



# INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER
2	INDEX AND GENERAL NOTES
3	CONSTRUCTION NOTES
4 - 5	CONSTRUCTION DETAILS
6 - 7	GENERAL PLANS
	NHDOT STANDARD PLANS
TC-1	AMENDMENTS TO PART VI MUTCD (2009)
TC-2	UNIFORMED OFFICERS AND FLAGGERS
TC-5	LANE CLOSURE: TWO-LANE ROAD WITH LOW TRAFFIC VOLUMES

- THE MINIMUM ACCEPTABLE STANDARDS FOR ALL CONSTRUCTION MATERIALS AND METHODS SHALL BE IN ACCORDANCE WITH THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2016 EDITION AND ALL SUBSEQUENT AMENDMENTS. ITEM NUMBERS REFERENCED IN THE DRAWINGS AND THE CONTRACT DOCUMENTS ARE NHDOT ITEM NUMBERS.
- CONTRACTOR SHALL NOTIFY DIG-SAFE (1-888-344-7233) A MINIMUM OF 72 HOURS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR, AT HIS/HER OWN EXPENSE, ANY UNDERGROUND CABLES OR UTILITIES DAMAGED BY HIS/HER OPERATIONS INCLUDING ANY DAMAGE DONE DRIVING HIS/HER EQUIPMENT OVER EXISTING UNDERGROUND CABLES OR UTILITIES.
- ALL TREE TRIMMING MUST BE REVIEWED BY THE TOWN OF WOLFEBORO AND ENGINEER PRIOR TO BEGINNING ANY CLEARING OPERATIONS.
- SIGN NOTES ARE SHOWN ON THE CONSTRUCTION DETAIL SHEETS.
- GREEN STREET SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES, EXCEPT WHEN A TEMPORARY DETOUR SHALL BE USED. NO DETOUR SHALL BE USED WITHOUT PRIOR APPROVAL OF THE ENGINEER. WHEN A DETOUR IS NOT IN PLACE, ONE WAY TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. TWO WAY TRAFFIC MUST BE RESTORED AT THE END OF EACH WORK DAY. THE CONTRACTOR MUST CONTACT THE WOLFEBORO FIRE, POLICE AND SCHOOL DEPARTMENTS PRIOR TO BEGINNING CONSTRUCTION AT THE START OF EACH WORK DAY. THE CONTRACTOR SHALL PROVIDE ALL SIGNAGE, BARRICADES AS REQUIRED FOR TRAFFIC CONTROL AND COORDINATION WITH OTHER CONSTRUCTION OPERATIONS ON ADJACENT STREETS. ALL TRAFFIC CONTROL PLANS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE TOWN AT LEAST 7 DAYS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION OPERATIONS AND DETOURS WITH OTHER TOWN PROJECTS.
- WORK SHALL NOT BEGIN BEFORE 7:00 AM AND MUST END BY 5:00 PM UNLESS OTHERWISE APPROVED BY THE TOWN IN WRITING.
- ALL PERMANENT CONSTRUCTION WARNING SIGNS MUST BE ERECTED PRIOR TO BEGINNING CONSTRUCTION.
- ALL PERMANENT AND TEMPORARY TRAFFIC CONTROL SIGNS SHALL MEET THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
  - PERMANENT CONSTRUCTION SIGNS SHALL CONFORM TO NHDOT "WORK ZONE TRAFFIC CONTROL STANDARD PLANS" SHEET TC-1, TC-2, TC-3 AND TC-8 WITH REGARD TO SIGN TYPE, QUANTITY AND LAYOUT.
  - TEMPORARY CONSTRUCTION SIGNS USED FOR DAILY LANE CLOSURES AND TRAFFIC CONTROL SHALL CONFORM TO NHDOT "WORK ZONE TRAFFIC CONTROL STANDARD PLANS" SHEET TC-2, TC-3 AND TC-8 WITH REGARD TO TAPER LENGTHS, CHANNELIZING DEVICES AND SIGN TYPE, QUANTITY AND LAYOUT. REMOVE THOSE EXCESS MATERIALS FROM SITE AT NO EXPENSE TO THE OWNER.
- THE CONTRACTOR MUST COORDINATE ALL WORK WITH THE TOWN OF WOLFEBORO, ENGINEER AND ANY AFFECTED ADJUTERS. ALL WORK OUTSIDE THE ROADWAY ROW SHALL BE COORDINATED WITH THE AFFECTED PROPERTY OWNER. WORK SHALL NOT PROCEED WITHOUT APPROVAL OF THE WOLFEBORO ENGINEERING DEPARTMENT.
- ALL ELEVATIONS AND LOCATIONS OF EXISTING UTILITY AND DRAINAGE STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO UTILIZATION OF THE PROPOSED DESIGNS SHOWN ON THE PLAN.
- BACKFILL OF THE TRENCHES SHALL BE COMPACTED TO TO 95% MAX. DRY DENSITY UNDER ALL PAVED AREAS AND 92% MAX. DRY DENSITY UNDER OTHER AREAS IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATIONS - SECTION 304.

- SHORING AND STABILIZATION OF TRENCH SIDEWALLS DURING EXCAVATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL CULVERTS, DRAINAGE STRUCTURES, UTILITY WORK, AND ROAD CONSTRUCTION SHALL BE SUBJECT TO FINAL INSPECTION BY THE WOLFEBORO ENGINEERING DEPARTMENT PRIOR TO ACCEPTANCE BY THE TOWN OF WOLFEBORO.
- THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 4" TOPSOIL AND SEED OVER ALL DISTURBED UNPAVED AREAS UNLESS OTHERWISE SPECIFIED.
- ALL PAVEMENT CUTTING SHALL BE COMPLETED BY SAW CUTTING ONLY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND FITTING OF VARIOUS ITEMS OF WORK AT THE PROJECT SITE.
- THE CONTRACTOR SHALL SUBMIT HIS/HER PROPOSED CONSTRUCTION SCHEDULE TO THE WOLFEBORO ENGINEERING DEPARTMENT FOR REVIEW AND APPROVAL AT LEAST TWO (2) WEEKS PRIOR TO THE START OF CONSTRUCTION. NO WORK SHALL BE CONDUCTED WITHOUT AN APPROVED SCHEDULE. UPDATED SCHEDULES SHALL BE PROVIDED TO THE WOLFEBORO ENGINEERING DEPARTMENT FOR REVIEW AND APPROVAL EVERY TWO (2) WEEKS DURING CONSTRUCTION.
- BLASTING, IF REQUIRED, SHALL BE PERFORMED BY A LICENSED BLASTING CONTRACTOR MEETING NHDOT AND TOWN OF WOLFEBORO REQUIREMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE WOLFEBORO MUNICIPAL ELECTRIC DEPT., METROCAST, FAIRPOINT COMMUNICATIONS, COMCAST AND ALL OTHER AFFECTED UTILITY COMPANIES.
- THE CONTRACTOR SHALL MEET THE REQUIREMENTS OF THE EPA NPDES PHASE II PROGRAM AND SUBSEQUENT PROGRAMS AS APPLICABLE AT THE TIME OF CONSTRUCTION OF THIS PROJECT.
- THE CONTRACTOR SHALL PROVIDE FOR AND MAINTAIN CONTINUOUS DRAINAGE THROUGHOUT CONSTRUCTION.
- ALL EXCESS MATERIALS ON SITE SHALL BE OFFERED FIRST TO THE OWNER AND TRANSPORTED TO A LOCATION SPECIFIED BY THE OWNER AT NO ADDITIONAL CHARGE. SHOULD THE OWNER NOT WANT SOME OR ALL THE MATERIALS, THE CONTRACTOR SHALL REMOVE THOSE EXCESS MATERIALS FROM SITE AT NO EXPENSE TO THE TOWN OF WOLFEBORO.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES AND SHALL PROVIDE ALL NECESSARY CONTINUOUS BARRIERS OF SUFFICIENT TYPE, SIZE AND STRENGTH TO PREVENT ACCESS TO ALL OPEN EXCAVATIONS AT THE COMPLETION OF EACH DAYS WORK.
- WOOD FROM TREES TO BE REMOVED FROM THE PROJECT SHALL BE FIRST OFFERED TO THE ADJACENT PROPERTY OWNER. SHOULD THE ADJACENT PROPERTY OWNER NOT WANT SOME OR ALL THE WOOD, THE CONTRACTOR SHALL REMOVE THE EXCESS WOOD FROM SITE AT NO EXPENSE TO THE TOWN OF WOLFEBORO.
- STUMP REMOVAL WILL BE PAID UNDER ITEM NO. 201.4.
- CONTRACTOR TO PERFORM TEST PITS PRIOR TO ORDERING STRUCTURES TO VERIFY ELEVATIONS AND REQUIRED OPENINGS.
- CATCH BASIN RIM ELEVATIONS SHALL BE SET TO THE PROPER ELEVATIONS WITHIN THE SHOULDERS TO PROVIDE FOR CONTINUOUS DRAINAGE, (NO PONDING). RIM ELEVATIONS ARE NOT PROVIDED IN THIS PLAN SET.
- ALL WORK IN AND ADJACENT TO TOWN STREETS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWN OF WOLFEBORO STREET OPENING PERMIT AND NHDOT STANDARDS AND SPECIFICATIONS. THE CONTRACTOR IS REQUIRED TO OBTAIN ALL THE NECESSARY PERMITS FROM THE TOWN OF WOLFEBORO AND NHDOT - DISTRICT 3 PRIOR TO THE START OF CONSTRUCTION.
- NO FIELD SURVEY HAS BEEN PERFORMED FOR THIS PROJECT. THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING MONUMENTS. MONUMENTS WHICH ARE TO BE REMOVED AND RESET SHALL BE RESET TO THE EXISTING LOCATION BY A LICENSED LAND SURVEYOR. RESET MONUMENTS WILL BE PAID UNDER ITEM NO. 622.55.
- IF, DURING CONSTRUCTION, IT BECOMES APPARENT THAT ADDITIONAL EROSION CONTROL MEASURES ARE REQUIRED TO STOP ANY EROSION ON THE CONSTRUCTION SITE DUE TO ACTUAL SITE CONDITIONS, OR AT THE REQUEST OF THE OWNER, THE CONTRACTOR SHALL BE REQUIRED TO INSTALL THE NECESSARY EROSION PROTECTION AT NO EXPENSE TO THE OWNER.
- THE CONTRACTOR SHALL COMPLY WITH THE CONDITIONS OF THE PROJECT PERMITS (SEE CONTRACT DOCUMENTS). THIS WORK SHALL BE CONSIDERED TO BE INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
- THE CONTRACTOR MUST ACQUIRE ALL PERMITS WITH NHDOT - DISTRICT 3, FOR THE PROPOSED WORK IN THE NHDOT RIGHT OF WAY. THE PROPOSED WATER MAIN WORK WITHIN THE NHDOT RIGHT OF WAY MUST TAKE PLACE AT NIGHT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW REMOVAL REQUIRED FOR CONSTRUCTION. PLACING AND REMOVING SNOW ON PRIVATE PROPERTY SHALL NOT BE ALLOWED. THE REMOVAL OF SNOW SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ALL TESTING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR
- ALL WORK SHALL TAKE PLACE WITHIN THE BOUNDARIES OF THE EXISTING RIGHT OF WAY. THE PROPERTY LINES SHOWN ON THE PLANS ARE APPROXIMATE. THE EXISTING STONE WALLS THROUGHOUT THE PROJECT ARE CONSIDERED TO BE RIGHT OF WAY BOUNDARIES. THE CONTRACTOR SHALL NOTIFY THE TOWN AND THE TOWN'S ENGINEER PRIOR ANY WORK THAT MAY IMPACT THE STONE WALLS. THE CONTRACTOR MUST TAKE BEFORE AND AFTER PHOTOS OF ANY WALLS THAT ARE IMPACTED DURING CONSTRUCTION. A PRECONSTRUCTION VIDEO IS REQUIRED FOR THE ENTIRE LENGTH OF THIS PROJECT.
- THE NHDOT 304.323 CRUSHED GRAVEL FOR SHOULDERS SHALL BE MIXED WITH 30% LOAM.
- NO TEST PITS WERE PERFORMED FOR THIS PROJECT.
- EXISTING DRAINAGE CULVERTS/PIPES ARE INTENDED TO BE RETAINED AT THE SAME LOCATION AND ELEVATION. THE CONTRACTOR MUST COORDINATE ALL CB/DMH ELEVATIONS WITH THE ENGINEER AND THE TOWN PRIOR TO FINAL ADJUSTMENT.
- THE PROPOSED WATER MAIN IS INTENDED TO BE INSTALLED IN THE SAME TRENCH AS THE EXISTING WATER MAIN WITH 5.5' OF COVER. NO ADDITIONAL PAYMENT WILL BE MADE FOR THE REMOVAL OF THE EXISTING WATER PIPE WITHIN THE SAME TRENCH AS THE NEW PIPE. ANY PIPE REMOVAL OUTSIDE OF THE PROPOSED TRENCH WILL BE PAID FOR UNDER ITEM NO. 202.41.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR THE INSTALLATION AND CONNECTION OF THE TEMPORARY WATER MAIN, ITEM NO. 611.992. THE CONTRACTOR MUST COORDINATE THE INSTALLATION OF THE TEMPORARY WATER MAIN WITH THE TOWN OF WOLFEBORO WATER DEPARTMENT.
- NEW DRIVEWAY APRONS ARE INTENDED TO BE SAWCUT AND REPAVED, APPROXIMATELY 5' FROM THE EDGE OF ROADWAY PAVEMENT. SEE RESIDENTIAL DRIVEWAY SECTION ON DETAIL SHEET C-004.

## LEGEND

	PROPOSED DROP INLET		EXISTING SIGN
	PROPOSED DROP INLET TP 1		EXISTING HYDRANT
	PROPOSED TEST PIT		EXISTING RIGHT-OF-WAY
	PROPOSED DITCH/SWALE		EXISTING MAJOR CONTOUR
	PROPOSED WATER MAIN		EXISTING MINOR CONTOUR
	PROPOSED STORM DRAIN		EXISTING STONE WALL
			EXISTING WOODEN FENCE
			EXISTING GUARD RAIL
			EXISTING STORM DRAIN
			EXISTING STREAM
			EXISTING EDGE OF PAVEMENT
			EXISTING WATER MAIN



Stantec Consulting Services Inc.  
5 Darmouth Drive Suite 200  
Auburn NH 03032-3984  
Tel: (603) 669-8672  
www.stantec.com

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Notes

Revision By Appd YYYY.MM.DD

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A.J.G. A.J.G. J.R.B. March 2023  
Dwn. Dgn. Chkd. YYYY.MM.DD

Permit/Seal

Client/Project Logo

Client/Project  
TOWN OF WOLFEBORO

GREEN ST ROADWAY  
RECONSTRUCTION PROJECT

Wolfboro, New Hampshire

Title  
INDEX AND GENERAL NOTES

Project No.  
179450615

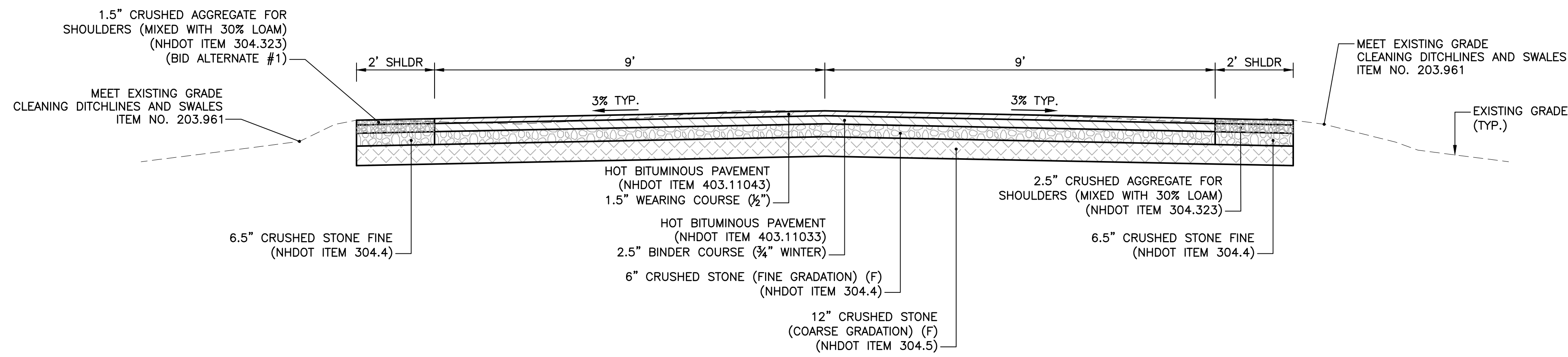
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Revision Sheet  
0 2 of 7

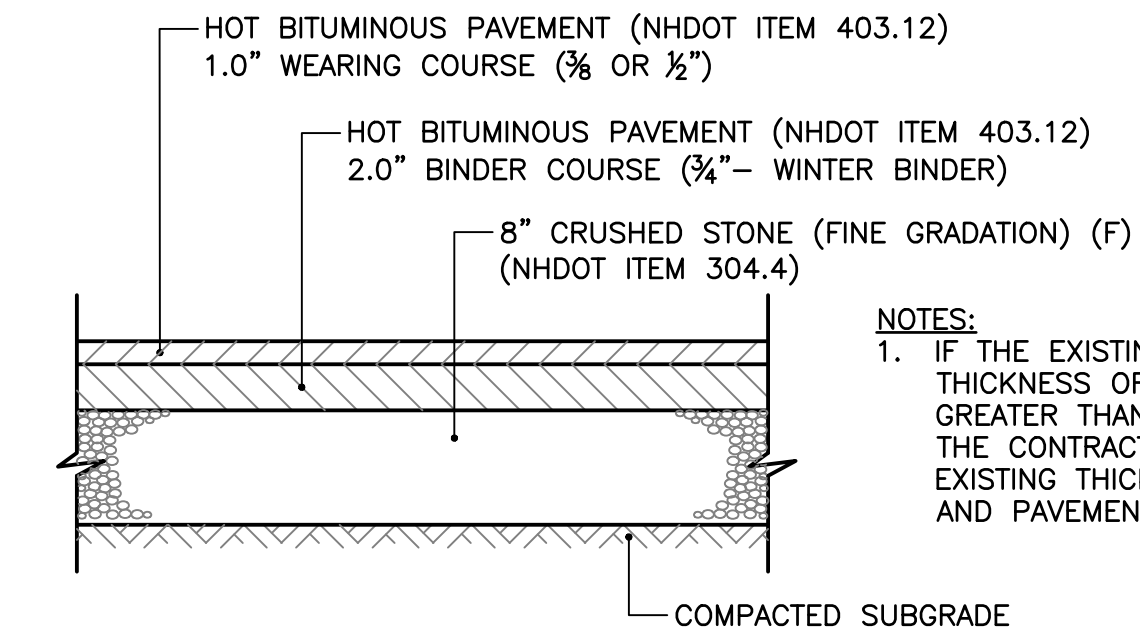
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**C-002**



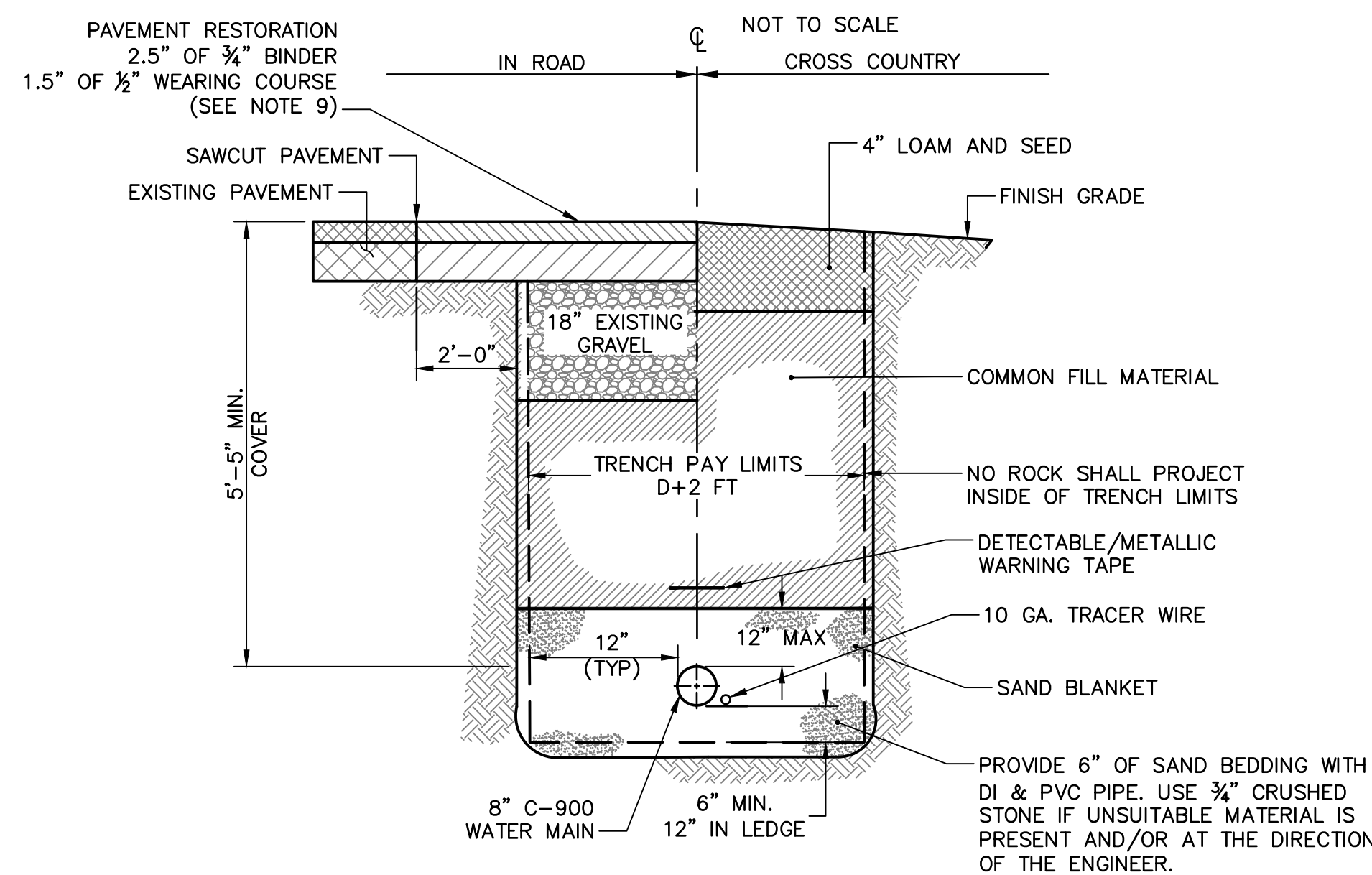




**TYPICAL ROADWAY SECTION - GREEN STREET**  
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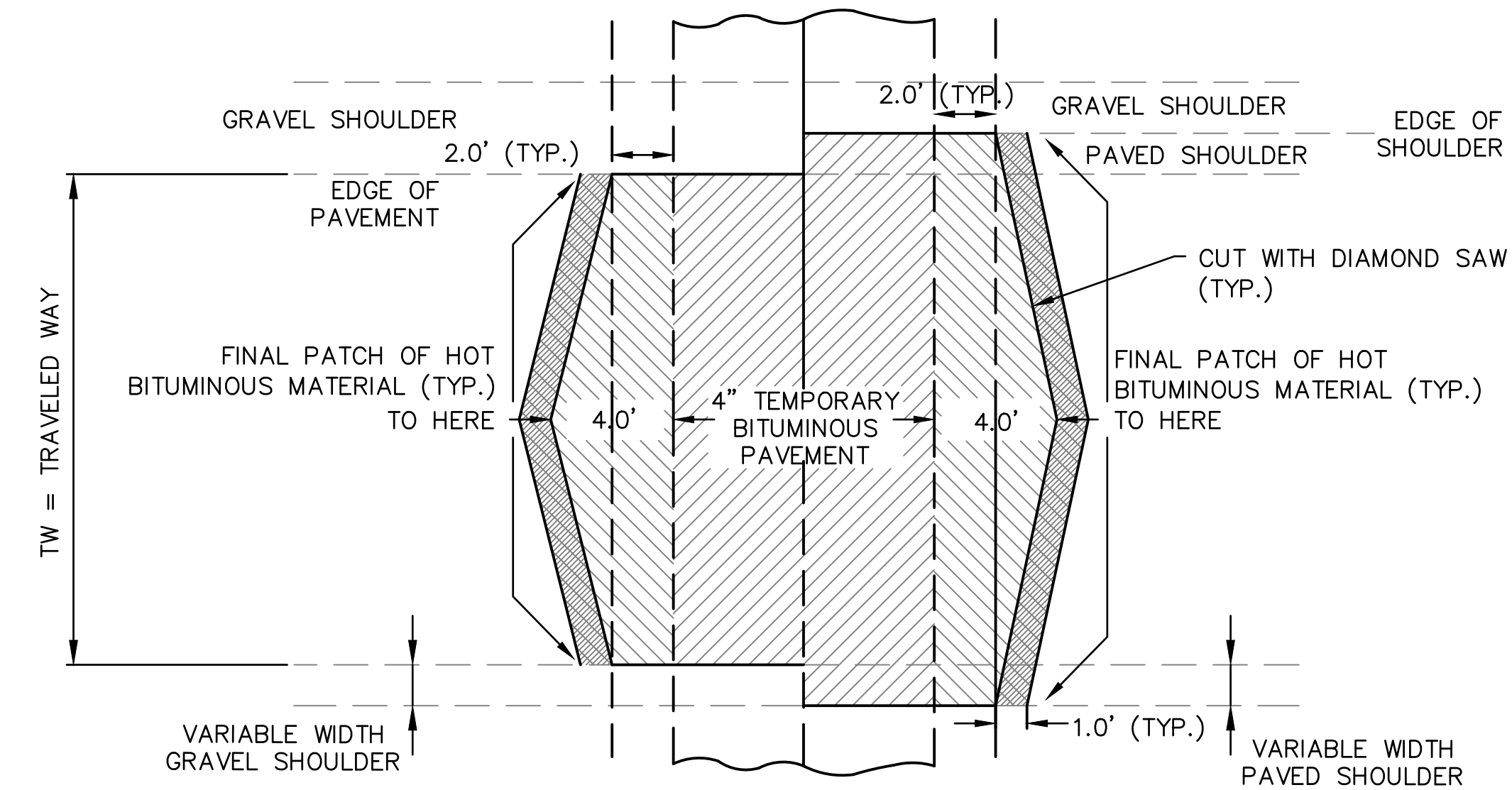
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**TYPICAL WATER MAIN AND SERVICE TRENCH DETAIL**  
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**GENERAL WATER NOTES:**

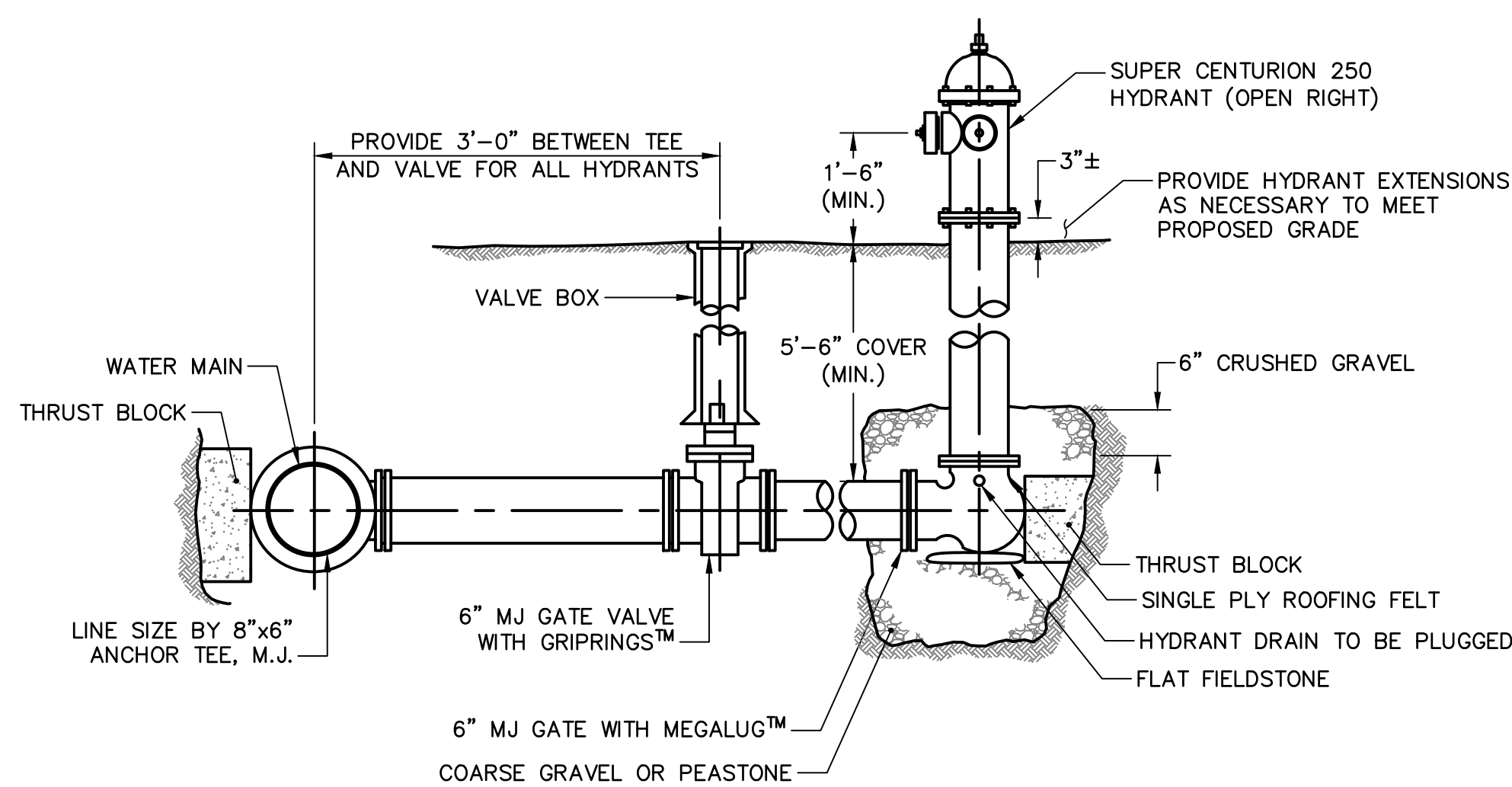
- ALL COMPONENTS AND CONSTRUCTION OF THE WATER SYSTEM SHALL MEET THE TOWN OF WOLFEBORO WATER DEPARTMENT & AWWA SPECIFICATIONS AND REQUIREMENTS.
- ALL WATER LINES SHALL BE INSTALLED AT 5.5' (MIN.) COVER. IN ANY AREAS THAT DO NOT ACHIEVE 5.5' OF COVER, 2\"/>



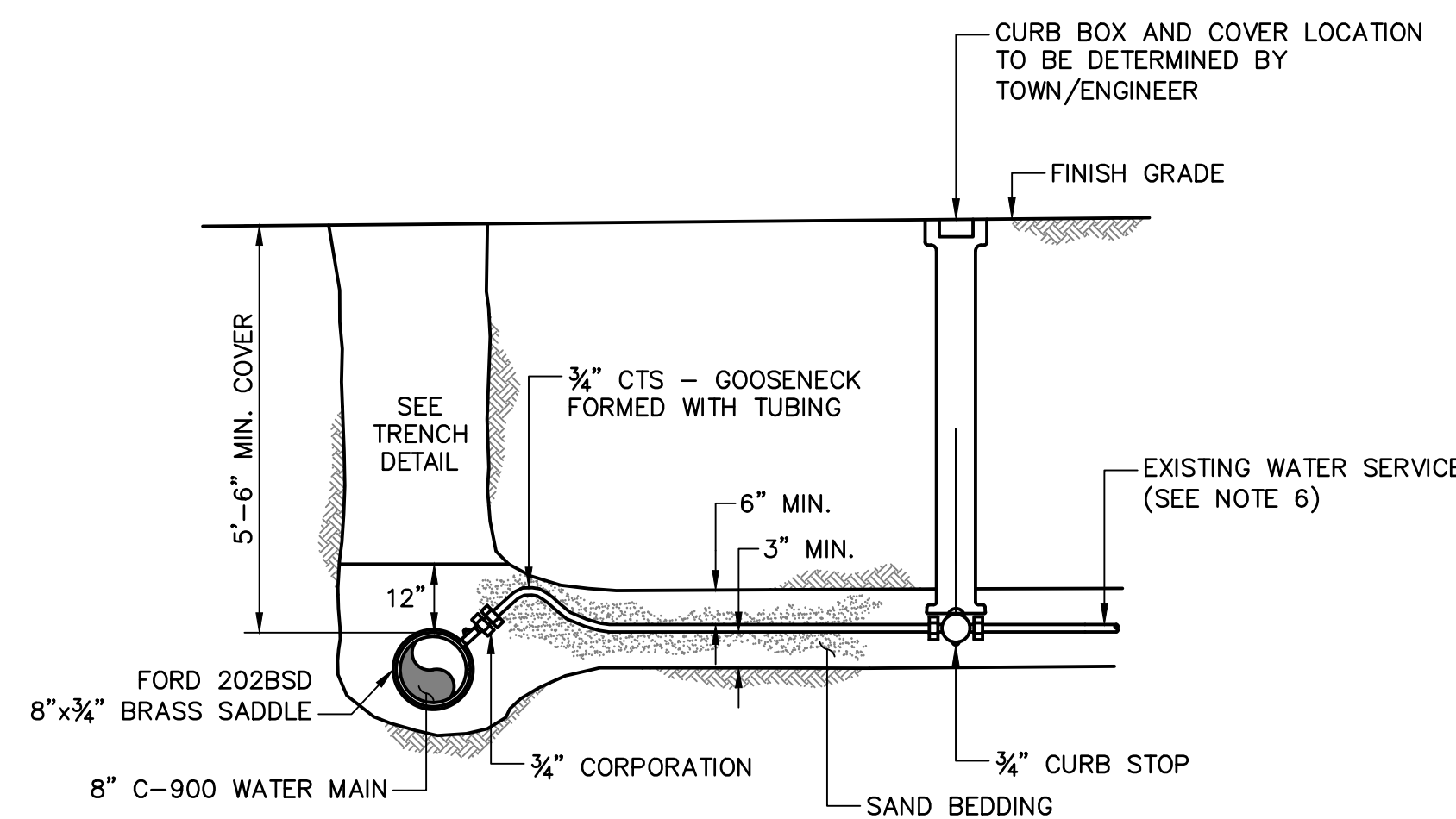
**TYPICAL PERMANENT PAVEMENT REPAIR**  
NOT TO SCALE

**PAVEMENT PATCH NOTES:**

- THE CONTRACTOR MUST COORDINATE ALL WORK WITHIN THE NHDOT RIGHT OF WAY WITH NHDOT - DISTRICT 3 - 603-524-6667.
- ALL PAVEMENT CUTTING MUST BE PERFORMED BY SAWCUTTING ONLY.
- THE PERMANENT PAVEMENT PATCH MUST MATCH THE DEPTH OF THE EXISTING PAVEMENT.



**HYDRANT ASSEMBLY DETAIL**  
NOT TO SCALE



**NOTES:**

- SERVICE SADDLES ARE REQUIRED FOR ALL CORPORATION STOPS.

**TYPICAL SERVICE CONNECTION DETAIL**  
NOT TO SCALE

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File Name: S0615_DETAILS	AJG	AJG	JRB	March 2023
	Dwn.	Dgnt.	Chkd.	YYYY.MM.DD

Permit/Seal	
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Client/Project Logo	
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Client/Project	TOWN OF WOLFEBORO
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GREEN ST ROADWAY RECONSTRUCTION PROJECT
Wolfeboro, New Hampshire

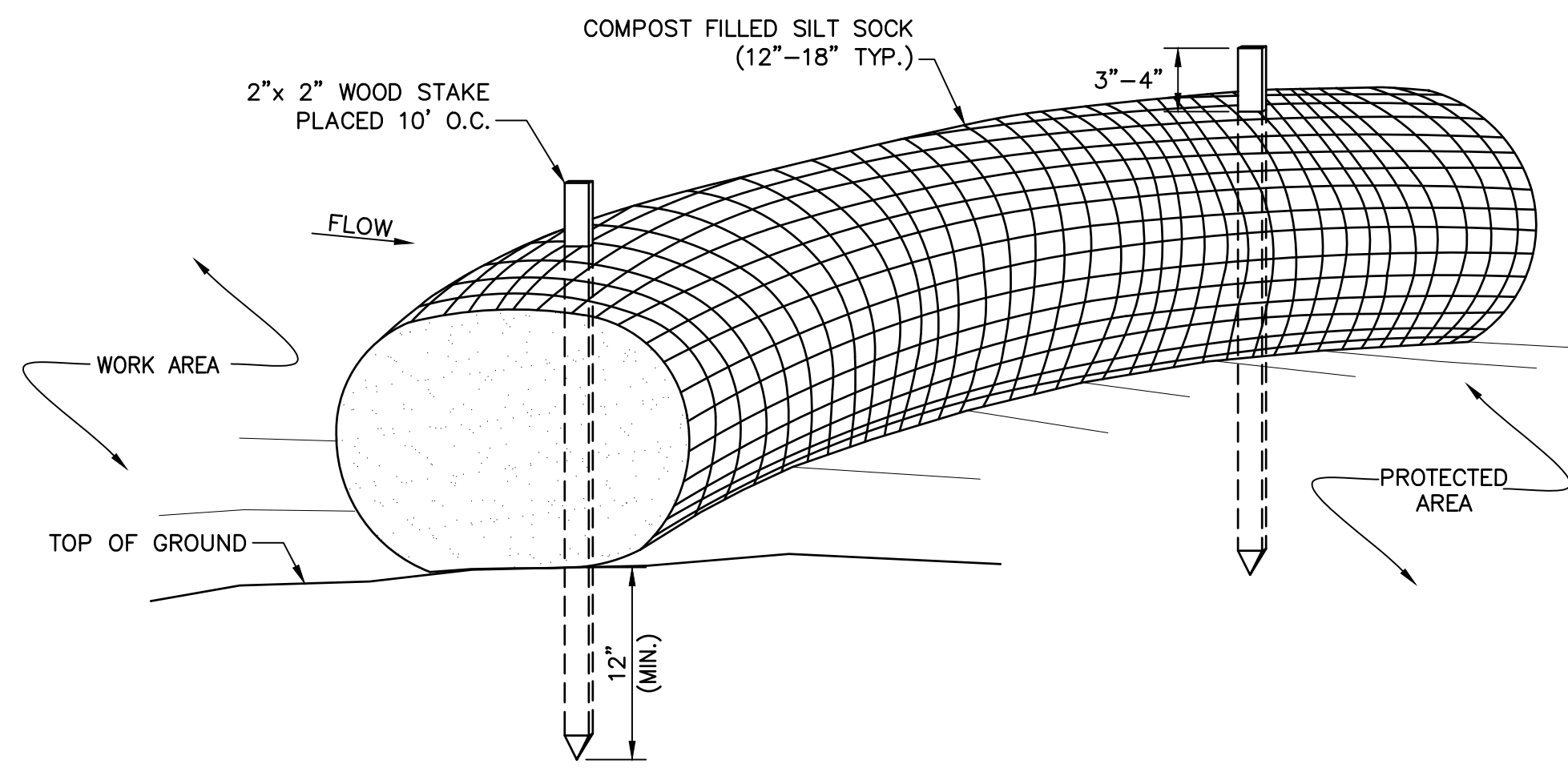
Title	CONSTRUCTION DETAILS (1 OF 2)
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Project No.	Scale
179450615	AS NOTED

Revision	Sheet	Drawing No.
0	4 of 7	C-004

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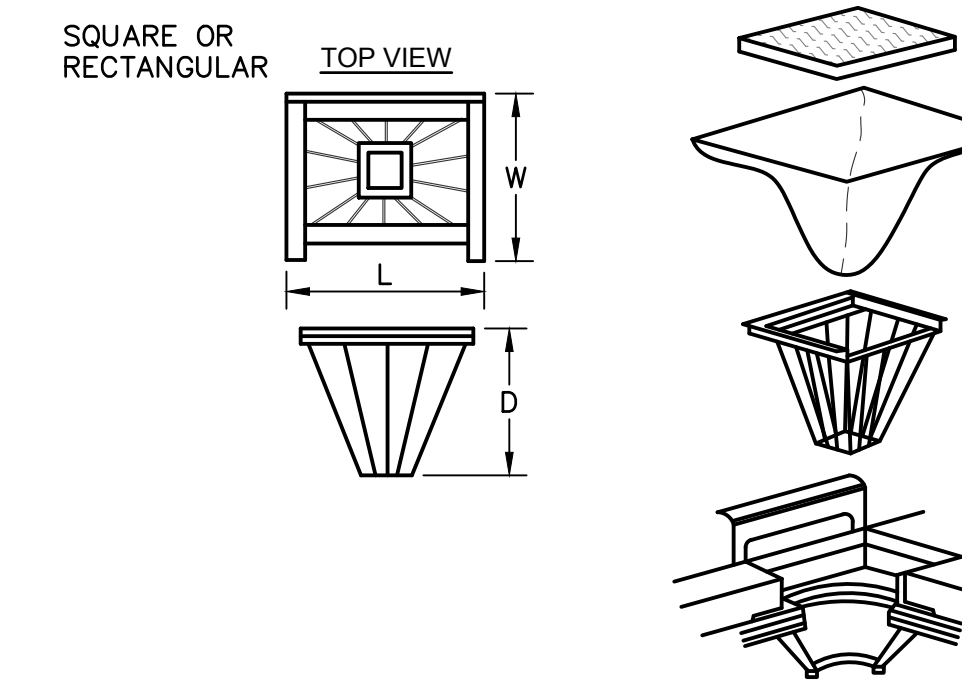


**SILT SOCK DETAIL**  
NOT TO SCALE

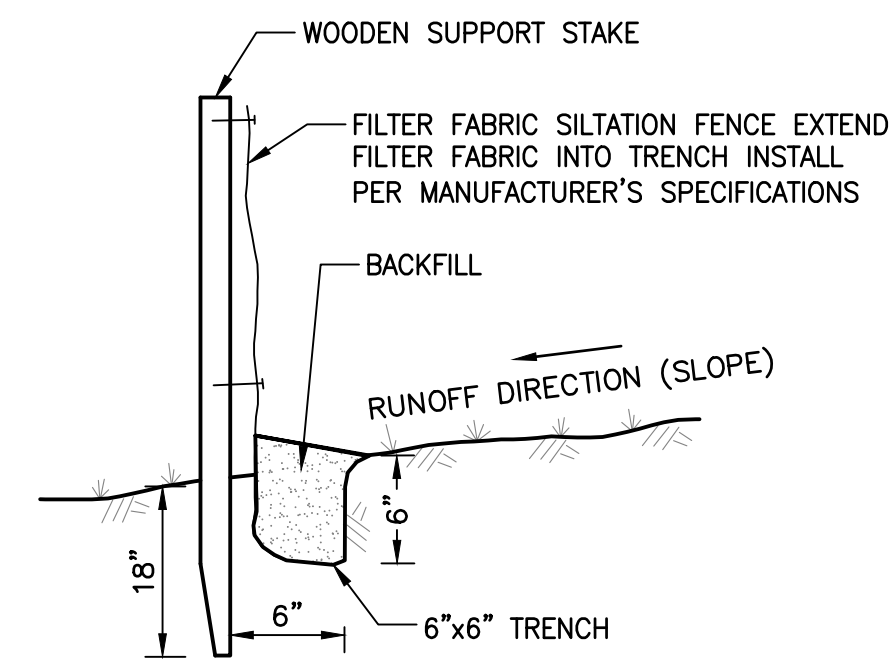
- NOTES:**
- SILT SOCK SHALL BE FILTREXX™ SILTSOXX™ OR APPROVED EQUIVALENT.
  - SEE SPECIFICATIONS FOR SOCK SIZE AND COMPOST FILL REQUIREMENTS.
  - SILT SOCK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED AS NEEDED.
  - AFTER IMPACT AREA HAS BEEN FULLY STABILIZED, THE COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.

**FILTER BASKET NOTES:**

- INLET BASKETS SHALL BE USED ON ALL CATCH BASINS IN PAVEMENT AREAS WITHIN THE PROJECT LIMITS AND/OR AS DIRECTED BY THE ENGINEER. INLET FILTER BASKETS SHALL BE "METAL-ERA" OR APPROVED EQUAL.
- FILTER FABRIC SHALL BE PUSHED DOWN AND FORMED TO THE SHAPE OF THE BASKET. THE SHEET OF FABRIC SHALL BE LARGE ENOUGH TO BE SUPPORTED BY THE BASKET FRAME WHEN HOLDING SEDIMENT AND EXTEND AT LEAST 6 INCHES PAST THE FRAME. THE INLET GRATE SHALL BE PLACED OVER THE BASKET/FRAME AND WILL SERVE AS THE FABRIC ANCHOR.
- THE FILTER FABRIC SHALL BE A GEO-TEXTILE FABRIC: POLYESTER, POLYPROPYLENE, STABILIZED NYLON, POLYETHYLENE OR POLYVINYLIDENE CHLORIDE MEETING THE FOLLOWING SPECIFICATIONS:  
GRAB STRENGTH: 45 lb. MINIMUM IN ANY PRINCIPAL DIRECTION (ASTM D1682).  
MULLEN BURST STRENGTH: MINIMUM 60 psi (ASTM D774).  
  
THE FABRIC SHALL HAVE AN OPENING NO GREATER THAN A NUMBER 20 U.S. STANDARD SIEVE AND MINIMUM PERMEABILITY OF 120 gpm/sq. ft.  
  
THE INLET BASKET SHALL BE INSPECTED WITHIN 24 HOURS AFTER EACH RAINFALL OR DAILY DURING EXTENDED PERIODS OF PRECIPITATION. REPAIRS SHALL BE MADE IMMEDIATELY, AS NECESSARY, TO PREVENT PARTICLES FROM ENTERING THE DRAINAGE PIPING SYSTEM AND/OR CAUSING SURFACE FLOODING.  
  
INLET BASKETS SHALL BE MAINTAINED IN PLACE UNTIL ALL PAVING IS COMPLETED AND ALL UNPAVED AREAS HAVE BEEN STABILIZED WITH VEGETATION.



**INLET FILTER BASKET**  
NOT TO SCALE



**SILT FENCE DETAIL**  
NOT TO SCALE

Revision \_\_\_\_\_ By \_\_\_\_\_ Appd \_\_\_\_\_ YYYY.MM.DD

Issued \_\_\_\_\_ By \_\_\_\_\_ Appd \_\_\_\_\_ YYYY.MM.DD

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Permit/Seal

Client/Project Logo

Client/Project  
TOWN OF WOLFEBORO

GREEN ST ROADWAY  
RECONSTRUCTION PROJECT  
Wolfboro, New Hampshire

Title  
CONSTRUCTION DETAILS (2 OF 2)

Project No.  
179450615  
Scale  
AS NOTED

Revision Sheet  
0 5 of 7  
Drawing No.

**C-005**

**TRAFFIC SIGN SUMMARY**

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW		BACK- GROUND	LEGEND	BORDER			
R1-1	30	30			SEE 2009 MUTCD		1	SEE 2009 MUTCD			U-CHNL 1	6.25	6.25
R8-3a	24	30			SEE 2009 MUTCD		2	SEE 2009 MUTCD			U-CHNL 2	5.00	10.00
-	24	30		4D	2.5		1	WHITE	BLACK	BLACK	U-CHNL 1	5.00	5.00

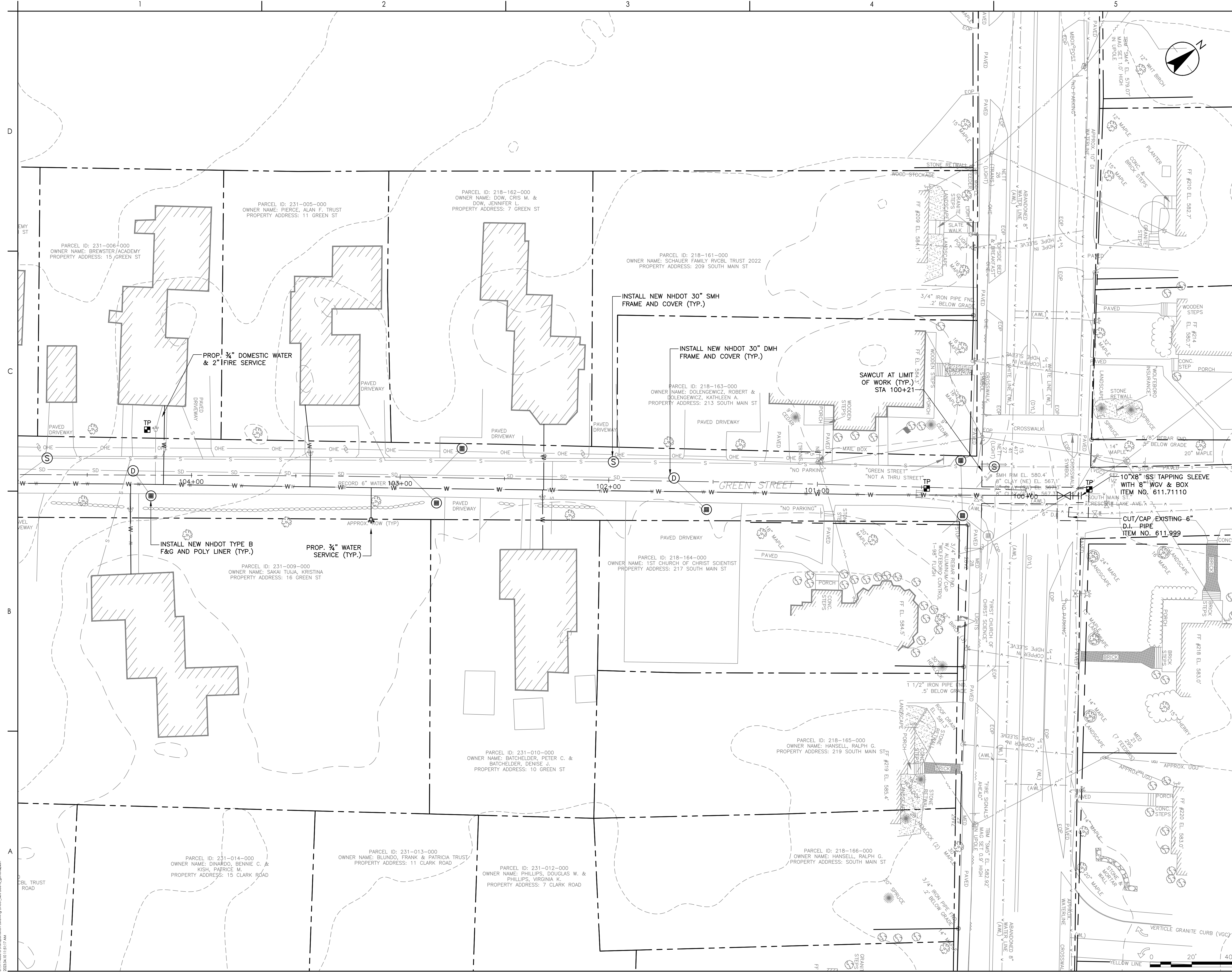


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Notes



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S0615_GENERALPLAN	Dwn.	Dgtr.	Chkd.	YYYY.MM.DD

Permit/Seal

Client/Project Logo

Client/Project  
 TOWN OF WOLFEBORO

GREEN ST ROADWAY  
 RECONSTRUCTION PROJECT  
 Wolfboro, New Hampshire

Title  
 GENERAL PLAN (2 OF 2)

Project No.	Scale	
179450615	AS NOTED	
Revision	Sheet	Drawn No.
0	7 of 7	C-102

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## AMENDMENTS TO PART VI OF THE MUTCD (2009 EDITION)

**NOTE: Revised Standards TC-1 through TC-8 amend Part VI of the 2009 Edition of the MUTCD by superseding or supplementing certain Sections. They shall be used in conjunction with the MUTCD and the Specifications for work zone traffic control on all projects.**

1. Section 6C.04, Table 6C-1 and Section 6H-01, Table 6H-3. "Urban (low speed)" shall be defined as those roadways with regulatory speed limits of 30 mph or less; "Urban (high speed)" shall be defined as those roadways with regulatory speed limits of 35 mph or more.
2. Section 6F.03, Sign Placement. Add the following paragraph as a "Standard" heading:  
**01a Actual placement of temporary traffic control signs shall be carefully considered to avoid obstructing existing signs or allowing existing signs, vegetation or other physical features to obstruct or limit visibility to temporary traffic control signs. Temporary traffic control signs shall also be placed at locations that avoid overwhelming motorists with information when combined with existing signs.**
3. Section 6F.17 Positioning of Advanced Warning Signs. Add the following sentence as "Guidance" and "Option", respectively after sentence 07:  
 Guidance:  
 08 *When multiple operations are occurring in the same area, duplication of the advance warning signs, e.g. ROAD WORK AHEAD, ROAD WORK ½ MILE, etc., should be avoided.*  
 Option:  
 09 In cases where room for advance warning signage is severely limited, some of the general advanced warning signs (e.g. ROAD WORK AHEAD) may be eliminated in order to provide adequate space for driver to see and comprehend the warning signs requiring driver action, e.g. LANE ENDS MERGE LEFT, FLAGGER AHEAD, etc.
4. Section 6F.64, Cones. Add the following to the "Standard":  
**01a Cones shall not be used at night as the primary channelization device, except during work hours.**
5. Section 6F.65, Tubular Markers. Replace paragraphs 01 and 02 of the "Standard" section with the following:  
**01 Tubular markers shall be predominately orange and shall not be less than 42 inches high and 3 inches wide when facing road users. They shall be made of material that can be struck without causing damage to the impacting vehicle. Refer to MUTCD 6F-65 Paragrah 3 for delineation color and type.**
6. Section 6F.67, Drums. Add the following sentences after Sentence number 01:  
**Standard:**  
**01a Drums shall be the primary delineation device on divided highways for all tapers and tangents.**  
**Option:**  
 01b Cones or tubular markers may be used, only in the tangent sections of the lane closure, when inadequate width, geometric constraints or the duration of the operation (short-duration or mobile, see 6G.02 for Work Duration definitions) necessitates the use of a narrower or more easily moved channelizing device.
7. Section 6F.78 – Temporary Markings. Add to the "Standard" the follow sentences:  
**05a All temporary markings on divided highways shall be 4-inch removable tape or paint conforming to MUTCD Chapter 3, Section 3A.**  
**05b All temporary markings shall be offset 1-foot from the final striping location.**  
**05c All temporary white broken-line pavement markings for traffic moving in the same direction shall be retroreflectorized paint or tape. Temporary paint or tape markings shall have a cycle length of 40 feet long with minimum 4-foot long skip and 36-foot long gap. Temporary tape shall be removed prior to any overlays and after permanent pavement markings have been applied.**  
**05d Stop lines shall be installed during temporary conditions and shall be retroreflectorized paint or tape.**  
 Replace "Guidance" paragraph 03 with:  
 03 *Edge lines, channelizing lines, lane reduction transitions, gore markings, and non-longitudinal lines (e.g., railroad crossings, crosswalks, words, symbols, etc.) are usually not required for temporary situations. Their use should be evaluated on a project by project basis based on field conditions, relative traffic speeds and volumes, and the use of other traffic control devices. When used, temporary markings for these types of longitudinal and non-longitudinal lines shall be retroreflectorized paint or tape and conform to MUTCD Part 3 Chapters 3A and 3B.*
8. Section 6F.85 – Temporary Traffic Barriers. Add the following to the "Standard" paragraph 06:  
**06a Temporary end treatments in the form of sand barrels and water filled arrays shall not be used from November 1st through April 15th unless they are greater than ten feet from the travelway (measured to the face) or specifically approved in writing by the Engineer. If approved by the Engineer for winter use, the sand or water shall be treated in accordance with the manufacturer's recommendations to prevent freezing.**  
**06b Impact attenuators shall be marked with a Type 3 Object Marker per Section 2C.63 Object Marker Design and Placement Height paragraph 02.**
9. Section 6G.05 – Work Affecting Pedestrian and Bicycle Facilities. Add the following to the "Support" paragraph 01:  
 01a R4-11 (Bike May Use Full Lane) sign should be used when the clear width of a single lane and shoulder is less than 14', except when the existing lane and shoulder in the general vicinity of the work provides less than 14' clear. This sign is optional where operational controls are used, and during mobile, short duration, and short term stationary work durations as defined by Section 6G.02. This sign shall not be used when the speed limit is over 40 mph.
10. Section 6H.01, Typical Applications. Add the following paragraph to the Option heading:  
 08 Many diagrams show ROAD WORK (W20-1), ROAD WORK NEXT XX MILES (G20-1), and END ROAD WORK (G20-2a) signs being used for the activities. These signs may be omitted if the activity is being performed within the limits of a larger project and the Advance Warning and/or Termination Signs for the larger project provide reasonable warning to the motorist for the activity.
11. Section 6H.01, Figure 6H-14. The diagram for the unsignalized crossing of a Haul Road shows interim tape and a NO PASSING ZONE (W-14-3) sign to deter passing maneuvers. In lieu of interim tape, cones may be placed along the centerline, using a maximum spacing of 40-feet.  
 In both diagrams, add a TRUCK CROSSING (W8-6) sign at a distance "B" in advance of the DO NOT PASS (R4-1) sign. Show the ROAD WORK AHEAD (W20-1a) sign at a distance "C" in advance of the TRUCK CROSSING sign. (See Table 6H-3 for distance)
12. Section 6H.01, Figure 6H-36. Make the following revisions:  
 a. Use REVERSE CURVE (W1-4 series) signs which show side-by-side arrows, one arrow for each open lane, at each location that the sign is shown.

WORK ZONE TRAFFIC CONTROL

AMENDMENTS TO PART VI  
MUTCD (2009)

STANDARD  
NO. TC-1

REVISION DATE

08/03/2004

03/16/2017

11/28/2018

05/17/2019

04/20/2022

\*.DGN FILE NAME

TC-1

STANDARD PLANS



STANDARD  
NO. TC-1



## UNIFORMED OFFICER AND FLAGGER USE GUIDELINES

**Flaggers shall be used to the greatest extent possible for “dynamic” traffic control operations. Uniformed Officers may be utilized for their specific authority above and beyond that of a flagger, such as assistance in speed control and traffic law enforcement. The use of Uniformed Officers may be necessary in some instances. However, Officer use is not a requirement. Their use must be preapproved by NHDOT.**

Examples of traffic control operations where Uniformed Officers and flaggers are typically not needed:

1. Shoulder work.
2. Work behind barrier.

Examples of traffic control operations where flaggers should be used include:

1. Alternating 1-way traffic (stop/slow paddles must be used).
2. Directing traffic through low volume intersections.
3. Assisting trucks and equipment in and out of work areas.
4. Providing coverage at side roads and driveways during mobile operations (e.g. paving, striping, etc.).
5. Directing pedestrians and bicyclists through the work zone.

Examples of traffic control operations where Uniformed Officers may be used include:

1. Directing traffic through complex intersections, especially where signals are being overridden.
2. Assisting construction vehicles and equipment in and out of work areas on high speed (> 45 mph), high volume facilities (> 15000 vpd). Note: If an access area is anticipated to be in place for an extended period of time and it is determined that assistance is required for the safe exit and entry of construction vehicles, then a cost analysis should be completed to determine if stationary measures (e.g. signals) would be more cost effective than officers or flaggers.
3. Rolling roadblock operations on interstate and turnpike facilities and other multi-lane L.A.R.O.W. highways.
4. If a uniformed officer is already on site for other needs (enforcement or presence), then the officer may be asked to supplement these duties by providing limited duration traffic control that would otherwise be covered by a flagger. However, the officer must be adequately trained for the flagger operation to be performed and must use appropriate equipment and techniques (which may include the use of stop/slow paddles).
5. If approved, officers may be hired as a speed deterrent and/or to increase driver awareness through a work zone under the following conditions:
  - a. The work zone has a posted speed of 45 mph or higher and an average daily traffic (ADT) volume of 15,000 vpd or greater; and
  - b. The work zone presents a unique safety issue, such as a high rate of crashes, vehicles traveling at excessive speeds, poor highway geometrics, excessive East-West sun glare; workers exposed to traffic; and/or construction equipment frequently entering and exiting the work zone.
6. In rare cases, a presence officer may be approved for use on low speed (< 45 mph) or low volume (< 15,000 vpd) roads if a unique safety issue exists and other speed deterrent or driver awareness measures are proven ineffective.
7. The use of law enforcement may be considered for nighttime operations. When used at night the use of the blue lights and positioning should be carefully considered. Excessive use of police vehicles with lights at night, or inappropriate positioning of these vehicles may actually detract from the positive guidance the work zone traffic control devices provide. When used for nighttime work, blue lights should be dimmed and headlights should be off.

See complete **Flagger and Uniformed Officer guidelines at this link:**

<http://www.nh.gov/dot/org/projectdevelopment/construction/documents/FlaggerPoliceUseGuidelines.pdf>

## UNIFORMED OFFICER PLACEMENT IN THE WORK ZONE

**If Uniformed Officer with Vehicle use has been approved for presence, cruiser placement is recommended as follows:**

1. Park in the shoulder or median, not in the travel lane.
2. Do not park behind the Truck Mounted Attenuator (TMA).
3. Do not park in the buffer zone. If buffer zone presence is needed, then consideration should be given to installing a truck TMA instead.
4. Do not park in the taper.
5. Locate the police cruiser between the 1st and 2nd signs (from the taper).
  - a. Urban (Low <= 30 mph) 150' from the taper.
  - b. Urban (High >= 35 mph) 525' from the taper.
  - c. Rural = 750' from the taper.
  - d. Expressway/Freeway = 1750' from the taper.
6. Consider having the cruiser face traffic for stationary operations.
  - a. Recommended cruiser positioning for moving operations:
    - I. Less than 5 mph face traffic (e.g. crack seal).
    - II. Greater than 5 mph face work (e.g. striping, rumble strips).
7. Stay ¼ mile in front of queue.
8. If a second Officer is used for enforcement, and there is no queue, the enforcement officer should be immediately after the work zone. If there is a traffic queue then the enforcement officer should be several miles before the backup queue and presence Officer.
9. Hands free and cell phone use should be only for work zone activity.
10. Headlights off, dim blue lights at night if possible.

WORK ZONE TRAFFIC CONTROL

UNIFORMED OFFICERS  
AND FLAGGERS

STANDARD  
NO. TC-2

REVISION DATE

03/16/2017

\*.DGN FILE NAME

TC-2

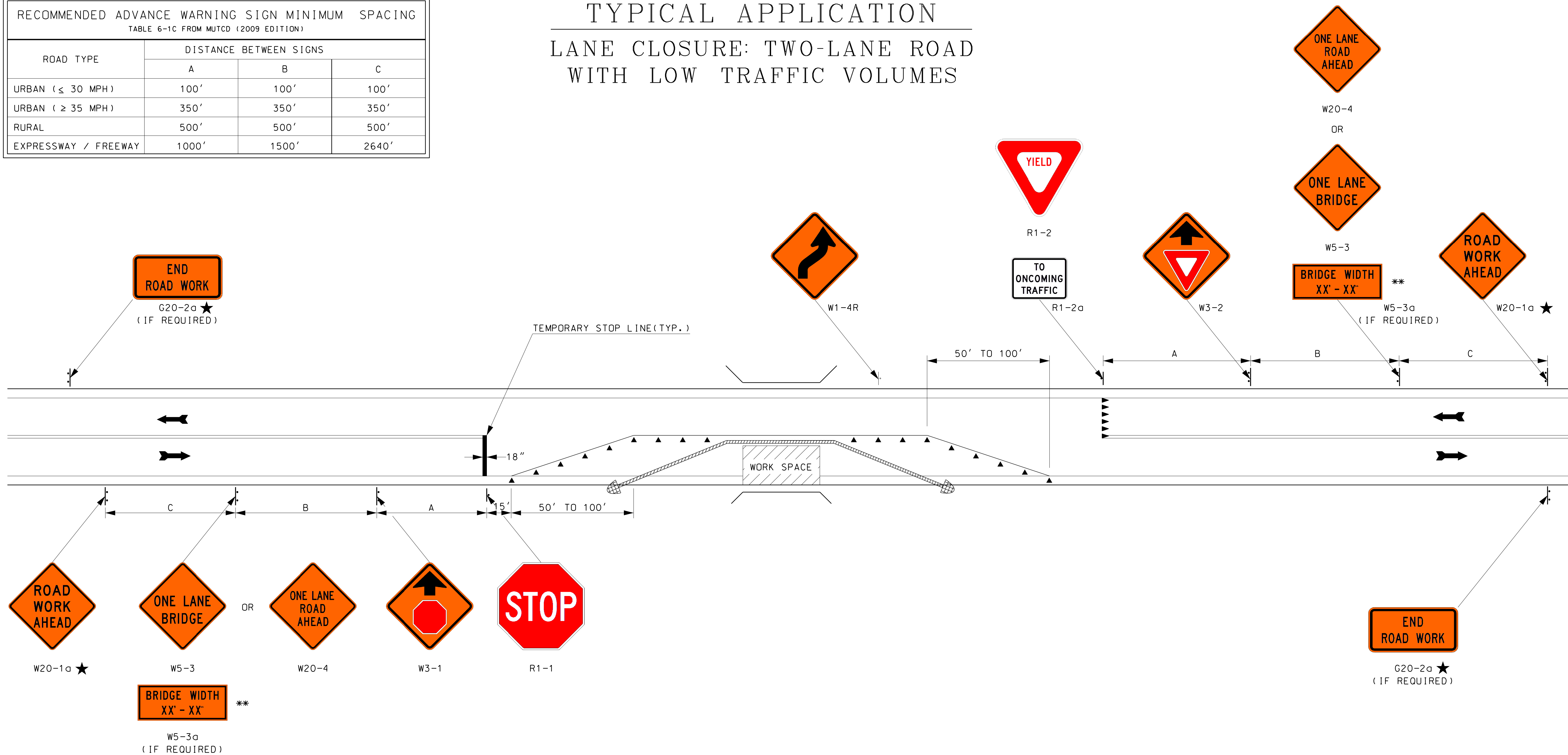
STANDARD PLANS



STANDARD  
NO. TC-2

RECOMMENDED ADVANCE WARNING SIGN MINIMUM SPACING TABLE 6-1C FROM MUTCD (2009 EDITION)			
ROAD TYPE	DISTANCE BETWEEN SIGNS		
	A	B	C
URBAN ( ≤ 30 MPH )	100'	100'	100'
URBAN ( ≥ 35 MPH )	350'	350'	350'
RURAL	500'	500'	500'
EXPRESSWAY / FREEWAY	1000'	1500'	2640'

## TYPICAL APPLICATION LANE CLOSURE: TWO-LANE ROAD WITH LOW TRAFFIC VOLUMES



### GENERAL NOTES

★ SEE AMENDMENT NO. 10 ON TC-1

\*\* POSTED BRIDGE WIDTH SHALL BE 1 FOOT LESS THAN ACTUAL WIDTH.

1. THIS TYPICAL APPLICATION SHOULD BE USED AS AN ALTERNATE TO MUTCD FIGURE TA-11 WHEN CONSTRUCTION ACTIVITIES ARE FOR A PERIOD LONGER THAN THAT CONSIDERED INTERMEDIATE-TERM WORK (SEE MUTCD SECTION 6G.02).
2. EXISTING PAVEMENT MARKINGS SHALL BE REMOVED AND TEMPORARY MARKINGS INSTALLED AS ORDERED.
3. REGULATORY SIGN PLACEMENT SHALL BE APPROVED BY BUREAU OF TRAFFIC.

4. HAZARD IDENTIFICATION BEACONS OR TYPE A FLASHING WARNING LIGHTS MAY BE MOUNTED WITH WARNING SIGNS, IF WARRANTED.
5. THE USE OF BARRIER IS ANTICIPATED FOR MOST SITUATIONS REQUIRING APPLICATION OF THIS LANE CLOSURE. REQUIRED BARRIER PROTECTION SHALL BE DETERMINED AS DESCRIBED IN THE MOST CURRENT EDITION OF THE ROADSIDE DESIGN GUIDE AS ADOPTED BY THE DEPARTMENT TAPER RATES FOR BARRIER ARE FOUND ON THE PORTABLE CONCRETE BARRIER STANDARD (GR-23).
6. CRASH CUSHIONS SHALL BE DELINEATED WITH TYPE 3 OBJECT MARKERS. SEE MUTCD FIGURE 2C-13.

NOT TO SCALE

LEGEND	
	PORTABLE BARRIER
	CHANNELIZING DEVICES
	IMPACT ATTENUATOR
	YIELD LINES

STATE OF NEW HAMPSHIRE SPECIAL DETAILS
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN
<b>LANE CLOSURE: TWO-LANE ROAD WITH LOW TRAFFIC VOLUMES</b>

REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
03-16-17	twlnrd-lowvol	-	3	12