

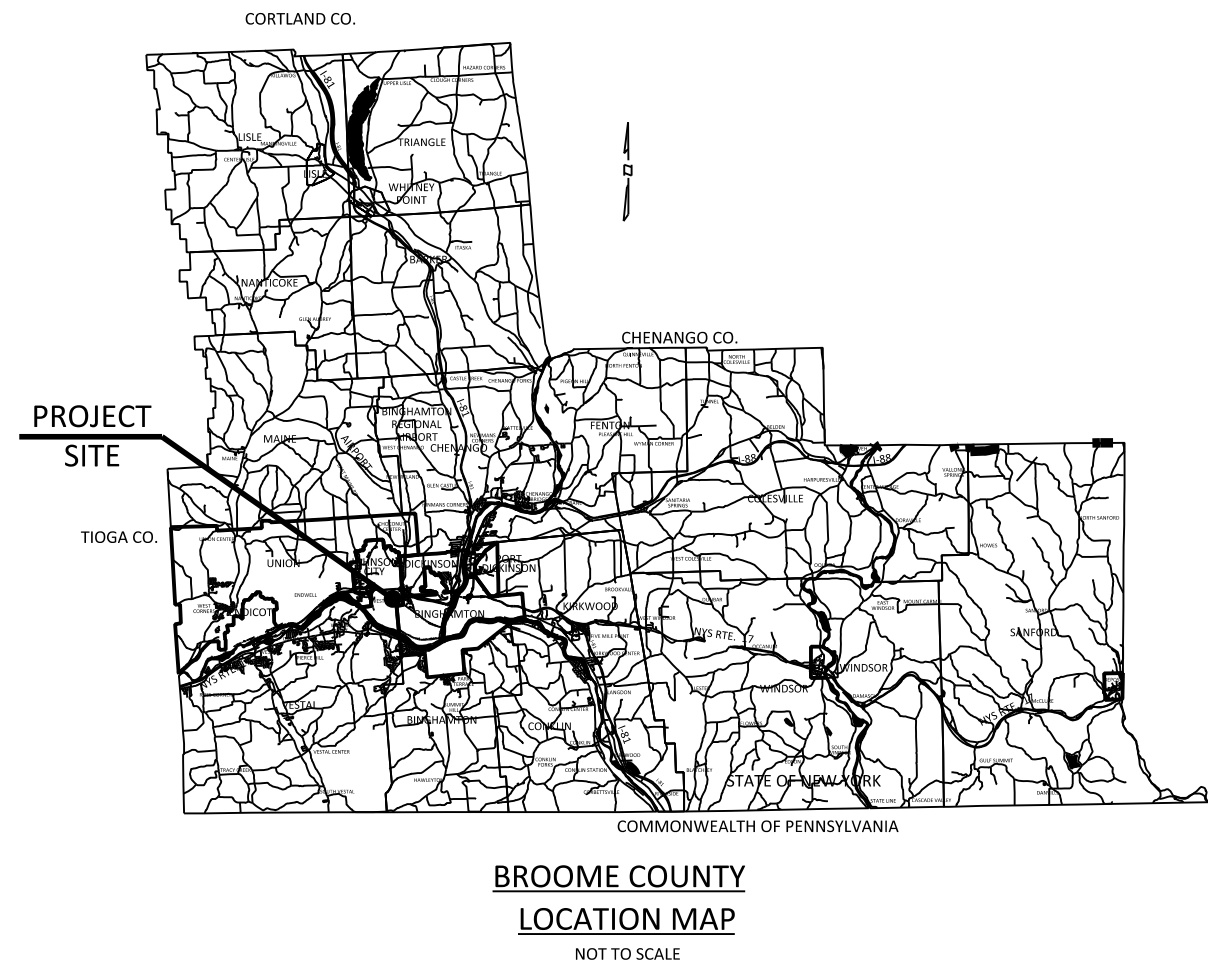
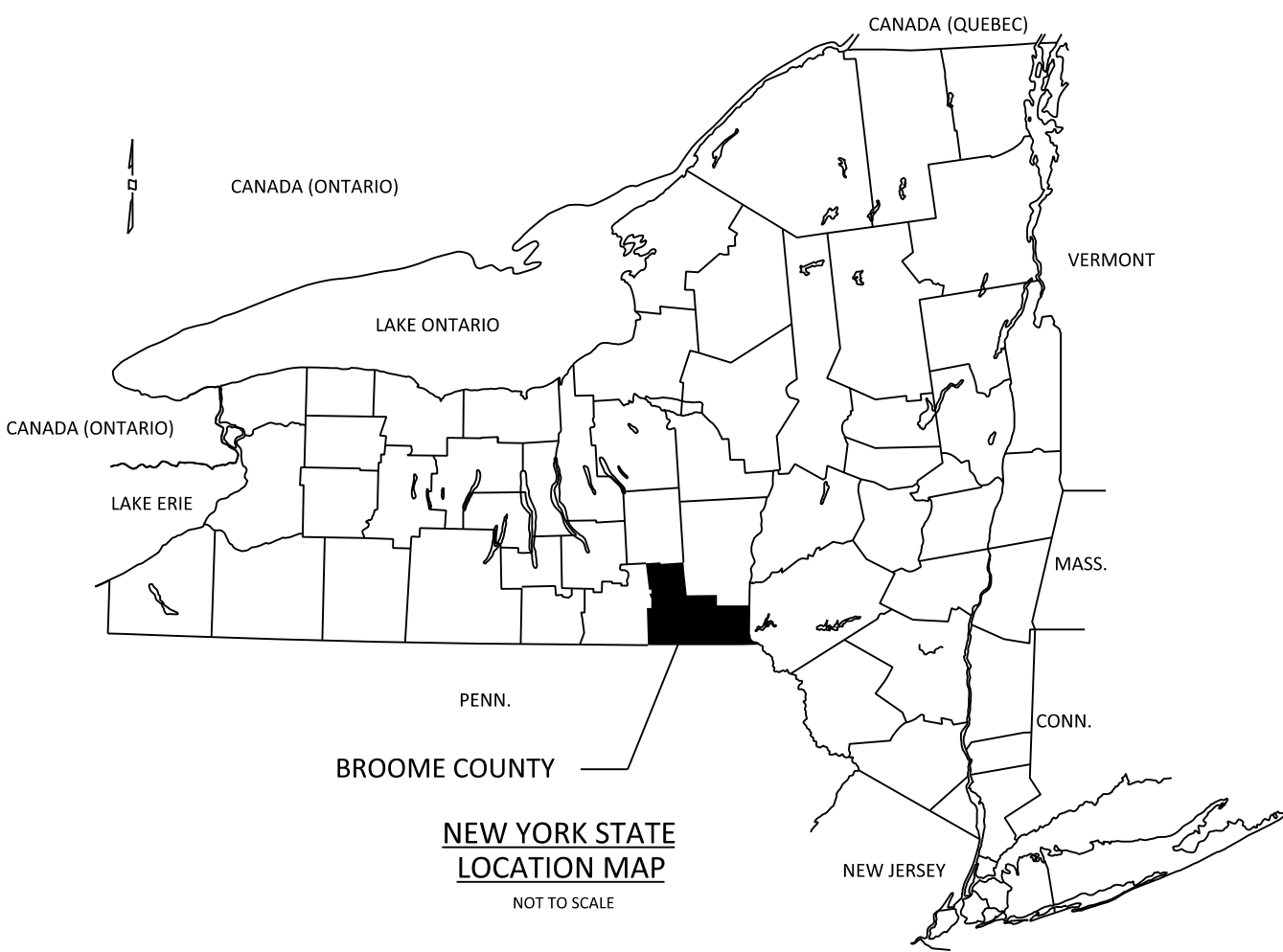
DESIGN PLANS FOR

GRAND AVENUE STREET RECONSTRUCTION

HARRISON STREET TO BALDWIN STREET

VILLAGE OF JOHNSON CITY TOWN OF UNION

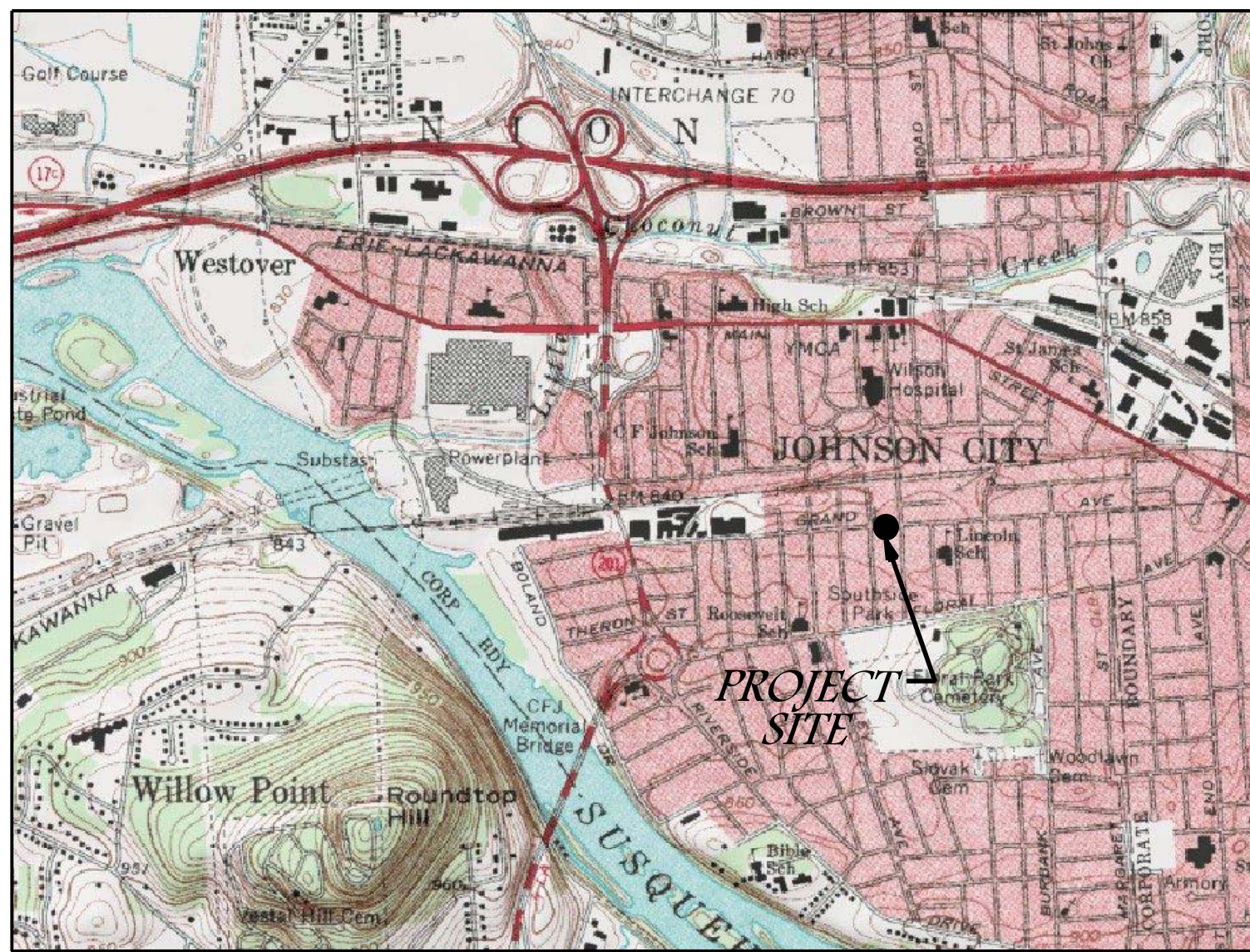
BROOME COUNTY NEW YORK STATE



Joshua Holland

JOSHUA HOLLAND

APPROVED BY THE DIRECTOR OF PUBLIC SERVICES, VILLAGE OF JOHNSON CITY



PROJECT LOCATION MAP

NOT TO SCALE

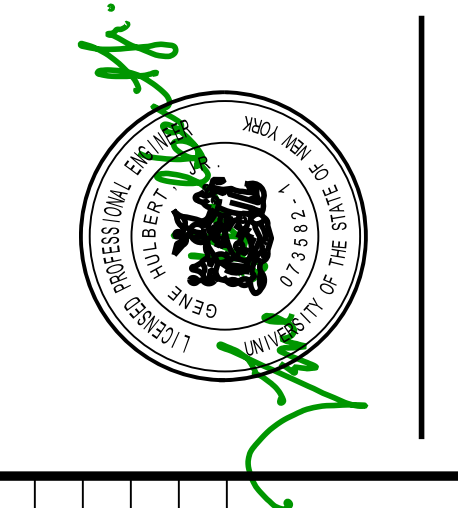
INDEX OF DRAWINGS

SHEET	TITLE
-	COVER SHEET
C000	LEGEND SHEET
C001	SITE PLAN AND PROFILE
C002	SITework DETAILS
C003	SITework DETAILS
C004	SITework DETAILS
C005	TRAFFIC SIGNAL AND PAVEMENT MARKINGS PLAN
C006	TRAFFIC SIGNAL DETAILS

HULBERT Engineering
and Land Surveying, DPC

- CIVIL ENGINEERING
- LAND SURVEYING
- ENVIRONMENTAL ENGINEERING
- CONSTRUCTION COORDINATION

Centre Plaza
55 Chenango Street, 8th Floor
Binghamton, New York 13901-2805
Phone: 607.725.0799



REV. NO.	DATE	DESCRIPTION

WARNING

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PROJECT NUMBER:	CAD FILE:	DRAWN BY:	CHECKED BY:	SCALE:	AS SHOWN
22050.02	CVS.DGN	TMD	GHH	AS SHOWN	AS SHOWN

PROJECT TITLE

GRAND AVENUE STREET RECONSTRUCTION

HARRISON STREET TO BALDWIN STREET

VILLAGE OF JOHNSON CITY TOWN OF UNION

BROOME COUNTY NEW YORK STATE

SHEET NO.

COVER SHEET

FEBRUARY 15, 2023

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	HORIZONTAL CONTROL POINT
	VERTICAL CONTROL POINT
	BASELINE POINT
	BENCH MARK
	PERMANENT SURVEY MARKER
	HORIZONTAL SURVEY CONTROL
	MONUMENT FOUND (AS NOTED)
	STAKE FOUND (AS NOTED)
	PIPE OR PIN FOUND (AS NOTED)
	IRON PIN SET (5/8" REBAR W/ HAWK CAP)
	NAIL FOUND (AS NOTED)
	DRILL HOLE
	FENCE LOCATION POINT
	WALL LOCATION POINT
	GUIDE RAIL ANCHOR BLOCK
	BARRICADES
	MAILBOX
	PAPER BOX
	TRAFFIC SIGNAL HEADS
	PHONE BOOTH
	WATER WELL
	POST (TYPE AS NOTED)
	ANTENNA
	FILLER CAP
	GAS PUMP
	DECIDUOUS SHRUB
	DECIDUOUS TREE
	CONIFEROUS SHRUB
	CONIFEROUS TREE
	STUMP
	BOULDER
	CATCH BASIN
	STORM MANHOLE
	ELECTRIC MANHOLE
	GAS MANHOLE
	WATER MANHOLE
	SANITARY MANHOLE
	TELEPHONE MANHOLE
	MISC. MANHOLE (AS NOTED)
	SIGN SINGLE POST
	SIGN DOUBLE POST
	SIGN TRIPLE POST
	TRAFFIC PULLBOX
	TELEPHONE PULLBOX
	CABLE TV PULLBOX
	ELECTRIC PULLBOX
	SIGNAL POLE W/ TRAFFIC UTILITY
	MISC. POLES (AS NOTED)
	LIGHT POLE
	UTILITY POLE
	UTILITY POLE W/LIGHT
	GUY WIRE
	ELECTRIC METER
	UTILITY TOWER
	GAS VALVE
	GAS METER
	MISC. PIPE LINE MARKER (AS NOTED)
	VENT PIPES (AS NOTED)
	WATER VALVE
	FIRE HYDRANT
	WATER METER
	MISC. UTILITY VALVE (AS NOTED)
	WATER SERVICE SHUT OFF VALVE
	SANITARY CLEANOUT
	SPOT ELEVATION (TYP)
	SOIL BORING OR TEST PIT (AS NOTED)
	MONITORING WELL
	SWAMP
	FLOW ARROW
	RIP RAP
	ROCK OUTCROP

	BASELINE
	CABLE GUIDE RAIL
	W-BEAM GUIDE RAIL
	BOX BEAM GUIDE RAIL
	BOX BEAM MEDIAN
	RAILROAD
	ABANDONED RAILROAD
	FENCE (AS NOTED)
	STONE WALL
	DECIDUOUS TREE ROW
	CONIFEROUS TREE ROW
	BRUSH LINE
	TREE LINE
	STREAM / RIVER / DITCH
	SILT FENCE
	PROPERTY LINE
	MUNICIPAL LINE
	HIGHWAY ROW
	EASEMENT LINE
	OVERHEAD UTILITY
	UNDERGROUND ELECTRIC
	OVERHEAD TELEPHONE
	UNDERGROUND TELEPHONE
	OVERHEAD CABLE TV
	UNDERGROUND CABLE TV
	OVERHEAD FIBER OPTIC
	UNDERGROUND FIBER OPTIC
	EXISTING SANITARY SEWER
	EXISTING STORM SEWER
	EXISTING GAS LINE
	EXISTING RETIRED GAS LINE
	EXISTING WATER LINE
	EXISTING INDEX CONTOUR
	EXISTING INTERMEDIATE CONTOUR
	CENTERLINE
	PROPOSED SANITARY SEWER
	PROPOSED STORM SEWER
	PROPOSED WATER LINE
	PROPOSED INDEX CONTOUR
	PROPOSED INTERMEDIATE CONTOUR

COMMON ABBREVIATIONS

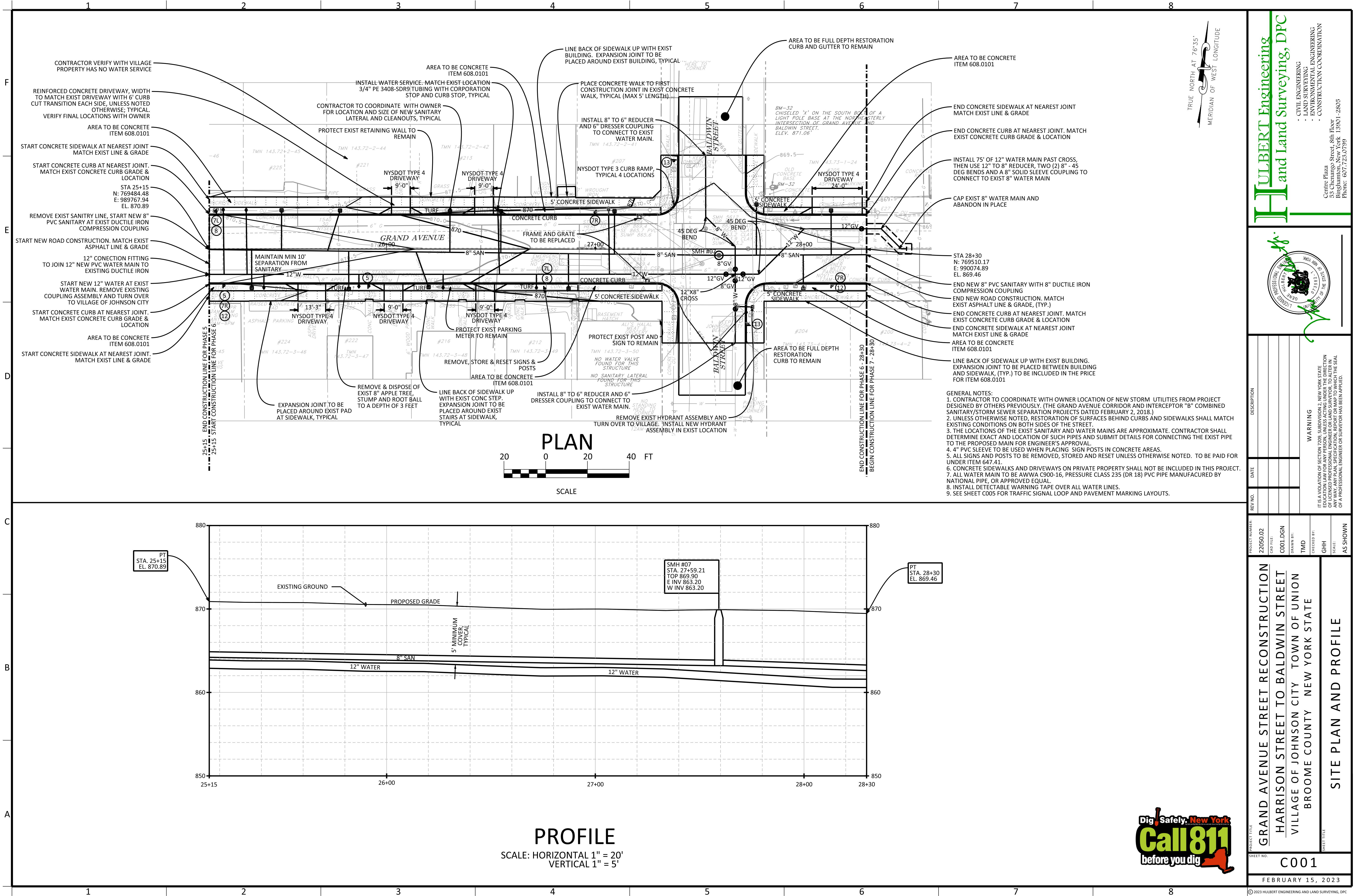
BIT	BITUMINOUS PAVEMENT
CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CONC	CONCRETE
DIP	DUCTILE IRON PIPE
ELEV	ELEVATION
FF	FINISHED FLOOR ELEVATION
INV	INVERT
MH	MANHOLE
PVC	POLYVINYLCHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
TC	TOP OF CURB
BC	BOTTOM OF CURB
TW	TOP OF WALL
BW	BOTTOM OF WALL
BOT	BOTTOM
EXIST	EXISTING
ROW	RIGHT OF WAY



PROJECT TITLE
GRAND AVENUE STREET RECONSTRUCTION
HARRISON STREET TO BALDWIN STREET
VILLAGE OF JOHNSON CITY TOWN OF UNION
BROOME COUNTY NEW YORK STATE

C000

FEBRUARY 15, 2023



Technical drawing of a stylized arrow. The arrow is composed of a rectangular shaft and a triangular head. The shaft has a height of 2'-4" and a width of 6". The head has a total height of 2'-2" (from the top of the shaft) and a total width of 18" (9" on each side of the centerline). The base of the head is 6" wide, matching the shaft. The drawing includes dimension lines and arrows indicating the measurements.

NOTES:

1. SEE NYSDOT AND TOWN OF UNION TYPICAL SIDEWALK, CURB AND GUTTER, AND CURB SECTIONS FOR FURTHER DETAILS.
2. ITEM 418.7603 TO BE APPLIED BETWEEN ALL ASPHALT VERTICAL JOINTS AS PER NYSDOT SPECIFICATION.
3. START OF ALL NEW CONCRETE WALKS AT EXIST WALKS SHALL HAVE #3 REBAR DOWELS, 12" LENGTHS, CENTERED ACROSS THE JOINT, SPACED 1' C/C, INSTALLED WITH NYSDOT SPECIFIED ANCHORING MATERIAL. (TO BE PAID FOR UNDER CONCRETE SIDEWALK LINE ITEM)

FINISHED GRADE

1'-4"

4"

4" PVC THREADED CAP AND NUT

GRAVEL/SUBBASE IN TURF AREAS

GENERAL BOUNDARIES #18111 CLEANOUT BOX

4" PVC LENGTH VARIES (AS NEEDED)

4" STREET ELBOW 45°

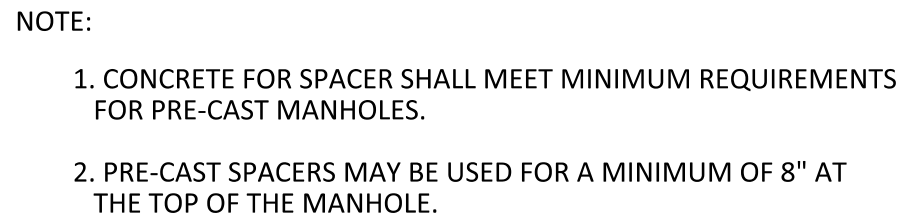
45° WYE

FLOW

NOTE:
SEWER CLEANOUT ITEM 26.1 TO INCLUDE ALL
EXCAVATION, MATERIALS, FILL, LABOR, EQUIPMENT, AND
ANY OTHER MISC. ITEMS IN THE COST BID PER EACH
INSTALLED SEWER CLEANOUT.

NOTE:
SEWER LATERAL ITEM 26.2 TO INCLUDE ALL EXCAVATION,
MATERIALS, FILL, LABOR, EQUIPMENT, AND ANY OTHER
MISC. ITEMS IN THE COST BID PER FOOT OF INSTALLED
SEWER LATERAL.

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NOTE:

- 1) WHEN THE LIDS ARE FOR SANITARY SEWER, THE WORDS "SANITARY SEWER" SHALL BE CAST IN THE LIDS.
- 2) WHEN THE LIDS ARE FOR STORM SEWER, THE WORDS "STORM SEWER" SHALL BE CAST IN THE LIDS.
- 3) LIDS SHALL BE NON-ROCKING TYPE (MACHINE BEARING SURFACE).
- 4) CASTINGS SHALL BE NEENAH R-1726-A OR APPROVED EQUAL, TOTAL WEIGHT 350 POUNDS.



CASTINGS SHALL BE INCLUDED IN
THE COST OF THE STRUCTURE



WHEN PIPES ARE STRAIGHT AT THE SAME ELEVATION THE PIPES MAY BE USED FOR CHANNELIZATION, WITH THE TOP HALF OF PIPE BROKEN OUT AND THE CONCRETE OR CEMENT MORTAR FILL PUT IN ON A 1 ON 4 SLOPE TO INSIDE WALL OF MANHOLE.

RADIUS FOR CHANNELIZATION, INSIDE RADIUS = 6" MINIMUM.

TYPICAL MANHOLE BASE CHANNELIZATION



STANDARD CATCHBASIN
FRAME & GRATE
NEENAH R-3067
(OR APPROVED EQUAL)

FRAME	325 LBS.
GRATE	185 LBS.
TOTAL	510 LBS.



CASTINGS SHALL BE INCLUDED IN
ITEM 655.1003

FRAME & GRATE FOR CATCHBASIN
NOT TO SCALE



SHEET NO. **C003**
FEBRUARY 15, 2023

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GRAND AVENUE STREET RECONSTRUCTION
HARRISON STREET TO BALDWIN STREET
VILLAGE OF JOHNSON CITY TOWN OF UNION
BROOME COUNTY NEW YORK STATE

SITEWORK DETAILS

F

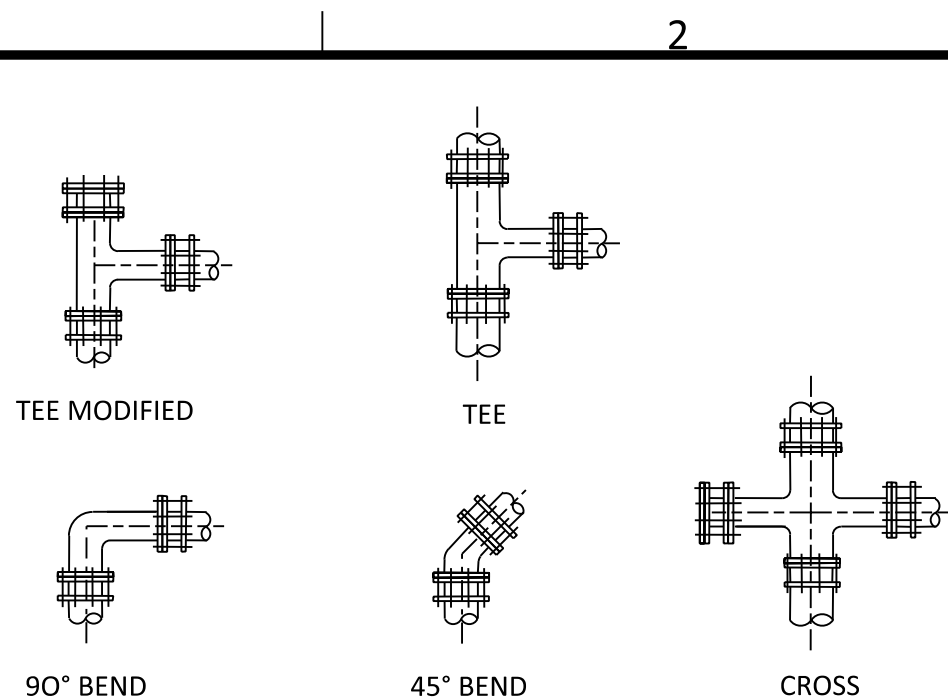
E

D

C

B

A



MINIMUM RESTRAINED LENGTHS							
PIP I.D. INCHES	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND	* SIZE X SIZE TEE	10 X 6 REDUCING TEE	VALVE HYDRANT DEAD END
6"	13'	6'	3'	2'	13'	13'	19'
8"	19'	8'	4'	2'-6"	19'	19'	24'
12"	27'	11'-6"	5'-6"	3'-6"	27'	27'	35'

MINIMUM VERTICAL OFFSETS		
PIPE I.D. INCHES	**45° VERTICAL OFFSET	** 22 1/4° VERTICAL OFFSET
6"	8'/4"	4'/2"
8"	11'/5'-6"	5'-6"/3'
12"	15'-6"/8'	7'-6"/4'

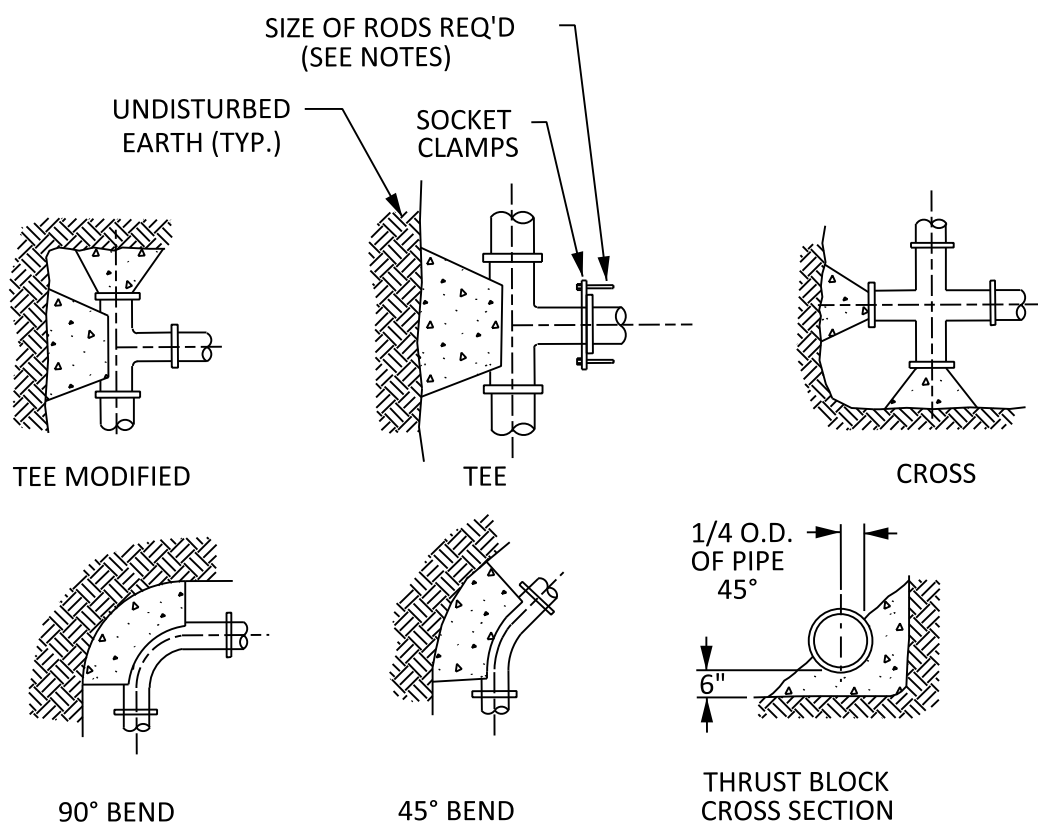
* RESTRAINED LENGTHS FOR TEES ARE FOR THE BRANCH OUTLET AND ASSUME A MINIMUM ATTACHED LENGTH OF PIPE OF 10' ON EACH SIDE OF THE RUN. RESTRAINT DEVICES SHALL ALSO BE INSTALLED ON BOTH RUN JOINTS OF THE TEE ITSELF.

** FIRST NUMBER IS THE LENGTH HIGH SIDE (LHS) OR MINIMUM RESTRAINED LENGTH ON EACH SIDE OF THE DOWN BENDS. SECOND NUMBER IS LENGTH LOW SIDE (LLS) OR MINIMUM RESTRAINED LENGTH ON EACH SIDE OF THE UP BENDS.

NOTE:
ANY JOINTS THAT FALL WITHIN THE ABOVE MINIMUM LENGTHS SHALL BE RESTRAINED ON BOTH SIDES OF BENDS, ON THE BRANCH OUTLETS OF TEES, AND BEFORE REDUCERS OR DEAD ENDS.

WATER MAIN THRUST RESTRAINT AND CONNECTION DETAILS

NOT TO SCALE



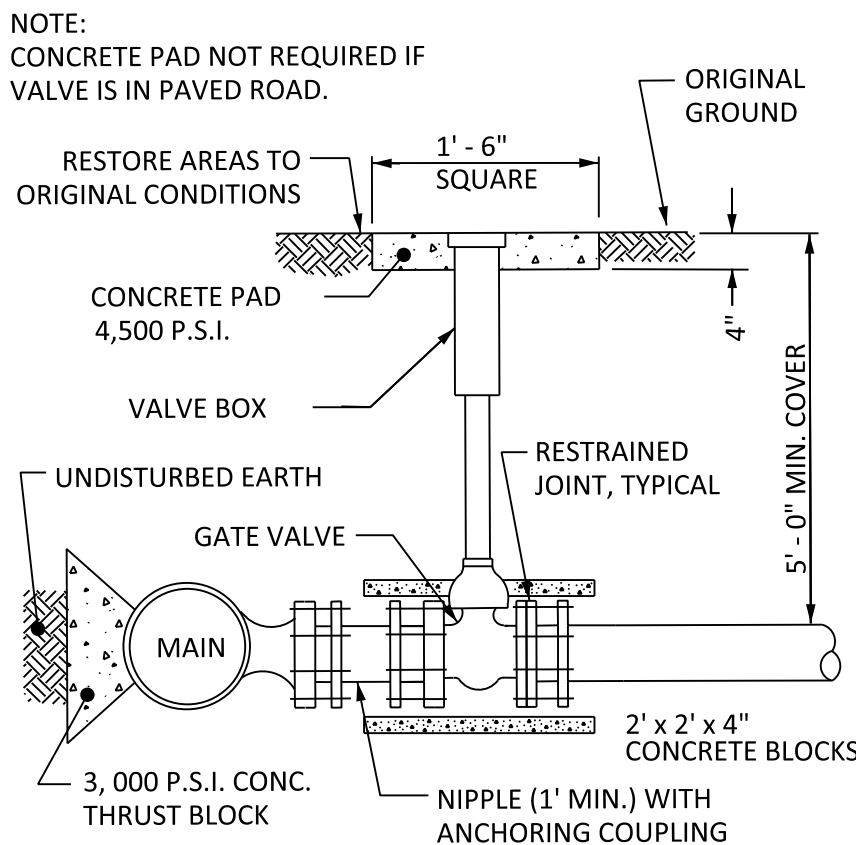
MINIMUM REACTION BLOCK AREA - SQ. FT.						
PIPE I.D. IN	PLUG & TEE	TAPPING SLEEVE	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND
6	5	5	6	3	3	3
8	8	8	6	3	3	3
10	8	8	8	4	3	3
12	16	16	22	12	6	3

TEES ARE TO BE CONSIDERED AS 90° BENDS. THE AREAS REFERRED TO ABOVE ARE THE CROSS SECTIONAL AREAS OF THE CONCRETE REACTION BLOCKS WHERE THE CONCRETE COMES IN CONTACT WITH THE SOLID AND UNDISTURBED TRENCH WALL.

- NOTES:
1. ALL CONCRETE SHALL BE TRANSIT MIX CAST-IN-PLACE UNLESS OTHERWISE APPROVED.
 2. ALL THRUST BLOCKS SHALL BE 3,000 PSI CONCRETE UNIFORMLY MIXED BEFORE PLACING ON UNDISTURBED EARTH AS SHOWN ON DETAILS.
 3. THE THRUST BLOCKS SHOWN FOR TEES SHALL ALSO BE USED FOR PLUGGED ENDS.
 4. AT REMOVABLE PLUGS ON WATER SERVICE BRANCHES, A SHEET POLYETHYLENE BOND BREAK SHALL BE UTILIZED BETWEEN THE REMOVABLE PLUG AND ANY CONCRETE THRUST BLOCK REQUIRED.
 5. WHERE THRUST BLOCKS ARE LOCATED IN FILL EARTH, IN ADDITION TO THE BLOCKING, THE CONTRACTOR SHALL USE RODDING AS A TEMPORARY MEANS OF RESTRAINING WATER LINE. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR APPROVAL, WITH DETAILS OF THE RODDING SYSTEM TO BE USED FOR EACH PARTICULAR CASE.
 6. ABOVE THRUST BLOCK AREAS ARE MINIMUM REQUIREMENTS. LARGER AREAS MAY BE REQUIRED IN LESS SUITABLE SOILS.

WATER MAIN THRUST BLOCK AND CONNECTION DETAILS

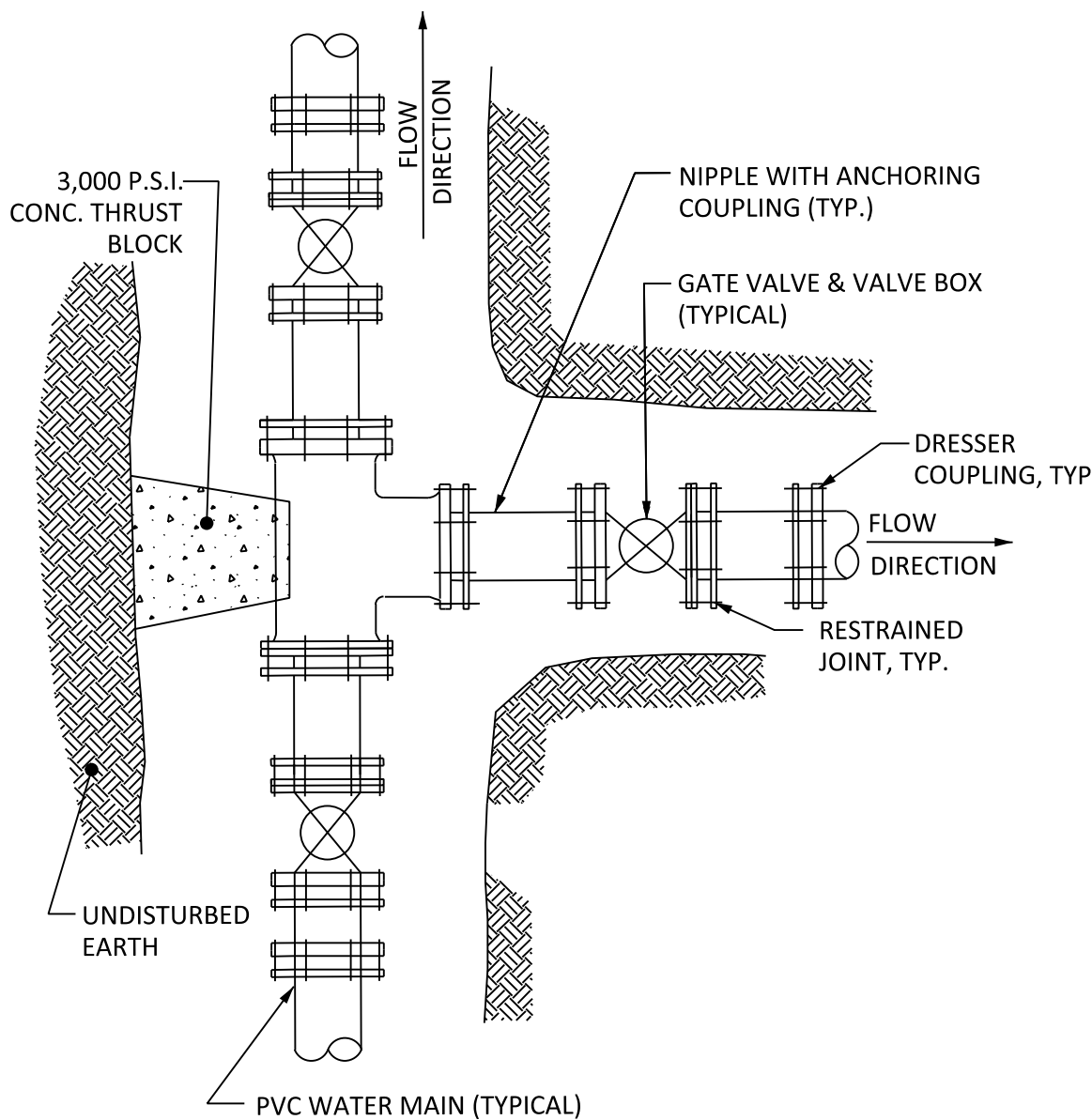
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TYPICAL VALVE TIE DETAIL

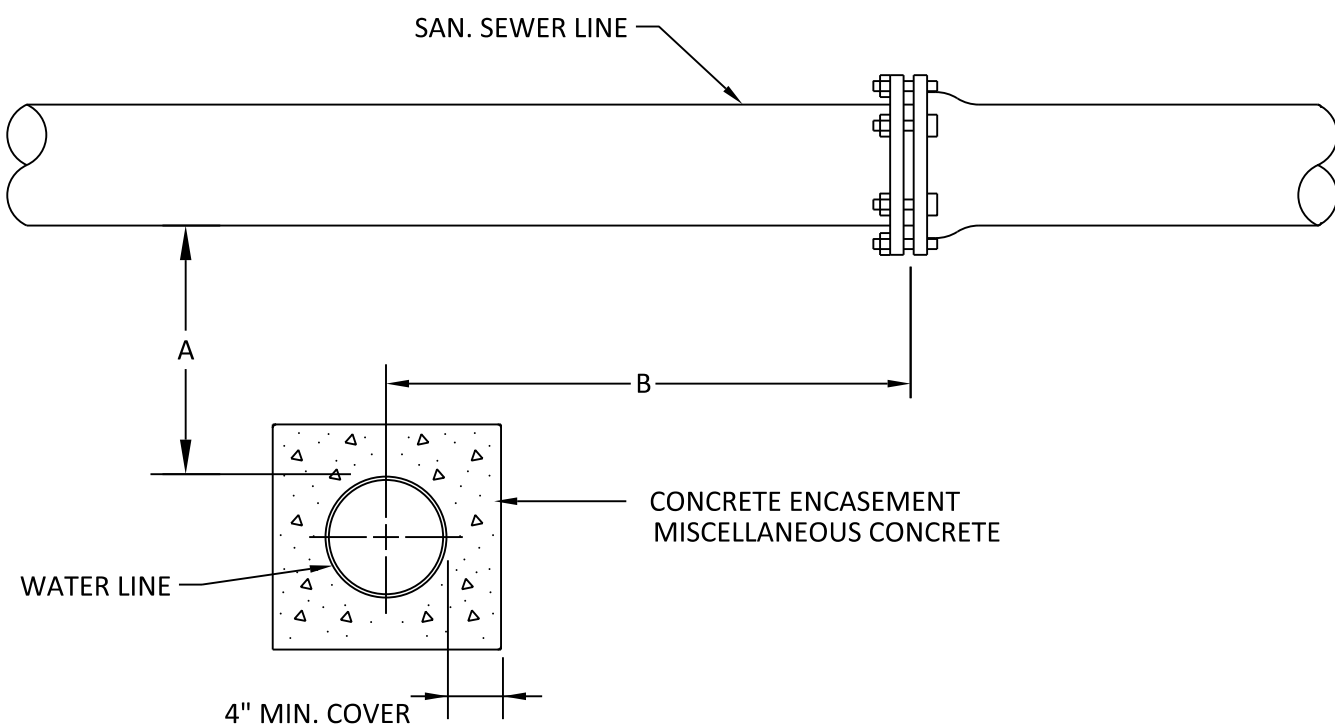
NOT TO SCALE

NOTE:
VALVE BOXES SHALL HAVE A MINIMUM 1/2" RISER.



TYPICAL VALVE CLUSTER DETAIL

NOT TO SCALE



*NO SEPARATE PAY ITEM SHALL BE USED FOR THIS DETAIL

NOTE:

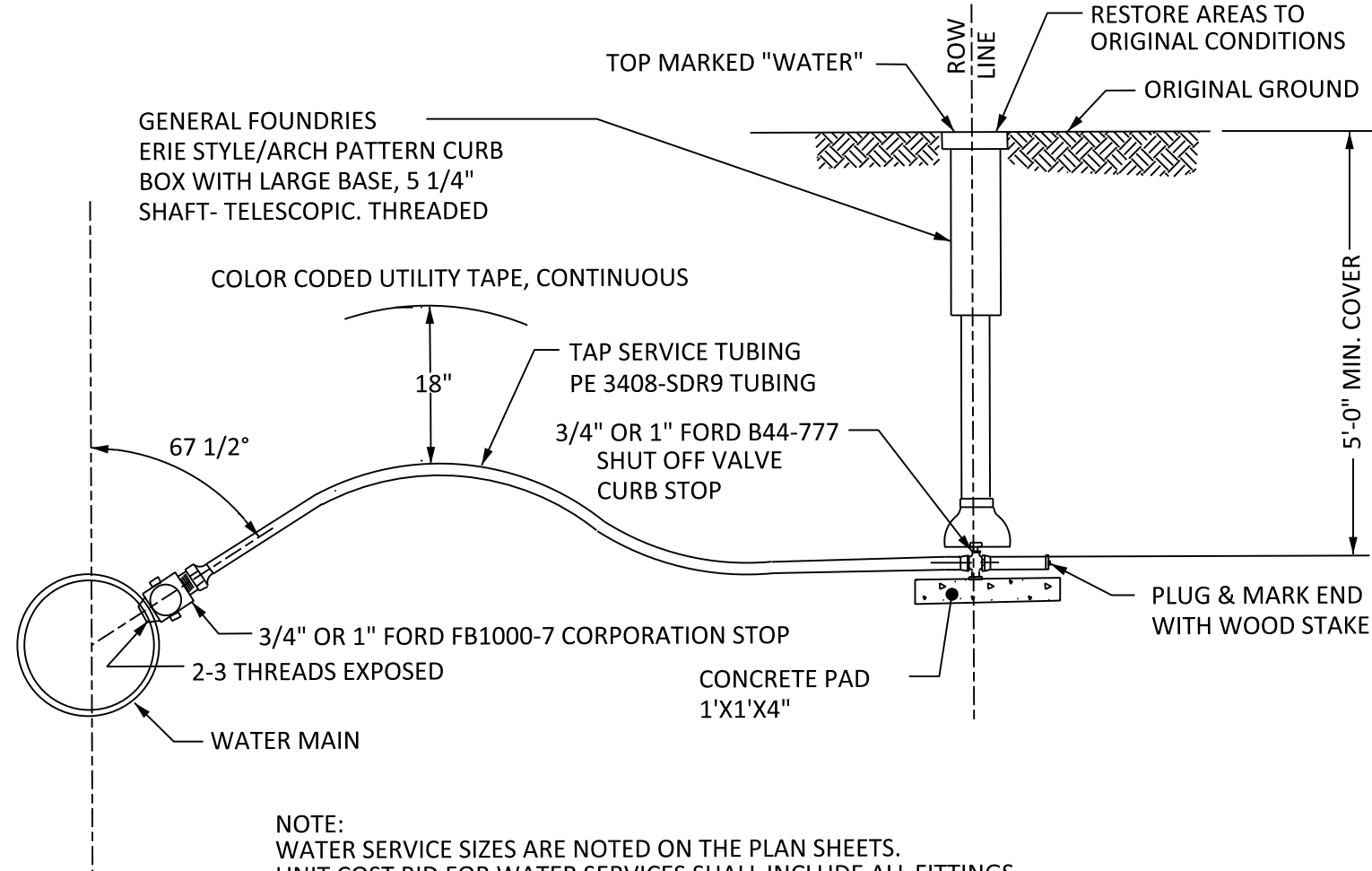
CONCRETE ENCASEMENT SHALL BE USED WHEN DIMENSION "A" IS LESS THAN 1'-6" FOR A DISTANCE OF 3'-0" EACH SIDE OF THE WATER LINE.

IF DIMENSION "B" IS LESS THAN 7'-0" THE WATER LINE SHALL BE RELOCATED IF ORDERED BY THE ENGINEER TO PROVIDE "A"= 1'-6" MINIMUM.

IF SUCH VERTICAL SEPARATION CAN NOT BE ACCOMPLISHED THE WATER LINE SHALL BE RECONSTRUCTED IF SO ORDERED USING MECHANICAL JOINT PIPE TO PROVIDE "B"= 7'-0" MIN.

WATER LINE CROSSING

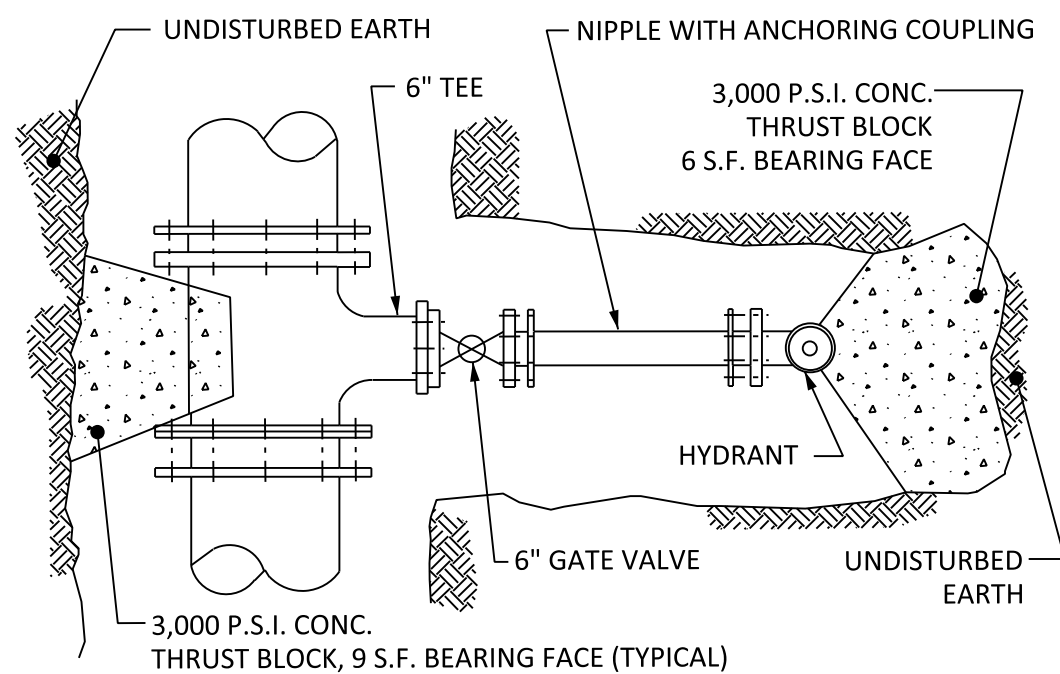
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WATER SERVICE CONNECTION DETAIL

NOT TO SCALE

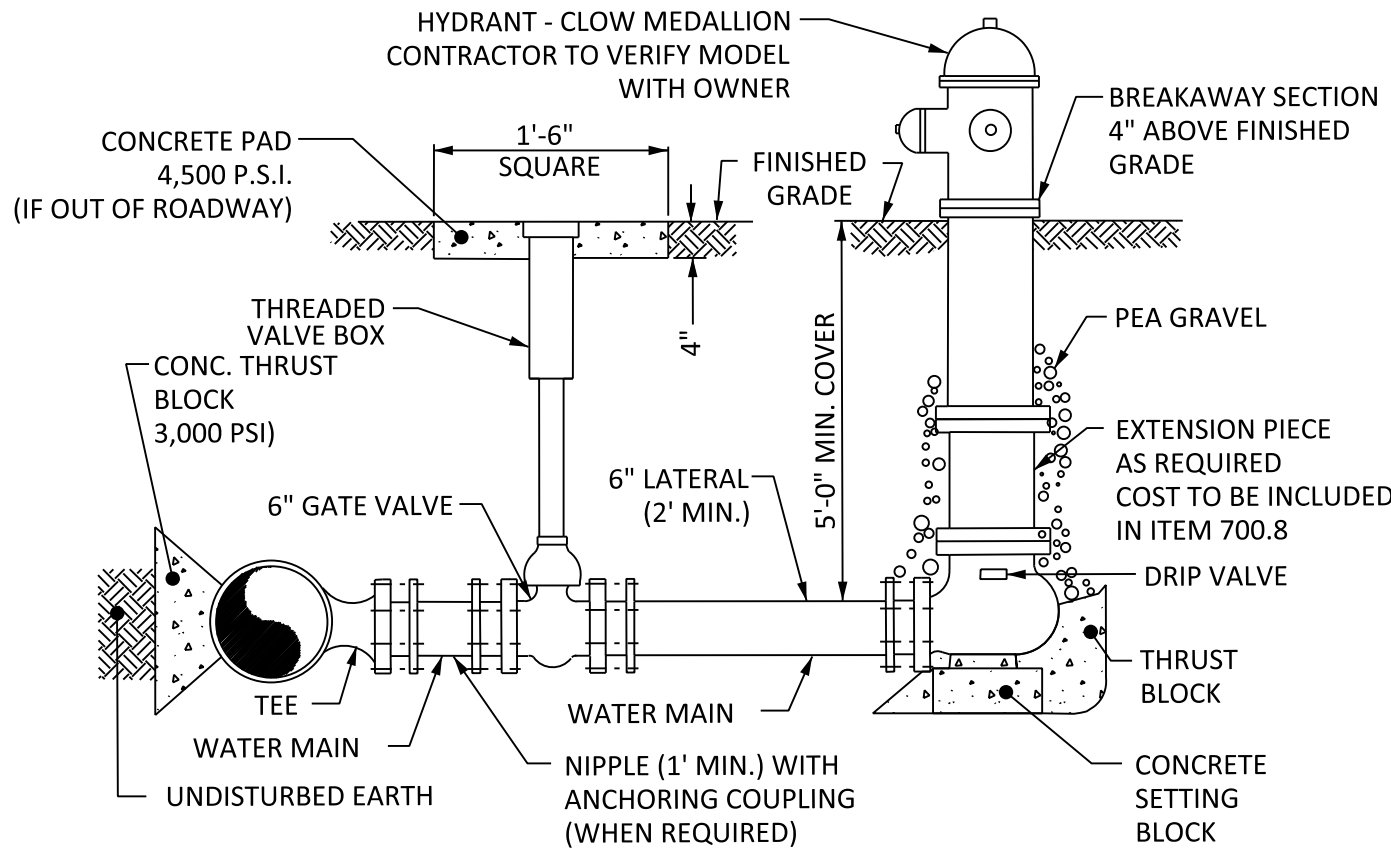
NOTE:
WATER SERVICE SIZES ARE NOTED ON THE PLAN SHEETS.
UNIT COST BID FOR WATER SERVICES SHALL INCLUDE ALL FITTINGS.
COUPLINGS IF NEEDED) SHALL BE 3/4" "FORD C44-77" WITH GRIP JOINT.



HYDRANT SETTING DETAIL

NOT TO SCALE

- NOTE:
HYDRANT ASSEMBLY COMPLETE INCLUDES:1.
1. 6" GATE VALVE AND VALVE BOX
 2. TEE (SIZE TO SUIT MAIN DIAMETER)
 3. ANCHOR COUPLINGS & TIE RODS
 4. HYDRANT (FURNISH HYDRANT INCLUDES THIS ITEM ONLY)
 5. GRAVEL DRAIN MATERIAL
 6. CONCRETE PAD (NOT REQUIRED IF VALVE IS IN PAVED ROAD)
 7. NO LEAD BRASS.
 8. 6" WATER MAIN.
 9. EXTENSION PIECE



HYDRANT ASSEMBLY DETAIL

NOT TO SCALE



DESCRIPTION		DATE		REV. NO.		PROJECT NUMBER		CADD FILE		DRAWN BY		CHECKED BY		SCALE		AS SHOWN	
						22050.02		C004.DGN		TMD		GHH					

WARNING

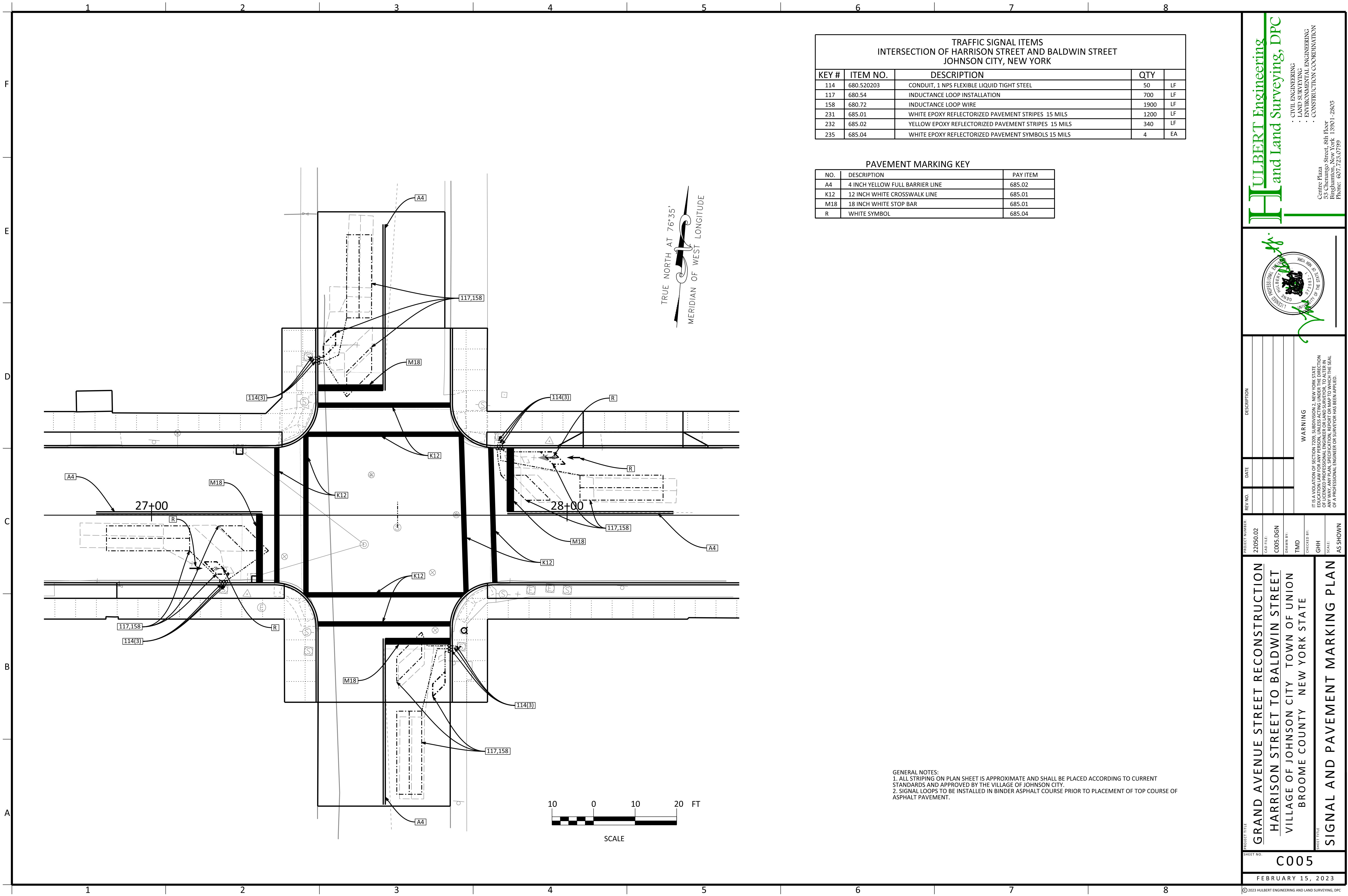
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GRAND AVENUE STREET RECONSTRUCTION
HARRISON STREET TO BALDWIN STREET
VILLAGE OF JOHNSON CITY TOWN OF UNION
BROOME COUNTY NEW YORK STATE

SITEWORK DETAILS

C004

FEBRUARY 15, 2023



GENERAL NOTES:
1. ALL STRIPING ON PLAN SHEET IS APPROXIMATE AND SHALL BE PLACED ACCORDING TO CURRENT STANDARDS AND APPROVED BY THE VILLAGE OF JOHNSON CITY.
2. SIGNAL LOOPS TO BE INSTALLED IN BINDER ASPHALT COURSE PRIOR TO PLACEMENT OF TOP COURSE OF ASPHALT PAVEMENT.

TRAFFIC SIGNAL ITEMS INTERSECTION OF HARRISON STREET AND BALDWIN STREET JOHNSON CITY, NEW YORK				
KEY #	ITEM NO.	DESCRIPTION	QTY	
114	680.520203	CONDUIT, 1 NPS FLEXIBLE LIQUID TIGHT STEEL	50	LF
117	680.54	INDUCTANCE LOOP INSTALLATION	700	LF
158	680.72	INDUCTANCE LOOP WIRE	1900	LF
231	685.01	WHITE EPOXY REFLECTORIZED PAVEMENT STRIPES 15 MILS	1200	LF
232	685.02	YELLOW EPOXY REFLECTORIZED PAVEMENT STRIPES 15 MILS	340	LF
235	685.04	WHITE EPOXY REFLECTORIZED PAVEMENT SYMBOLS 15 MILS	4	EA

PAVEMENT MARKING KEY		
NO.	DESCRIPTION	PAY ITEM
A4	4 INCH YELLOW FULL BARRIER LINE	685.02
K12	12 INCH WHITE CROSSWALK LINE	685.01
M18	18 INCH WHITE STOP BAR	685.01
R	WHITE SYMBOL	685.04

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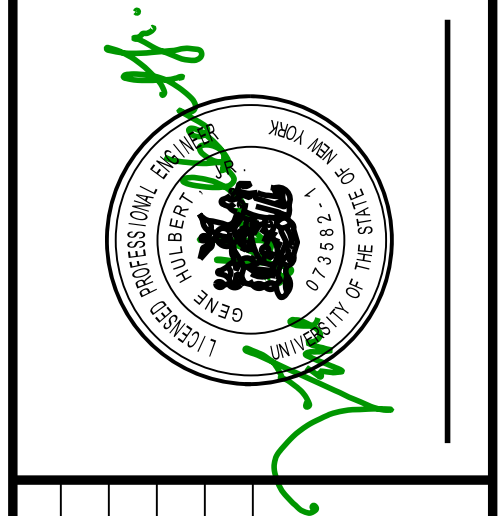
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PROJECT NUMBER:
22050.02

CAD FILE:
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TMD

CHECKED BY:
GHH

SCALE:
AS SHOWN

PROJECT TITLE
GRAND AVENUE STREET RECONSTRUCTION
HARRISON STREET TO BALDWIN STREET
VILLAGE OF JOHNSON CITY TOWN OF UNION
BROOME COUNTY NEW YORK STATE

SHEET TITLE
SIGNAL AND PAVEMENT MARKING PLAN

SHEET NO.:
C005

FEBRUARY 15, 2023

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