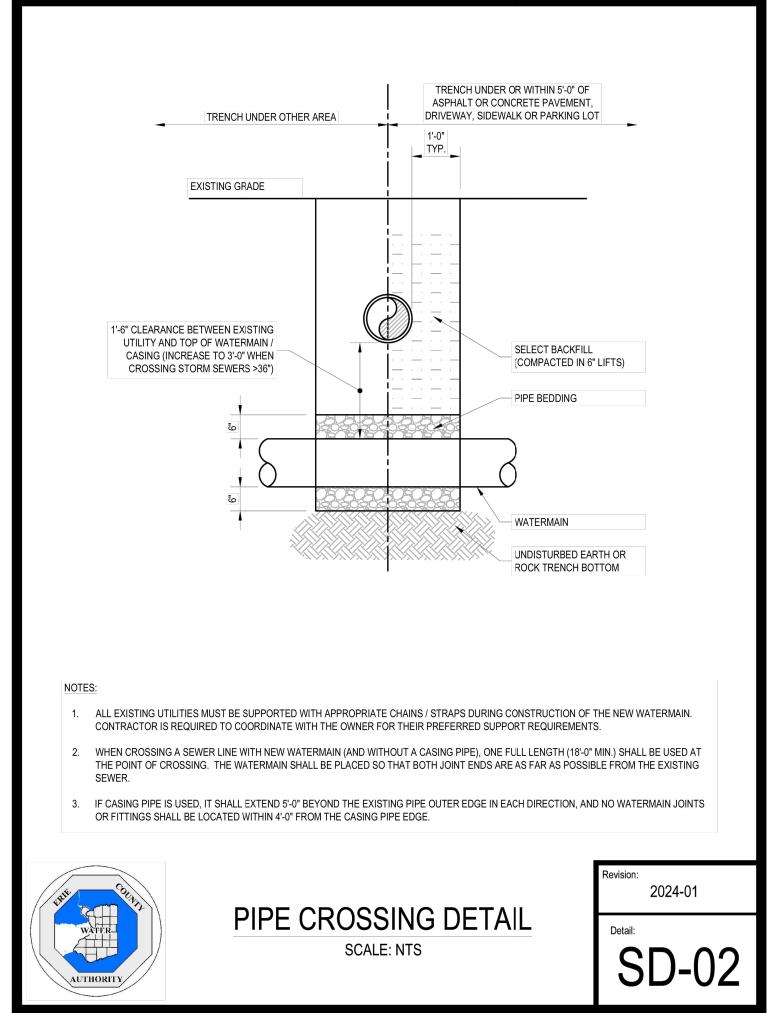
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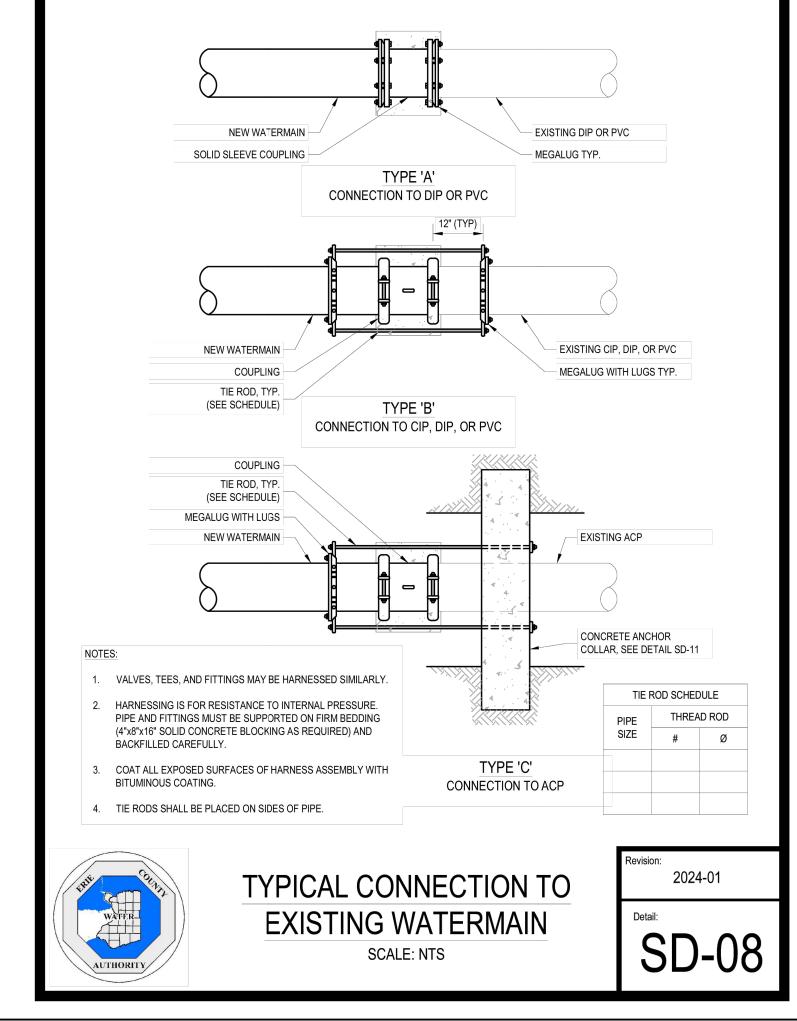
01/29/25

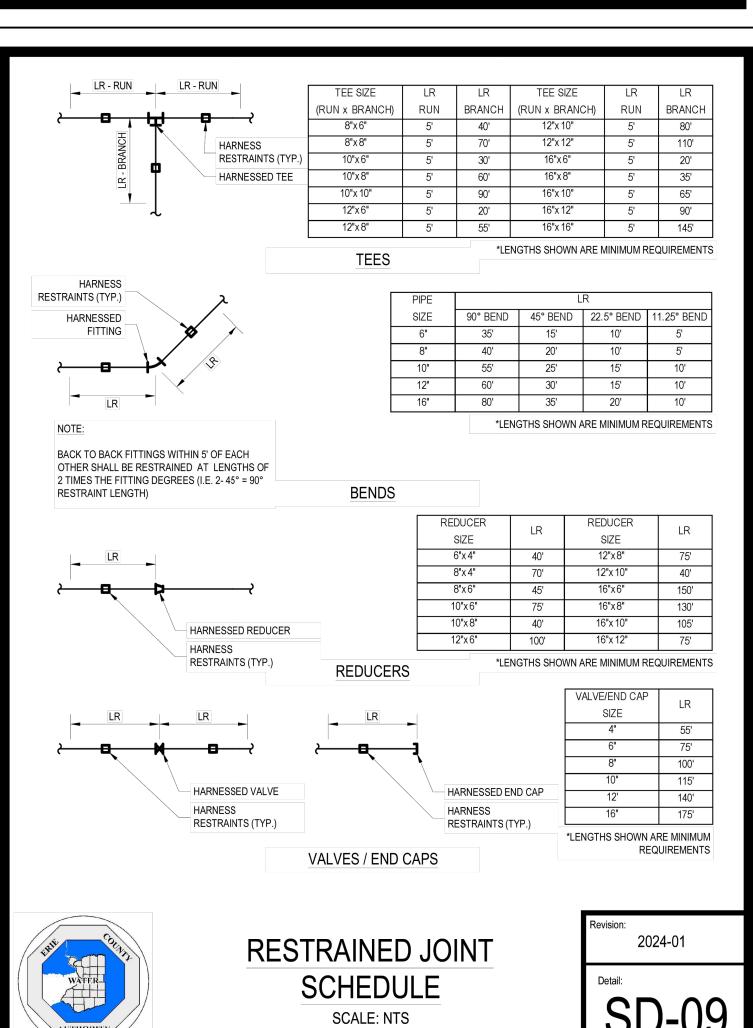
C. Wood As Noted

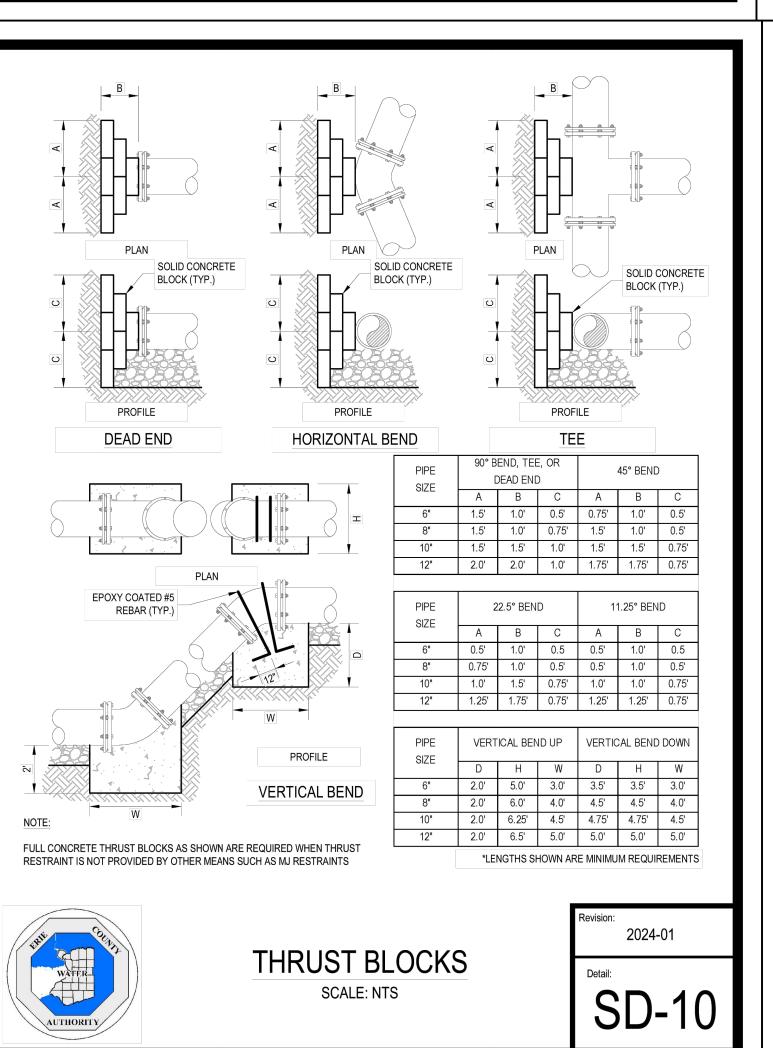


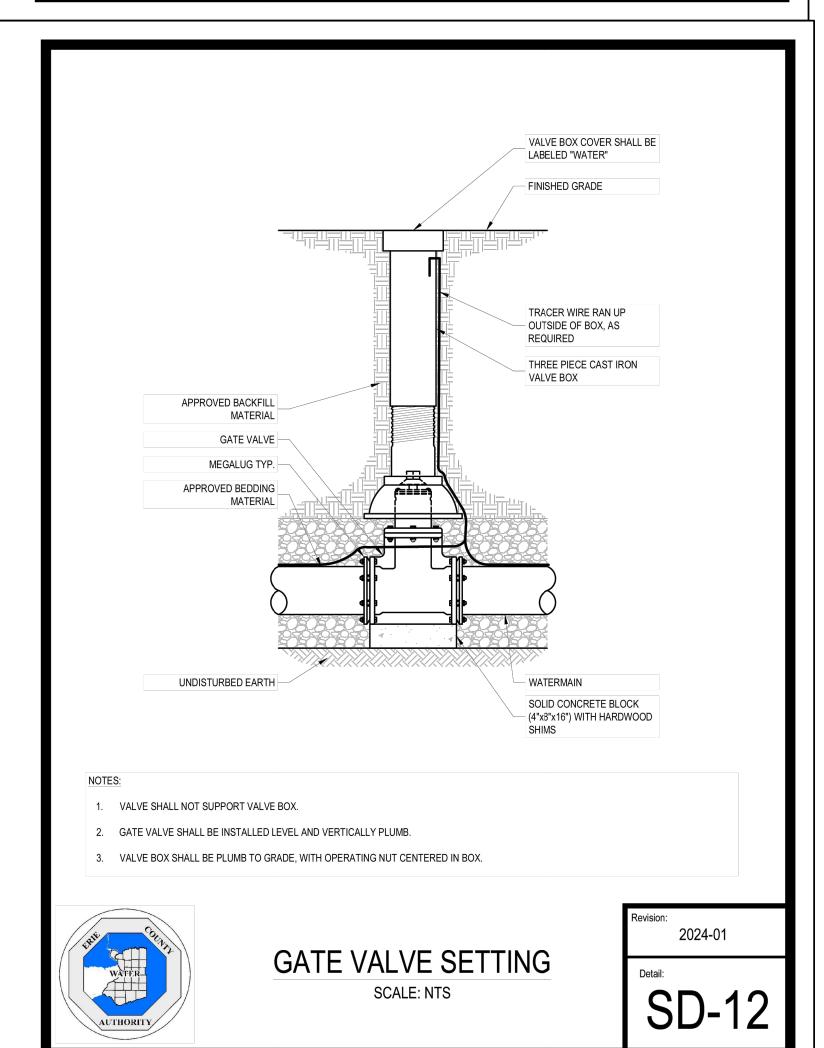


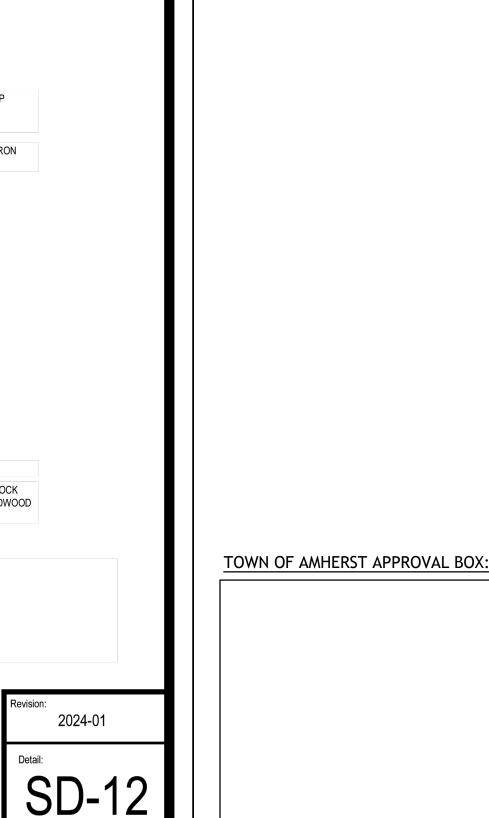












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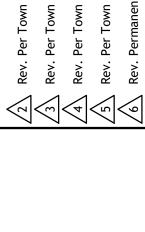
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01/29/25

C. Wood

As Noted

D



ubdivision

TOWN OF AMHERST APPROVAL BOX:

2024-01

SD-30

FUTURE CURB BOX

FUTURE CONNECTION TO EXISTING SERVICE WITH

CURB STOP SUPPORTED BY

A SOLID CONCRETE BLOCK

CORPORATION STOP

AFTER COMPLETION OF TESTING, THE SAMPLE POINT SHALL BE UTILIZED FOR A SERVICE CONNECTION. IF UNABLE TO UTILIZE FOR A SERVICE REPLACE THE CORPORATION STOP IN PIPE WITH A THREADED BRASS PLUG.

TEMPORARY BLOW-OFF /

SAMPLING POINT

SCALE: NTS

NEW WATERMAIN

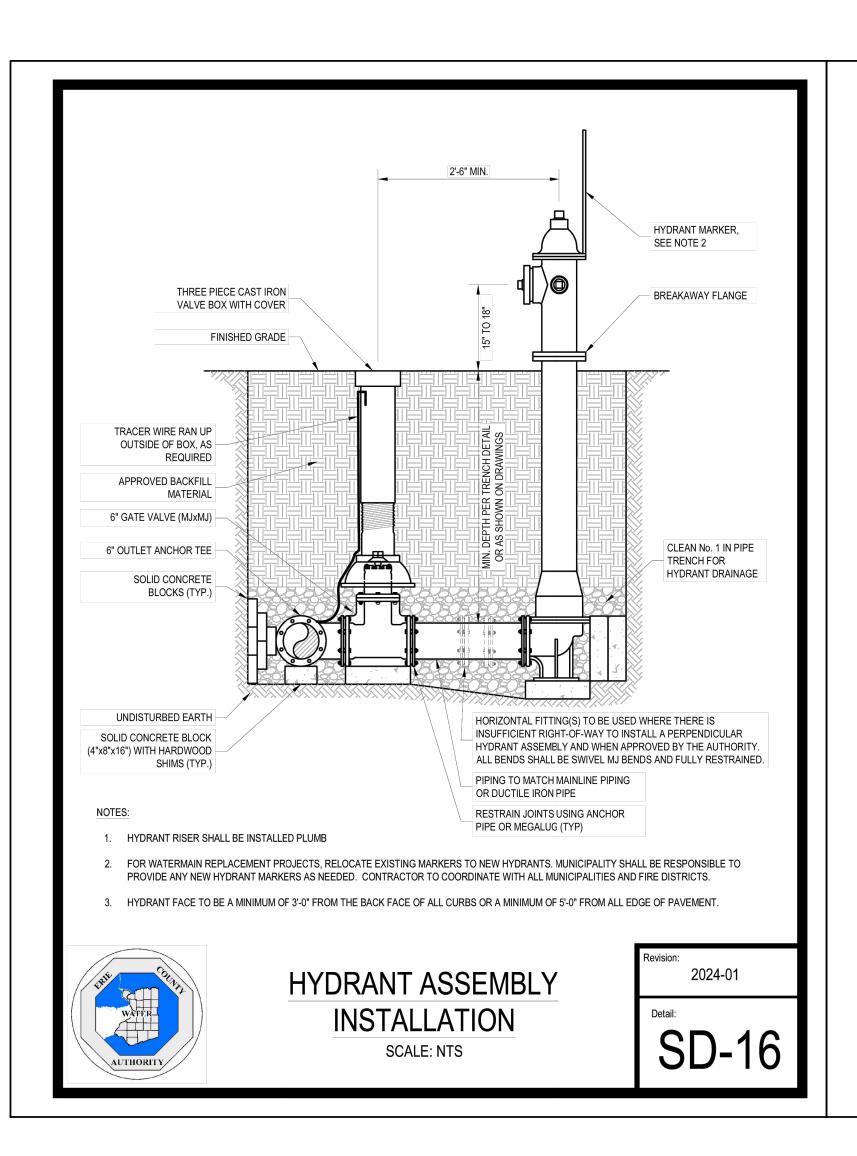
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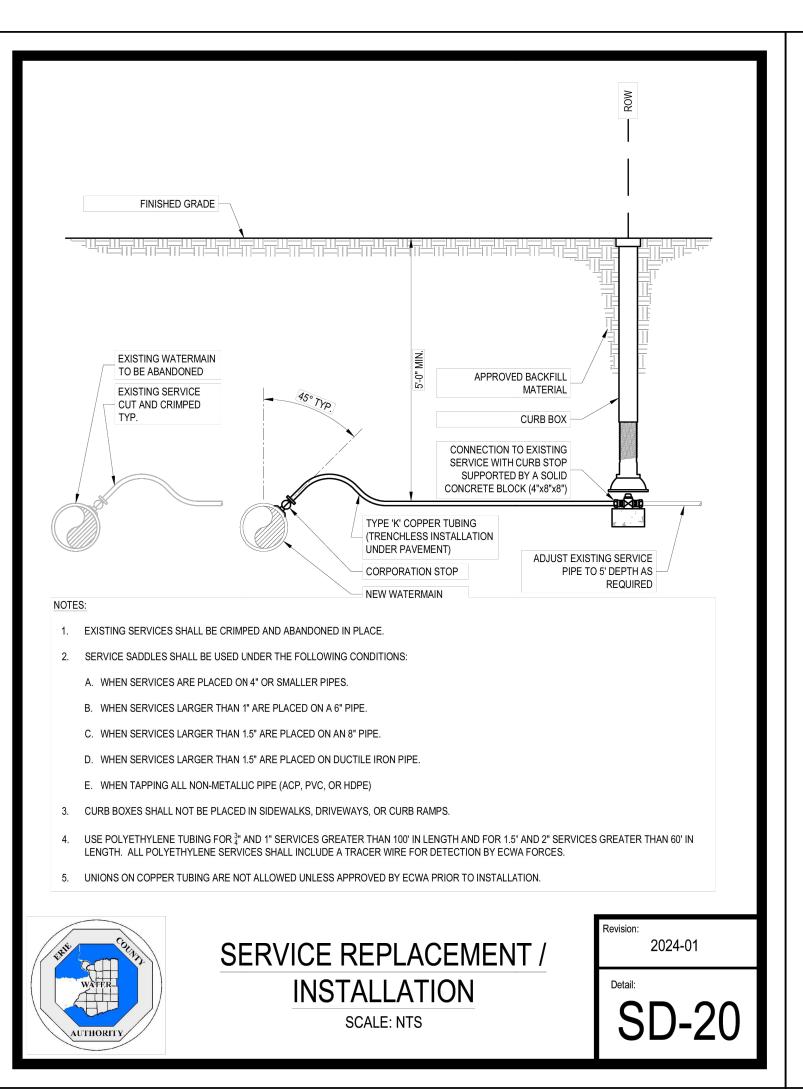
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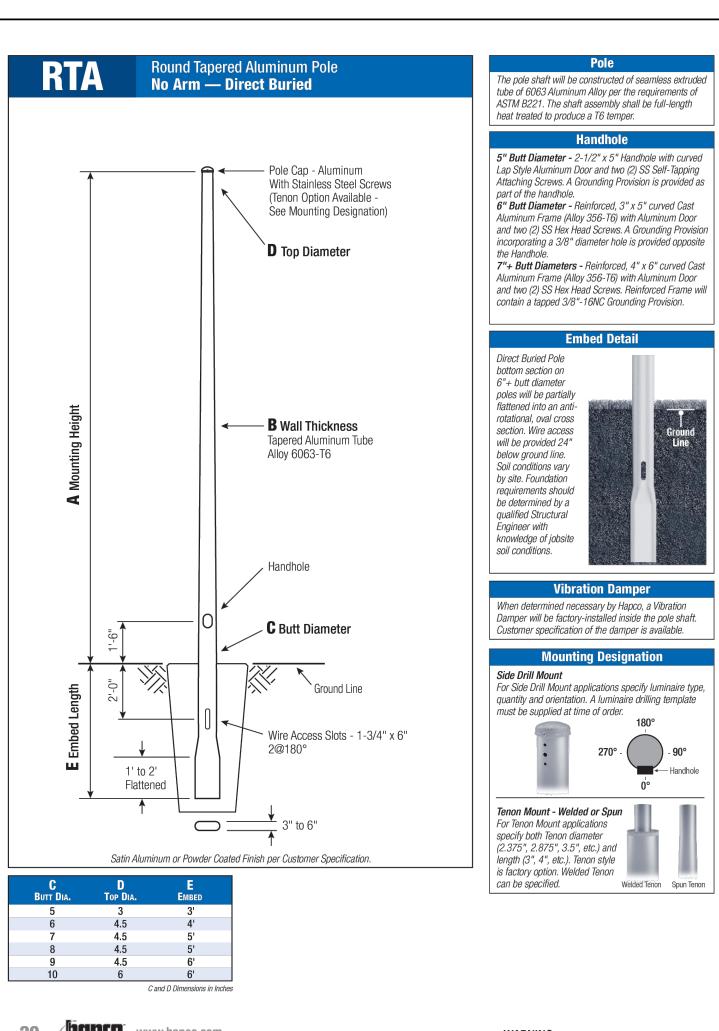
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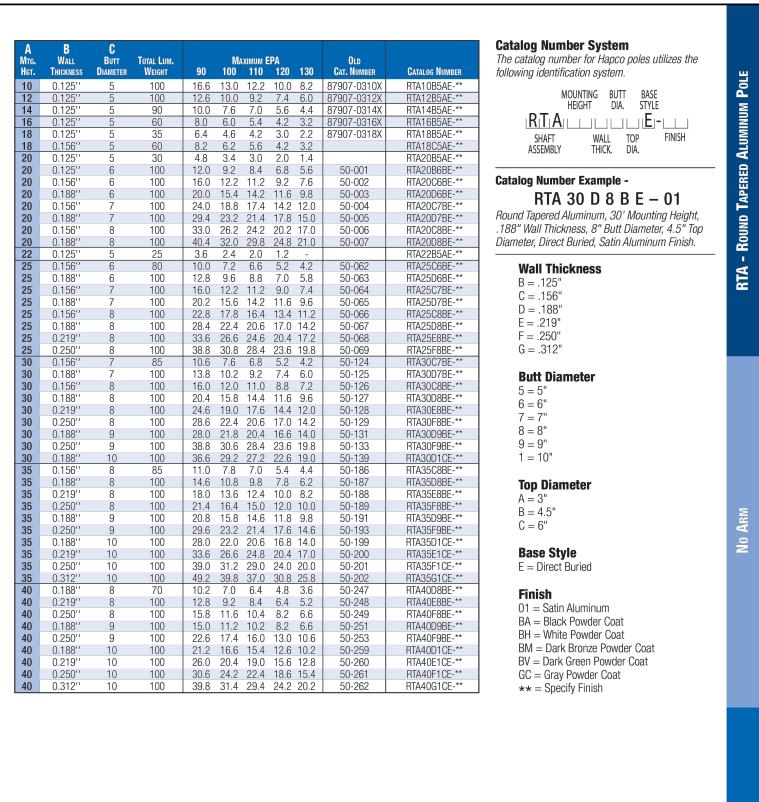
As Noted

01/29/25 C. Wood









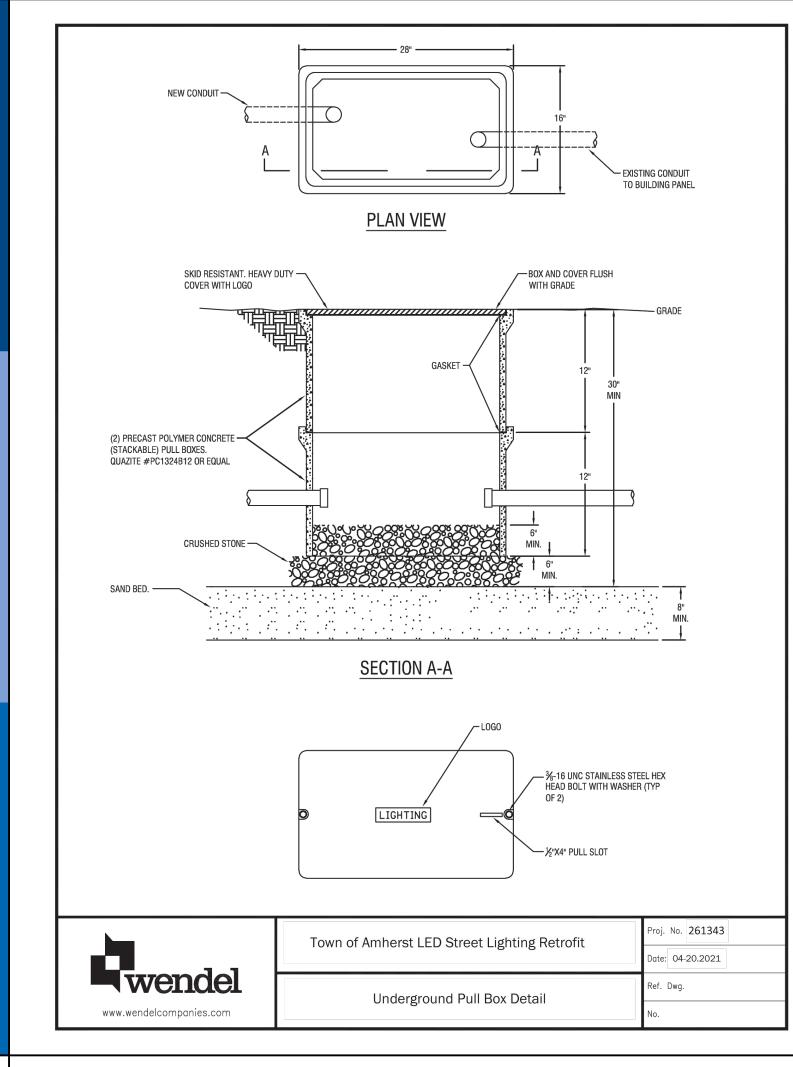
Effective Projected Area (EPA) in square feet. EPA's calculated using

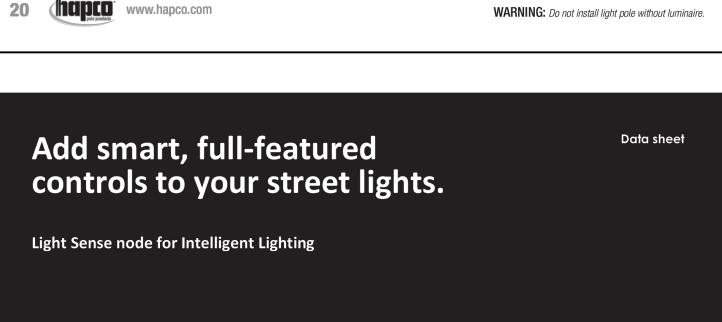
wind velocity (mph) indicated in accordance with 2009 AASHTO

www.hapco.com httpto 21

Data sheet

LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code





Light Sense node is designed to convert LED fixtures into intelligent focal centers, providing actionable insights that go far beyond illumination and mere granular lighting control. Our Smart Communities solutions and cloud-based IoT services are now at your fingertips.

Main features.

- Cellular connectivity enables gateway-free installation
- Advanced 4G LTE CAT-M loT technology
- Auto-commissioning with integrated GPS
- Simple plug-and-twist mounting to luminaires via existing National Electrical Manufacturers Association (NEMA) 5or 7-pin photo-control socket in accordance with American National Standards Institute (ANSI) C136.41
- Advanced lighting control with on-board photocell and (voltage) 0-10V dimming
- Utility-grade energy measurement with metering Class 0.5 accuracy
- Measures and reports electrical and sensor data to NetSense® Lighting Application

Advanced 4G LTE IoT CAT-M IoT connectivity No additional networking equipment is needed to deploy with 4G LTE connectivity. Fast, reliable, and nationwide 4G LTE connectivity from Verizon Wireless allows for

gateway-free deployment.





Lighting control

Light Sense node is connected to incoming AC mains and the LED driver/standard ballast. This direct connection provides on/off control and performance monitoring of the luminaire.Luminaire dimming control follows the 0-10 VDC dimming standard.

Onboard sensors Light Sense node sensors include: GPS, photocell, utility-grade power metering and temperature.

Security Light Sense node connects to the network using highly secure, certificate-based authentication and encryption for

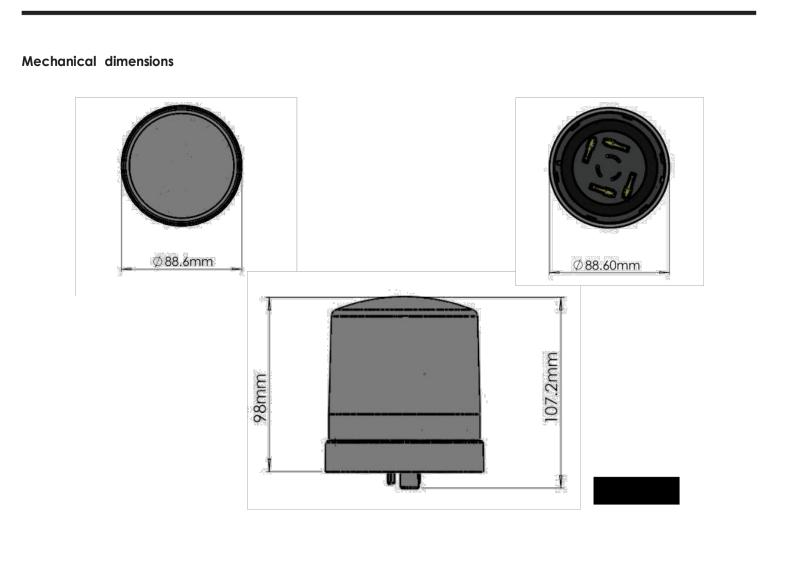
Certifications Underwriters Laboratories (UL), Federal Communications Commission (FCC)

verizon /

Product specifi ations

verizon /

Ordercode	\$80-000123
Communication	
Communication	Cellular (4G LTE) Lightweight machine-to-machine (LwM2M) protocol
LTE frequency bands	LTEband 4 and 13
Cellular data rate	LTE CAT-M
Security	
Encryption	DTL\$1.2 PSK with 256-bit AES encryption
Power and electrical	
AC input voltage	120-277V/60Hz
Node power consumption	1.0WTypical (1.2Wmax)
Surge rating	6KV/3kA ANSI C136.2
Energy measurement	Metering accuracy ANSI C12.20 Class 0.5 (relevant sections), IR Pulse LED Support for energy measurement
On-board sensors	Photocell, GPS, power metering, temperature
GPS accuracy	3m (clearopen sky)
LED Luminaire Control	
Ballastrating	E-fBallast and Standard/HID Ballast* rating of 5A max at 120V/277V 60Hz
Dimming control output	0-10 VDC
Photocell	
Operating levels	ANSI C136.10 Tum-on typical at 16 Lux, tum-off typical at 24 Lux, (On:Off ratio of 1:1.5)
Physical	
Mounting	Twist-lock National Electrical Manufacturers Association (NEMA) photo-receptacle (ANSI C136.41) 5-wire/7-wire receptacle
Weight	0.6 lbs
Color	Light gray
Dimensions	107.2mmheightx88.6mmdiameter
Environmental and compliance	
Water ingress	IP66, UL773 wet rated
Vibration	3G vibration per ANSI C136.31 2010
Operating temperature	-40C to 55C
Relative humidity operating range	5% to 95% non-condensing
Certifications	UL, FCC
Region of certification and LTE operation	USA



Ordering information

Ordercode	Description
\$80,000123	Light Spreagod ACLTE 0.10V NEMA 120.277V

verizon Network details & coverage maps at vzw.com. © 2019 Verizon. DSxxx0619 TOWN OF AMHERST APPROVAL BOX:

Data sheet

DRAWING NAME: **Lighting Details**

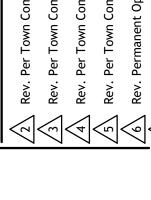
Drawn By: DRAWING NO.

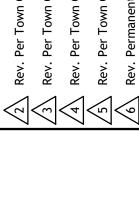
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C. Wood As Noted

D

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Urban TownView

TVPC/TVPR



The Hadco TownView LED post top luminaires were designed to eliminate the compromises of performance, comfort, style options and value when choosing the right lighting solution for residential street and pedestrian area. The horizontal lens option reduces glare to enhance a sense of security with increased visual comfort. TownView offers design flexibility with a variety of style options, lumen packages, a range of control options and more at exceptional value.

Project:	
Location:	
Cat.No:	
Туре:	
Lamps:	Qty:
Notes:	

Ordering guide: Luminaire

	ex	ample: TVPC-S3-	S-32-G1-7-3S-7	30-A-N-R7-N-SP1-T-N-N-I
e	Distribution	0-1	V-14	

	- Trountaing	Troot option	- Incualc	- Contraction	Guirone	Diotribution	Color tollip.	Tollago		, ar control
				G1						
TVPC TownView with visu comfort provided page 1.00 to	Top Fitter 4" (tool less al entry)	S Square Roof C¹ Curved Roof	16 16 LEDs 32 32 LEDs 48 48 LEDs	G1 Gen 1 G1 Gen 1	5 530 mA 7 700 mA 9 900 mA 1 1050 mA 5 530 mA 7 700 mA 8 800 mA 1 1050 mA 5 530 mA 7 700 mA	25 Type 2 Short 35 Type 3 Short 3W Type 3 Wide 5 Type 5 2H Type 2 House-side shield 3SH Type 3 Short House-side shield 3WH Type 3 Wide House-side shield	730 3000K (70 CRI) 740 4000K (70 CRI) 827 ² 2700K (80 CRI)	A 120-277 Volt J 480V K 347V	DA 5 DB 5 DC 5 DD 5 DF 5 DG 5 DH 5 DJ 5 DL 45 SRD 45	4 Hrs 25% Reduction 4 Hrs 50% Reduction 4 Hrs 75% Reduction 6 Hrs 25% Reduction 6 Hrs 50% Reduction 6 Hrs 75% Reduction 8 Hrs 25% Reduction 8 Hrs 50% Reduction B Hrs 75% Reduction DALI (default: logarithmic) SR Driver
	Fitter 4"								AST 5 OTL 5 S 10 SRD SRD1 N	Adjustable startup time Over the life (default: L70 hrs) FAWS Field adjustable wattage selector Sensor ready driver (standard configuration) Sensor ready driver (alternative configuration None

Ordering	guide	(continu

Rece	eptacle	Sensor Receptacle 8	Surge Protection	Term Block	Decorative Option	Bird Guard	Finish 9
R7	7 Pin tooless rotatable standard - no photocell	N None	SP1 Parallel 10kV standard SP2 Parallel 20kV	T Terminal Block N None	L ⁶ Ladder Rest	N None	BKS Black Smooth WHS White Smooth
	7 Pin tooless rotatable standard - with photocell						BZS Bronze Smooth GNS Green Smooth
	7 Pin tooless rotatable standard - with shorting cap						BK Black Texture WH White Texture
	7 Pin tooless rotatable standard - with long life photocell						BZ Bronze Texture GN Green Texture

Footnotes see page 2

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Predicted Lumen Depreciation Data



TVPC/TVPR TownView

Post top and arm mount luminaire

Ordering Guide: Arm mount

Code TV	Mount A	Width 55	Options	Finish
TV TownView	A Arm Mount	55 55.5" wide	S Decorative Scroll	BKS Black Smooth WHS White Smooth BZS Bronze Smoot GNS Green Smooth BK Black Texture WH White Texture

Footnotes
I. Only S Square roof available with A Arm Moun

- 2. Consult factory for information and lead time
- 3. Only pick one option from the Control list for multiple control options consult the factory 4. This option requires more information contact factory
- 5. Only available with 120-277 V
- supplied with BKS or BK finish option may be used City with other finishes, cupola must be removed and 6. Ladder rest option not available with Arm Mount Astro-Clock node is not required.
- 8. Order a TVLN (no panel version if you want the SR Receptacle option) Or consult factory to review sensor 9. When any finish other than ${\bf BKS}$ or ${\bf BK}$ is selected upola will be metal and painted to match finish. Cupola

GN Green Texture

10.Position 10 is open for receptacle control, must use one or the other not BOTH. 11. SR Receptacle only available with 32 LED (receptacle is mounted in the middle of the boards) and SRD Driver is required if you choose this receptacle

Dimensions: Arm mount

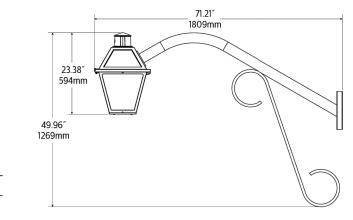
7. Not available with 347V

TVPx-A-S

Arm: Made of aluminum tubing Decorative Element: Bent aluminum decorative channel scroll mechanically assembled. Mounting Plate: Made of aluminum, mechanically fastened to the pole.

EPA Values

	Weight	
ΓVPx-A-S	14 lbs	



TVP_TownView-spec-sheet 12/20 page 2 of 8

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.L₇₀ is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L₇₀ hours limited to 6 times actual LED test hours.

Ambient Temperature °C	Driver mA	Calculated L ₇₀ Hours	L ₇₀ per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	up to 1050 mA	>100,000 hours	>54,000 hours	>96%

Field Adjustable Wattage (FAWS) Multiplier Chart

TVPC/TVPR TownView

Post top and arm mount luminaire

FAWS Position	Typical Delivered Lumens Multiplier	Typical System wattage
1	0.31	0.28
2	0.53	0.50
3	0.62	0.58
4	0.70	0.67
5	0.78	0.75
6	0.83	0.81
7	0.89	0.87
8	0.92	0.91
9	0.96	0.95
10	1.00	1.00

LED Lumen values - TVPC (Visual Comfort Panels)

Note: Typical value accuracy +/- 15%

		System				Type 25		Type 3S				Type 3V	1	Type 5		
	LED qty.	Current (mA).	Color Temp.	Avg. System Wattage (W)	Lumen Output	Efficacy (LPW)	BUG Rating									
TVPC-16-G1-5-x-730	16	530	3000	29	2,621	91	B1-U2-G1	2,788	96	B1-U2-G1	2,779	96	B1-U2-G1	2,930	101	B1-U2-G1
ΓVPC-16-G1-7-x-730	16	700	3000	38	3,316	87	B1-U2-G1	3,527	93	B1-U3-G1	3,516	92	B1-U3-G1	3,707	97	B1-U3-G
ΓVPC-16-G1-9-x-730	16	900	3000	49	4,069	83	B1-U3-G1	4,328	89	B1-U3-G1	4,314	88	B1-U3-G2	4,548	93	B1-U3-G
TVPC-16-G1-1-x-730	16	1050	3000	57	4,586	81	B1-U2-G1	4,878	86	B1-U3-G1	4,862	85	B1-U3-G1	5,126	90	B1-U3-G
ΓVPC-32-G1-5-x-730	32	530	3000	53	5,103	96	B1-U3-G1	5,342	100	B1-U3-G1	5,390	101	B2-U3-G2	5,617	105	B1-U3-G2
ΓVPC-32-G1-7-x-730	32	700	3000	70	6,443	92	B2-U3-G2	6,744	96	B2-U3-G2	6,805	97	B2-U3-G2	7,091	101	B1-U3-G2
ΓVPC-32-G1-8-x-730	32	800	3000	80	7,170	89	B1-U3-G1	7,505	93	B1-U3-G1	7,572	94	B1-U3-G2	7,892	98	B1-U3-G
ΓVPC-32-G1-1-x-730	32	1050	3000	108	9,006	83	B2-U3-G2	9,427	87	B2-U3-G2	9,512	88	B2-U3-G2	9,913	91	B1-U3-G
ΓVPC-48-G1-5-x-730	48	530	3000	81	7,780	96	B2-U3-G2	8,144	101	B1-U3-G2	8,217	102	B2-U3-G2	8,564	106	B1-U3-G
ΓVPC-48-G1-7-x-730	48	700	3000	105	9,766	93	B2-U3-G2	10,223	98	B2-U3-G2	10,315	98	B2-U3-G2	10,750	103	B2-U3-G
ΓVPC-16-G1-5-x-740	16	530	4000	29	2,882	99	B1-U2-G1	3,065	105	B1-U2-G1	3,055	105	B1-U2-G1	3,221	110	B1-U2-G
ΓVPC-16-G1-7-x-740	16	700	4000	39	3,646	95	B1-U2-G1	3,878	101	B1-U3-G1	3,865	100	B1-U3-G1	4,075	106	B1-U3-G
ΓVPC-16-G1-9-x-740	16	900	4000	49	4,473	90	B1-U3-G1	4,758	96	B1-U3-G1	4,743	96	B1-U3-G2	5,001	101	B1-U3-G
ΓVPC-16-G1-1-x-740	16	1050	4000	58	5,042	88	B1-U2-G1	5,363	93	B1-U3-G1	5,345	93	B1-U3-G1	5,636	98	B1-U3-G
ΓVPC-32-G1-5-x-740	32	530	4000	54	5,611	104	B1-U3-G1	5,873	109	B1-U3-G1	5,926	110	B2-U3-G2	6,176	114	B1-U3-G
ΓVPC-32-G1-7-x-740	32	700	4000	71	7,083	100	B2-U3-G2	7,414	104	B2-U3-G2	7,481	105	B2-U3-G2	7,797	110	B1-U3-G
ΓVPC-32-G1-8-x-740	32	800	4000	81	7,883	97	B1-U3-G1	8,251	102	B1-U3-G1	8,326	102	B1-U3-G2	8,677	107	B1-U3-G
TVPC-32-G1-1-x-740	32	1050	4000	110	9,902	90	B2-U3-G2	10,365	95	B2-U3-G2	10,458	95	B2-U3-G2	10,899	99	B1-U3-G
TVPC-48-G1-5-x-740	48	530	4000	82	8,554	105	B2-U3-G2	8,954	110	B1-U3-G2	9,034	111	B2-U3-G2	9,415	115	B1-U3-G
TVPC-48-G1-7-x-740	48	700	4000	106	10,738	101	B2-U3-G2	11,240	106	B2-U3-G2	11,341	107	B2-U3-G2	11,819	112	B2-U3-G

Actual performance may vary due to installation variables including optics, mounting/ceiling height, dirt depreciation, light loss factor, etc.; highly recommended to confirm performance with a layout - contact Applications at outdoorlighting.applications@philips.com. Consult DLC QPL to confirm your specific fixture selection is DLC approved. Note: Some data may be scaled based on tests of similar but not identical luminaries.

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TVPC/TVPR TownView

1.98 ft².

Post top and arm mount luminaire

LED Lumen values - TVPC (Visual Comfort Panels and House-side shield)

					Type 2SH				Type 3SI	4	Type 3WSH				
		System													
rdering Code	I ED artis	Current (mA).	Color	Avg. System Wattage (W)	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen	Efficacy (LPW)	BUG Rating	Lumen	Efficacy (LPW)	BUG Rating		
	LED qty.		Temp.			(-: · · · ·		Output			Output				
/PC-16-G1-5-x-730	16	530	3000	29	2,094	72	B0-U2-G1	2,322	80	B0-U2-G1	2,155	75	B1-U2-G1		
/PC-16-G1-7-x-730	16	700	3000	38	2,649	70	B1-U2-G1	2,938	77	B1-U2-G1	2,726	72	B1-U3-G1		
/PC-16-G1-9-x-730	16	900	3000	49	3,251	66	B1-U2-G1	3,605	74	B1-U3-G1	3,345	68	B1-U3-G1		
/PC-16-G1-1-x-730	16	1050	3000	57	3,664	64	B1-U2-G1	4,062	71	B1-U2-G1	3,770	66	B1-U3-G1		
/PC-32-G1-5-x-730	32	530	3000	53	4,018	75	B1-U3-G1	4,362	82	B1-U3-G1	4,291	80	B1-U3-G1		
/PC-32-G1-7-x-730	32	700	3000	70	5,073	72	B1-U3-G1	5,507	78	B1-U3-G1	5,417	77	B1-U3-G2		
/PC-32-G1-8-x-730	32	800	3000	80	5,645	70	B1-U3-G1	6,128	76	B1-U3-G1	6,028	75	B1-U3-G1		
/PC-32-G1-1-x-730	32	1050	3000	108	7,091	65	B1-U3-G1	7,698	71	B1-U3-G2	7,572	70	B1-U3-G2		
/PC-48-G1-5-x-730	48	530	3000	81	6,126	76	B1-U3-G1	6,650	82	B1-U3-G1	6,541	81	B1-U3-G2		
/PC-48-G1-7-x-730	48	700	3000	105	7,690	73	B1-U3-G2	8,348	80	B1-U3-G2	8,211	78	B1-U3-G2		
/PC-16-G1-5-x-740	16	530	4000	29	2,302	79	B0-U2-G1	2,553	87	B0-U2-G1	2,369	81	B1-U2-G1		
/PC-16-G1-7-x-740	16	700	4000	39	2,913	76	B1-U2-G1	3,230	84	B1-U2-G1	2,997	78	B1-U3-G1		
/PC-16-G1-9-x-740	16	900	4000	49	3,574	72	B1-U2-G1	3,963	80	B1-U3-G1	3,678	74	B1-U3-G1		
/PC-16-G1-1-x-740	16	1050	4000	58	4,028	70	B1-U2-G1	4,466	78	B1-U2-G1	4,145	72	B1-U3-G1		
/PC-32-G1-5-x-740	32	530	4000	54	4,418	82	B1-U3-G1	4,796	89	B1-U3-G1	4,718	87	B1-U3-G1		
/PC-32-G1-7-x-740	32	700	4000	71	5,577	79	B1-U3-G1	6,055	85	B1-U3-G1	5,955	84	B1-U3-G2		
/PC-32-G1-8-x-740	32	800	4000	81	6,207	76	B1-U3-G1	6,738	83	B1-U3-G1	6,628	82	B1-U3-G1		
/PC-32-G1-1-x-740	32	1050	4000	110	7,796	71	B1-U3-G1	8,464	77	B1-U3-G2	8,325	76	B1-U3-G2		
/PC-48-G1-5-x-740	48	530	4000	82	6,735	82	B1-U3-G1	7,312	89	B1-U3-G1	7,192	88	B1-U3-G2		
/PC-48-G1-7-x-740	48	700	4000	106	8,454	80	B1-U3-G2	9,178	87	B1-U3-G2	9,028	85	B1-U3-G2		

LED Lumen values - TVPR (Vertical Ribbed Panels)

		System				Type 2S			Type 3S			Type 3V	V	Type 5		
Ordering Code	LED qty.	Current (mA).	Color Temp.	Avg. System Wattage (W)	Lumen Output	Efficacy (LPW)	BUG Rating									
TVPR-16-G1-5-x-730	16	530	3000	29	2,750	95	B1-U2-G1	2,940	102	B1-U2-G1	2,920	101	B1-U3-G1	3,096	107	B2-U3-G1
TVPR-16-G1-7-x-730	16	700	3000	38	3,479	91	B1-U2-G1	3,719	98	B1-U2-G1	3,694	97	B1-U3-G1	3,917	103	B2-U3-G1
TVPR-16-G1-9-x-730	16	900	3000	49	4,269	87	B1-U3-G1	4,564	93	B1-U3-G1	4,533	93	B1-U3-G1	4,806	98	B3-U3-G1
TVPR-16-G1-1-x-730	16	1050	3000	57	4,811	85	B1-U3-G1	5,144	90	B1-U3-G1	5,109	90	B1-U3-G1	5,417	95	B3-U3-G1
TVPR-32-G1-5-x-730	32	530	3000	53	5,380	101	B1-U3-G1	5,602	105	B1-U3-G1	5,611	105	B1-U3-G1	5,884	110	B3-U3-G2
TVPR-32-G1-7-x-730	32	700	3000	70	6,792	97	B2-U3-G2	7,071	101	B1-U3-G2	7,083	101	B1-U3-G2	7,428	106	B3-U3-G2
TVPR-32-G1-8-x-730	32	800	3000	80	7,558	94	B2-U3-G2	7,869	98	B1-U3-G2	7,882	98	B2-U3-G2	8,266	103	B3-U3-G2
TVPR-32-G1-1-x-730	32	1050	3000	108	9,494	88	B2-U3-G2	9,885	91	B2-U3-G2	9,901	91	B2-U3-G2	10,383	96	B4-U3-G2
TVPR-48-G1-5-x-730	48	530	3000	81	8,202	102	B2-U3-G2	8,539	106	B2-U3-G2	8,553	106	B2-U3-G2	8,970	111	B4-U3-G2
TVPR-48-G1-7-x-730	48	700	3000	105	10,296	98	B2-U3-G2	10,720	102	B2-U3-G2	10,737	102	B2-U3-G2	11,260	107	B4-U3-G2
TVPR-16-G1-5-x-740	16	530	4000	29	3,023	103	B1-U2-G1	3,232	111	B1-U2-G1	3,210	110	B1-U3-G1	3,404	116	B2-U3-G1
TVPR-16-G1-7-x-740	16	700	4000	39	3,825	99	B1-U2-G1	4,089	106	B1-U2-G1	4,062	105	B1-U3-G1	4,306	112	B2-U3-G1
TVPR-16-G1-9-x-740	16	900	4000	49	4,693	95	B1-U3-G1	5,018	101	B1-U3-G1	4,984	101	B1-U3-G1	5,284	107	B3-U3-G1
TVPR-16-G1-1-x-740	16	1050	4000	58	5,290	92	B1-U3-G1	5,655	98	B1-U3-G1	5,617	98	B1-U3-G1	5,955	104	B3-U3-G1
TVPR-32-G1-5-x-740	32	530	4000	54	5,915	110	B1-U3-G1	6,159	114	B1-U3-G1	6,169	114	B1-U3-G1	6,469	120	B3-U3-G2
TVPR-32-G1-7-x-740	32	700	4000	71	7,467	105	B2-U3-G2	7,775	110	B1-U3-G2	7,787	110	B1-U3-G2	8,166	115	B3-U3-G2
TVPR-32-G1-8-x-740	32	800	4000	81	8,310	102	B2-U3-G2	8,652	106	B2-U3-G2	8,666	107	B2-U3-G2	9,088	112	B3-U3-G2
TVPR-32-G1-1-x-740	32	1050	4000	110	10,438	95	B2-U3-G2	10,868	99	B2-U3-G2	10,886	99	B2-U3-G2	11,416	104	B4-U3-G2
TVPR-48-G1-5-x-740	48	530	4000	82	9,017	110	B2-U3-G2	9,389	115	B2-U3-G2	9,404	115	B2-U3-G2	9,862	121	B4-U3-G2
TVPR-48-G1-7-x-740	48	700	4000	106	11,319	107	B2-U3-G2	11,786	111	B2-U3-G2	11,805	111	B2-U3-G2	12,379	117	B4-U3-G2

Actual performance may vary due to installation variables including optics, mounting/ceiling height, dirt depreciation, light loss factor, etc.; highly recommended to confirm performance with a layout - contact Applications at outdoorlighting applications@philips.com. Consult DLC QPL to confirm your specific fixture selection is DLC approved. Note: Some data may be scaled based on tests of similar but not identical luminaries.

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TVPC/TVPR TownView

TVPC/TVPR TownView

___15.93″__ 405mm

TVPx_S4_S ___ 15.93" ___ 405mm

TVPx_S3_C

EPA Values

TVPx-L3-C

TVPx-L3-S

TVPx-S2/S3-C

TVPx-S2/S3-S

TVPx-S4-C

TVPx-S4-S TVPx-A-S

TVPx_S3_S

1.75 sq. ft.

1.49 sq. ft.

1.54 sq. ft.

1.39 sq. ft.

23.50 lbs

24.38 lbs

22.13 lbs

Post top and arm mount luminaire

Dimensions: Luminaire

TVPx_S4_C

Post top and arm mount luminaire

TVP_TownView-spec-sheet 12/20 page 3 of 8

LED Lumen values - TVPR (Vertical Ribbed Panels and House-side shield)

		System				Type 2SI	1		Type 3SF	1		Type 3WS	Н
Ordering Code	LED qty.	Current (mA).	Color Temp.	Avg. System Wattage (W)	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating	Lumen Output	Efficacy (LPW)	BUG Rating
TVPR-16-G1-5-x-730	16	530	3000	29	2,210	76	B1-U2-G1	2,457	85	B1-U2-G1	2,265	78	B1-U3-G1
TVPR-16-G1-7-x-730	16	700	3000	38	2,796	73	B1-U2-G1	3,108	82	B1-U2-G1	2,865	75	B1-U3-G1
ΓVPR-16-G1-9-x-730	16	900	3000	49	3,431	70	B1-U3-G1	3,814	78	B1-U3-G1	3,516	72	B1-U3-G1
TVPR-16-G1-1-x-730	16	1050	3000	57	3,866	68	B1-U3-G1	4,299	76	B1-U3-G1	3,963	70	B1-U3-G1
TVPR-32-G1-5-x-730	32	530	3000	53	4,265	80	B1-U3-G1	4,610	86	B1-U3-G1	4,476	84	B1-U3-G1
ΓVPR-32-G1-7-x-730	32	700	3000	70	5,385	77	B1-U3-G1	5,820	83	B1-U3-G1	5,651	80	B1-U3-G2
ΓVPR-32-G1-8-x-730	32	800	3000	80	5,992	75	B1-U3-G1	6,476	81	B1-U3-G1	6,288	78	B1-U3-G2
VPR-32-G1-1-x-730	32	1050	3000	108	7,527	69	B2-U3-G2	8,135	75	B2-U3-G2	7,899	73	B2-U3-G2
TVPR-48-G1-5-x-730	48	530	3000	81	6,502	80	B1-U3-G2	7,028	87	B1-U3-G2	6,824	84	B1-U3-G2
TVPR-48-G1-7-x-730	48	700	3000	105	8,162	78	B2-U3-G2	8,822	84	B2-U3-G2	8,566	82	B2-U3-G2
VPR-16-G1-5-x-740	16	530	4000	29	2,430	83	B1-U2-G1	2,701	92	B1-U2-G1	2,490	85	B1-U3-G1
TVPR-16-G1-7-x-740	16	700	4000	39	3,074	80	B1-U2-G1	3,418	89	B1-U2-G1	3,150	82	B1-U3-G1
TVPR-16-G1-9-x-740	16	900	4000	49	3,772	76	B1-U3-G1	4,193	85	B1-U3-G1	3,866	78	B1-U3-G1
TVPR-16-G1-1-x-740	16	1050	4000	58	4,251	74	B1-U3-G1	4,726	82	B1-U3-G1	4,357	76	B1-U3-G1
TVPR-32-G1-5-x-740	32	530	4000	54	4,690	87	B1-U3-G1	5,068	94	B1-U3-G1	4,921	91	B1-U3-G1
ΓVPR-32-G1-7-x-740	32	700	4000	71	5,920	83	B1-U3-G1	6,398	90	B1-U3-G1	6,213	88	B1-U3-G2
ΓVPR-32-G1-8-x-740	32	800	4000	81	6,588	81	B1-U3-G1	7,120	88	B1-U3-G1	6,914	85	B1-U3-G2
ΓVPR-32-G1-1-x-740	32	1050	4000	110	8,276	76	B2-U3-G2	8,944	82	B2-U3-G2	8,685	79	B2-U3-G2
TVPR-48-G1-5-x-740	48	530	4000	82	7,149	88	B1-U3-G2	7,727	95	B1-U3-G2	7,502	92	B1-U3-G2
TVPR-48-G1-7-x-740	48	700	4000	106	8,974	85	B2-U3-G2	9,699	92	B2-U3-G2	9,418	89	B2-U3-G2

Actual performance may vary due to installation variables including optics, mounting/ceiling height, dirt depreciation, light loss factor, etc.; highly recommended to confirm performance with a layout $contact Applications at outdoor lighting. applications @philips.com. \ Consult DLC QPL to confirm your specific fixture selection is DLC approved.$ **Note:** Some data may be scaled based on tests of similar but not identical luminaries.

Specifications

Roof and Cage: Two Style options C: Curved Roof and S: Square Roof. Tool-less latch made of stainless steel allows for quick access inside of the hinged roof to locate the driver, surge protector and optional FAWs (field adjustable wattage solution). Roof and Cage made of 360 low-copper die-cast, aluminum

alloy. Decorative Cupola on top of roof covers the 7 pin NEMA socket. Panels: Two panel options made of U.V. Stabilized Acrylic.

C: Visual Comfort panels help to eliminate glare and pixelization and give a soft glow at night R: Vertical Ribbed panels, for a clear look during the day and performance at night All panels have tool-less removal for ease of cleaning or replacement. (exception for arm

Fitter: Two fitter options. L: Large Utility Fitter with tool-less door to access the terminal block and wiring. Available in 3" or 4" Or **S**: Small Fitter. Small fitter available in 2" 3/8, 3" or 4". Large 4" fitter uses a secondary adaptor to achieve 4" opening.

with IESNA TM-21. Metal core board ensures greater heat transfer and longer lifespan.

Light Engine

LED Module Composed of high-performance white LEDs. Color temperature as per ANSI/NEMA bin 2700 Kelvin nominal (2725 ±145K) CRI 80 min, 3000 Kelvin nominal (3045K +/- 175K) or 4000 Kelvin

Other CCT/CRI also available, consult factory.

Composed of 4 main components: LED Module

sealed light engine LEDs tested by ISO 17025-

LM-80 guidelines, extrapolations in accordance

2005 accredited lab in accordance with IESNA

/ Optical System / Heat Sink / Driver. Electrical components are RoHS compliant, IP66

Optical System

Heat Sink

Composed of high performance UV stabilized optical grade polymer refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. System is rated IP66. Performance shall be tested per LM-63, LM-79 nominal (3985K +/- 275K), CRI 70 Min. 75 Typical. and TM-15 (IESNA) certifying its photometric performance. Type 2S, 3S, 3W and Type 5 Street side indicated. House side shield optional (can be field installed) **2SH**: Type 2 with House Side Shield, **3SH**: Type 3 short with house side shield,

3WH: Type 3 Wide with House side shield

Made of die cast aluminum optimizing the LEDs

efficiency and life. Product does not use any

cooling device with moving parts (only passive

cooling device). Entire luminaire is rated for

operation in ambient temperature of -40°C/

-40°F up to +40°C / +104°F.

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TOWN OF AMHERST APPROVAL BOX:

DRAWING NAME: **Lighting Details**

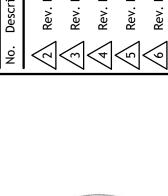
Drawn By: DRAWING NO.

01/29/25 C. Wood

As Noted

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TVPC/TVPR TownView

Post top and arm mount luminaire

Specifications (continued)

Driver comes standard with 0-10V dimming capability. High power factor of 95%. Electronic driver, operating range 50/60 Hz. Auto adjusting universal voltage input from 120 to 277, 347 and 480 VAC rated for both application line to line or line to neutral, Class I, THD of 20% max. Maximum ambient operating temperature from $40^{\circ}F$ ($4^{\circ}C$) to $130^{\circ}F$ ($55^{\circ}C$). Certified in compliance to UL1310 cULus requirement (dry and damp location).] The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built in driver surge protection of 2.5kV (min).

Integrated Features

R7*: Tool less rotatable receptacle with 7 pins enabling dimming and additional functionality (to be determined), can be used with a twist lock Interact City node or photoelectric cell or a shorting cap. SP1: Surge protection device tested in

accordance with ANSI/IEEE C62.45 per ANSI/ IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with DOE MSSLC Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High test level

SP2: Optional 20kV / 10kA surge protection device that provides extra protection beyond the SP1 10kV/10kA level. NEMA Labels: Installed NEMA label, ANSI C136.15-2015 compliant. Consult factory for other

labeling needs. Please note that these integrated features always come with the luminaire. * Use of photoelectric cell or shorting cap is required to ensure proper illumination.

Driver and Luminaire Options

Dimming Options: DA: 4 Hrs 25% reduction DB: 4 Hrs 50% reduction DC: 4 Hrs 75% reduction DD: 6 Hrs 25% reduction DE: 6 Hrs 50% reduction

DF: 6 Hrs 75% reduction DG: 8 Hrs 25% reduction DH: 8 Hrs 50% reduction DJ: 8 Hrs 75% reduction

DL: Pre-set driver compatible with the DALI control system. Logarithmic standard **SRD**: Sensor Ready Driver including SR communication (used for dimming and other functionalities), 24V auxiliary supply and a logical signal input (LSI) connected to the top NEMA twist lock receptacle and bottom **TLRSR** receptacle, if this option included/chosen. This

configuration is compatible with Interact City AST: Pre-set driver for progressive start-up of the LED module(s) to optimize energy management and enhance visual comfort at CLO: Pre-set driver to manage the lumen depreciation by adjusting the power given to the

LEDs offering the same lighting intensity during the entire lifespan of the LED module. OTL: Pre-set driver to signal end of life of the LED module(s) for better fixture management. FAWS: Field Adjustable Wattage Selector, pre-set to the highest position, can be easily switched in the field to the required position. This reduces total luminaire wattage consumption and reduces the light level – see the FAWS multiplier chart for more details. Note: It is not recommended to use FAWS with other dimming or controls; if you do, set the switch to position 10 (maximum output) to enable the other dimming or controls. Switching FAWS to any position other than 10 will disable the other dimming or controls. **DALI:** Pre-set driver compatible with DALI

contorl system. SRD: Sensor Ready Driver including SR communication (used for dimming and other functionalities), 24V auxiliary supply and a logical signal input (LSI) connected to the top NEMA twist lock receptacle. SRD1: Sensor Ready Driver including SR communication (used for dimming and other functionalities) but with 24V auxiliary supply and a logical signal input (LSI) not connected to the top NEMA twist lock.

PH8: 7 Pin Tooless rotatable standard - with photocell. Photocell has dimensional limits: 3" dia x 2" tall (for non



PH9: 7 Pin Tooless rotatable standard - with shorting cap

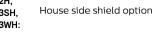
PHX: 7 Pin Tooless rotatable standard - with long life photocell. Photocell has dimensional limits: 3" dia x



Sensor ready receptacle located on the heat sink between two LED boards. Cannot be combined With 16 or 48 LED's or horizontal lens. Contact factory for use with panel **TVP** options.









TVPC/TVPR TownView

Post top and arm mount luminaire

Specifications (continued)

Luminaire Useful Life

Refer to IES files for energy consumption and delivered lumens for each option. Based on ISTMT in situ thermal testing in accordance with UL1598 and UL8750, System Reliability Tool, Philips Advance data and LED manufacturer LM-80/TM-21 data, expected to reach 100,000 + hours (72W32LED and 108W48LED at 700mA) or 94,500 hours (108W32LED and 160W48LED at 1050mA) with >L70 lumen maintenance @ 25°C. Luminaire Useful Life accounts for LED lumen maintenance AND all of these additional factors including: LED life, driver life, PCB substrate, solder joints, on/off cycles, burning hours and corrosion.

18AWG wire, 6" (15mm) minimum extending from luminaire.

Terminal block connector 600V, 85A for use

Optional Terminal block

with #14-2 AWG wires from the primary circuit, located inside the housing. Due to the inrush current that occurs with electronic drivers, recommend using a 10Amp time-delay fuse to avoid unwanted fuse blowing (false tripping) that can occur with normal or fast acting fuses. Fuses and holders by others or consult factory

Hardware

All non-ferrous fasteners prevent corrosion and ensure longer life. All seals and sealing devices are made and/or lined with EPDM silicone rubber.

Certifications and Compliance

cETL listed to Canadian safety standards for wet locations. Manufactured to ISO 9001:2008 Standards. UL8750 and UL1598 compliant. ETL listed to U.S. safety standards for wet locations. cETL listed to Canadian safety standards for wet locations. LM80 & LM79 tested. Listed on the DesignLights TM Consortium (DLC) Qualified Products List (QPL).ANSI C136 standards: .2, .3, .10, .14, .15, .22, .25, .31, .37, .41.

Service Tag

Each individual luminaire is uniquely identifiable, thanks to the Service tag application. With a simple scan of a QR code, placed on the inside of the mast door, you gain instant access to the luminaire configuration, making installation and maintenance operations faster and easier, no matter what stage of the luminaire's lifetime. Just download the APP and register your product right away. For more details visit: philips.com/servicetag

Limited Warranty

5 year standard warranty. Options available for extended warranties – contact factory. See signify.com/warranties for details and restrictions.

Brackets and Poles

Visit the website for pole and post top bracket options.

Color in accordance with the AAMA 2603

standard. Application of polyester powder

coat paint (4 mils/100 microns) with 1 mils /

24 microns of tolerance. The Thermosetting

resins provides a discoloration resistant finish

in accordance with the ASTM D2244 standard,

as well as luster retention in keeping with the

ASTM D523 standard and humidity proof in

accordance with the ASTM D2247 standard.

of 2000 hours for salt spray resistant finish in

accordance with testing performed and per

ASTM B117 standard.

GNS:

BKS: Black Smooth

WHS: White Smooth

BZS: Bronze Smooth

Vibration Resistance

over 100,000 cycles).

Green Smooth

Black Texture

Bronze Texture

Green Texture

The electronic components sensitive to

emitting diodes (LEDs) are assembled in

electrostatic discharge (ESD) such as light

compliance with IEC61340-5-1 and ANSI/ESD

could decrease the useful life of the product.

S2, S3, S4 Fitter and A Arm Mount Meets the

Roadway Luminaire Vibration specifications

ANSI C136.31, American National Standard for

for Bridge/overpass applications (Tested for 3G

S20.20 standards to eliminate ESD events that

LED products manufacturing standard

White Texture

The surface treatment achieves a minimum



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TOWN OF AMHERST APPROVAL BOX:

DRAWING NAME: Lighting Details

DRAWING NO.

01/29/25 C. Wood As Noted