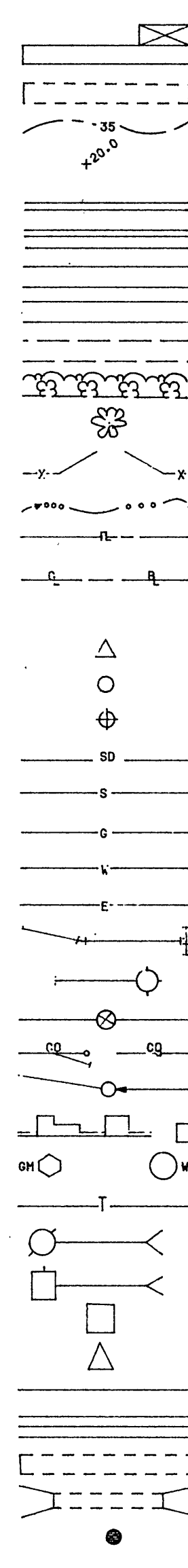


ABBREVIATIONS

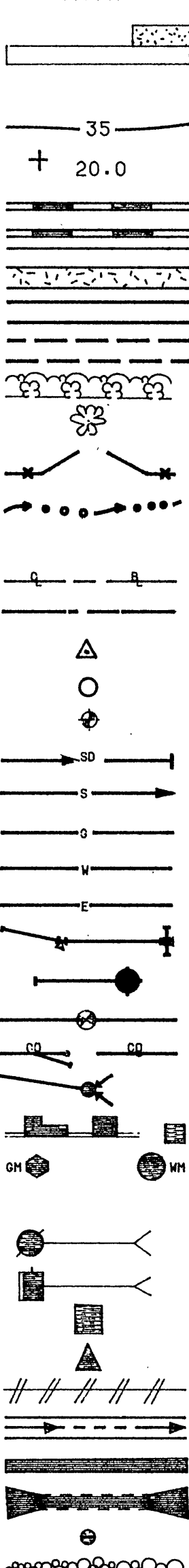
ABUT	ABUTMENT	PIV	POST INDICATOR VALVE
ABV	ABOVE	PL	PLATE, PROPERTY LINE
ADD	ADDITIONAL	PLYMD	PLYWOOD
ADJ	ADJACENT	POT	POINT ON TANGENT
ADPR	ADVERTISE	PERF	PERFORATED
ADR	ANCHOR	POL	POINT ON LINE
AMC	ANCHOR	PRC	POINT OF REVERSE CURVE
ALUM	ALUMINUM	PSI	POUNDS PER SQ INCH
ALT	ALTERNATE	PT	POINT OF TANGENT
APPROX	APPROXIMATE	PVC	POINT OF VERTICAL CURVE
AWA	AMERICAN WATER WORKS ASSOCIATION	PVI	POINT OF VERTICAL INTERSECTION
BL	BITUMINOUS	PVMT	PAVEMENT
BLDG	BUILDING	PVT	POINT OF VERTICAL TANGENT
BLKG	BLOCKING	R	RADIUS
BM	BENCH MARK, BEAM	RT	RIGHT
BOTT	BOTTOM	R/W	RIGHT OF WAY
B	BRICK	RD	ROAD
BRG	BEARING	RODR	ROD
BSMT	BASEMENT	REINF	REINFORCE, REINFORCEMENT
C TO C C/C	CENTER TO CENTER	REDD	REQUIRED
C & G	CURB & GUTTER	REV	REVISION
OF	CAPACITY	S	SANITARY SEWER, SOUTH, STORY
OF	CUBIC FEET	SAN	SANITARY
OF	CUBIC YARD	SCN	SCHEDULE
CI	CIRCULAR	SD	STORM DRAIN
CIRC	CENTER LINE	SECT	SECTION
CLR	CLEAR	SHT	SHEET
CMP	CORRUGATED METAL PIPE	SHTG	SHEETING
CND	CONDUIT	SH	SIMILAR
CO	CLEAN OUT	SPEC	SPECIFICATION
COL	COLUMN	SPCS	SPECIFICATIONS
CONC	CONCRETE	SQ	SQUARE
CMU	CONCRETE MASONRY UNITS	SS	STAINLESS STEEL
CONN	CONNECT, CONNECTION	STA	STATION
CONT	CONTINUOUS	STD	STANDARD
CONTR	CONTRACTOR	STL	STEEL
CTR	CENTER	SURF	SURFACE
CR. STONE	CRUSHED STONE	SER	SERVICE
CULV	CULVERT	SUR	SURVEY
D	DEPTH, DEGREE OF CURVE	SYMM	SYMMETRICAL
DEPT	DEPARTMENT	TDO	TURNED DOWN CURB
DET.	DETAIL	TELE	TELEPHONE
DI	DROP INLET, DUCTILE IRON	TEMP	TEMPORARY
DIA	DIAMETER	THK	THICK
DIM	DIMENSION	TV	TELEVISION
DISC	DISCONNECT	TW	TOP OF WALL
DHM	DROP MANHOLE	TRD	TREATED
DN	DOWN	TYP	TYPICAL
DS	DOWN SPOUT	UG	UNDERGROUND
DR	DRIVE	VAL	VALVE
DXL	DWELLING	VAP. BAR.	VAPOR BARRIER
DWG	DRAWING	VC	VERTICAL CURVE
E	EACH	VERT	VERTICAL
EA	EACH FACE	VOL	VOLUME
EF	EXPANSION JOINT	VONT	VIRGINIA DEPT OF HIGHWAYS AND TRANSPORTATION
EJ	ELEVATION	W	WITH
ELEC	ELECTRIC, ELECTRICAL	W/O	WITHOUT
ENGR	ENGINEER	WD	WOOD
ENTR	ENTRANCE	WL	WATER LINE
EQ	EDGE OF LINE	WS	WATER SURFACE
EP	EDGE OF PAVEMENT	WTF	WELDED WIRE FABRIC
EQ	EQUAL	WVHD	WEST VIRGINIA DEPT OF HIGHWAYS
EQUIP	EQUIPMENT	LOC.	LOCATION
EX	EACH WAY, ENDWALL	B.O.	BOTTOM OF CURB
EXT	EXISTING	T.O.	TOP OF CURB
F	FRAME	CONST.	CONSTRUCTION
FBN	FLOOR DRAIN	PERM.	PERMANENT
FES	FLARED END SECTION	CVR	COVER
FIG	FIGURE	ULP	UTILITY POLE W/LIGHT
FIN	FINISH	UP	UTILITY POLE
FL	FLOOR	L/P	LIGHT POLE
FLEX	FLEXIBLE	P/P	POWER POLE
FLG	FLANGE	SF	SQUARE FEET
FT	FOOT	FR	FRAME
FTG	FOOTING		
FUT	FUTURE		
GAL	GALLON		
GALV	GALVANIZED		
GND	GROUND		
GOVT	GOVERNMENT		
GPM	GALLONS PER MINUTE		
GV	GATE VALVE		
HM	HOLLOW METAL		
HB	HOSE BIBB		
HDR	HORIZONTAL		
HP	HORSEPOWER, HIGH PRESSURE		
HPT	HIGH POINT		
HYD	HYDRANT		
ID	INSIDE DIAMETER		
IN	INCH		
INCL	INCLINATION		
INVT	INVERT		
JB	JUNCTION BOX		
L	LENGTH		
LF	LINEAL FOOT		
LP	LOW POINT		
LFT	LEFT		
LX	LASER		
MAT.	MATERIAL		
MAX	MAXIMUM		
MFG	MANUFACTURER		
MI	MANHOLE		
MIN	MINIMUM		
MISC	MISCELLANEOUS		
MON	MONUMENT		
N & C	NAIL & CAP		
NTD	NOT IN CONTRACT		
NO	NUMBER		
NTS	NOT TO SCALE		
OD	ON CENTER		
OD	OUTSIDE DIAMETER		
OPNG	OPENING		
OPP	OPPOSITE		
PER	PERIMETER		
PERP	PERPENDICULAR		
PC	POINT OF CURVE		
PCC	POINT OF COMPOUND		
P1	POINT OF INTERSECTION		

LEGEND

EXISTING



NEW



DESCRIPTION

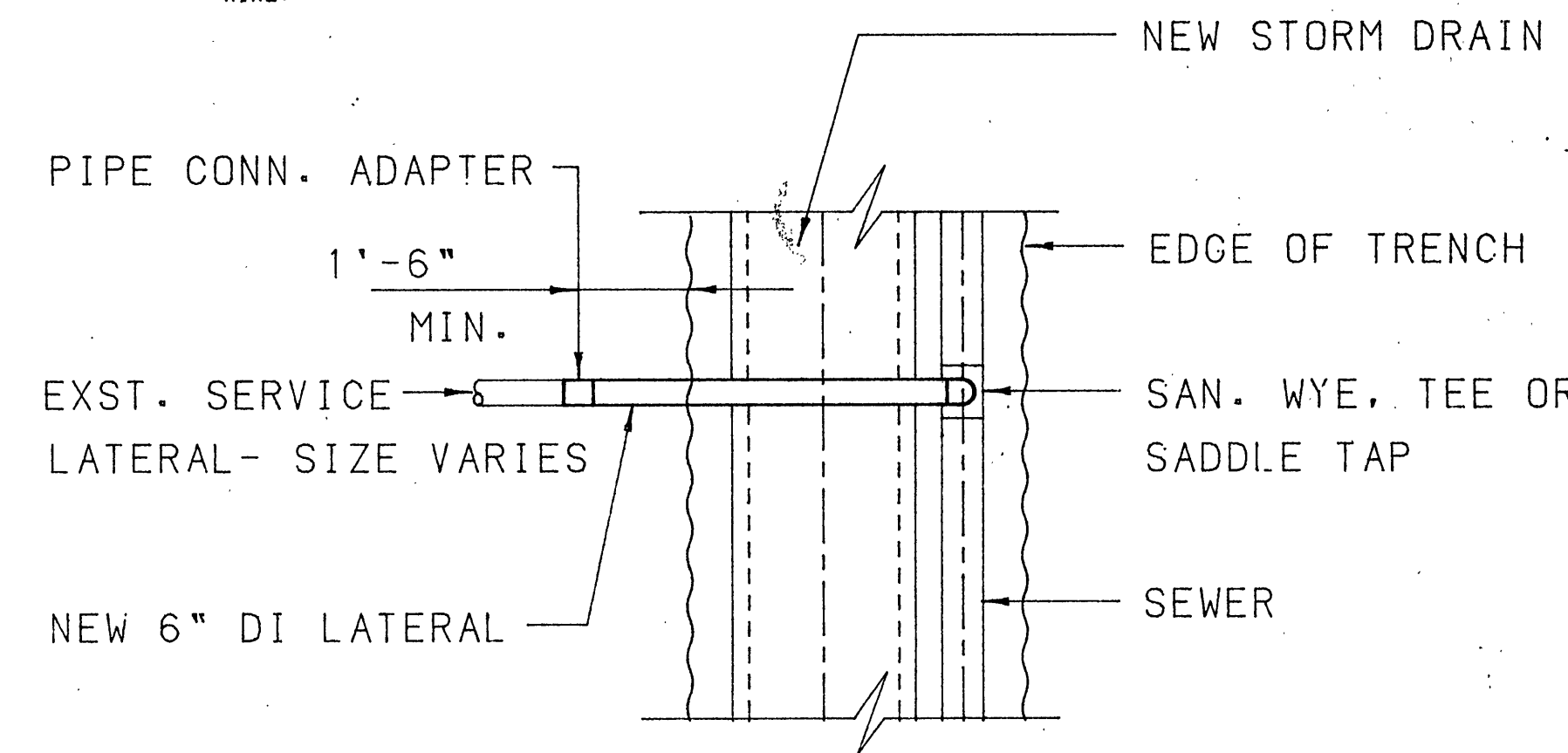
BUILDING WITH PORCH OR SToop
FOUNDATION ONLY
CONTOUR, CONTOUR WITH ELEVATION
SPOT ELEVATION
CONCRETE CURB
CONCRETE CURB & GUTTER
CONCRETE WALK OR SLAB
PAVEMENT
UNPAVED OR GRAVEL ROAD
TREE LINE
TREE OR SHRUB
FENCE AND GATE
CENTERLINE OF DITCH OR SHALE
PROPERTY LINE
CENTERLINE OR BASELINE
LIMIT OF WORK LINE
FIELD SURVEY TRAVERSE POINT
P.C. OR P.T.
GEOLOGIC BORE HOLE
STORM DRAIN AND ENDWALL
SANITARY SEWER
GAS MAIN OR SERVICE LINE
WATER MAIN OR SERVICE LINE
ELECTRICAL LINE
PIPE FITTINGS AND REACTION BLOCKING
FIRE HYDRANT
DATE VALVE
CLEANOUT
MANHOLE
DROP INLET (CURB AND GRATING TYPES)
G.M. - GAS METER, W.M. - WATER METER
TELEPHONE LINE
TELEPHONE POLE, UTILITY POLE, GUY AND ANCHOR
POWER POLE, GUY AND ANCHOR
TELEPHONE PEDESTAL
BURIED TELEPHONE VAULT
ABANDON OR REMOVE
PAVED DITCH
DRIVEWAY CULVERT
CULVERT WITH FLARED END SECTION
IRON PIN OR PINCH PIPE
EROSION CONTROL STONE
STRAW BALES AND SILT TRAP
STORM DRAIN INLET PROTECTION
TEMPORARY DIVERSION DIKE
TEMPORARY SEDIMENT TRAP
TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
STRAW BALE BARRIER
RIPRAP
FORCE MAIN
8" SEWER LATERAL WITH CLEANOUT
DI - DUCTILE IRON PIPE
PVC - PVC PIPE

GENERAL NOTES

GENERAL NOTES:

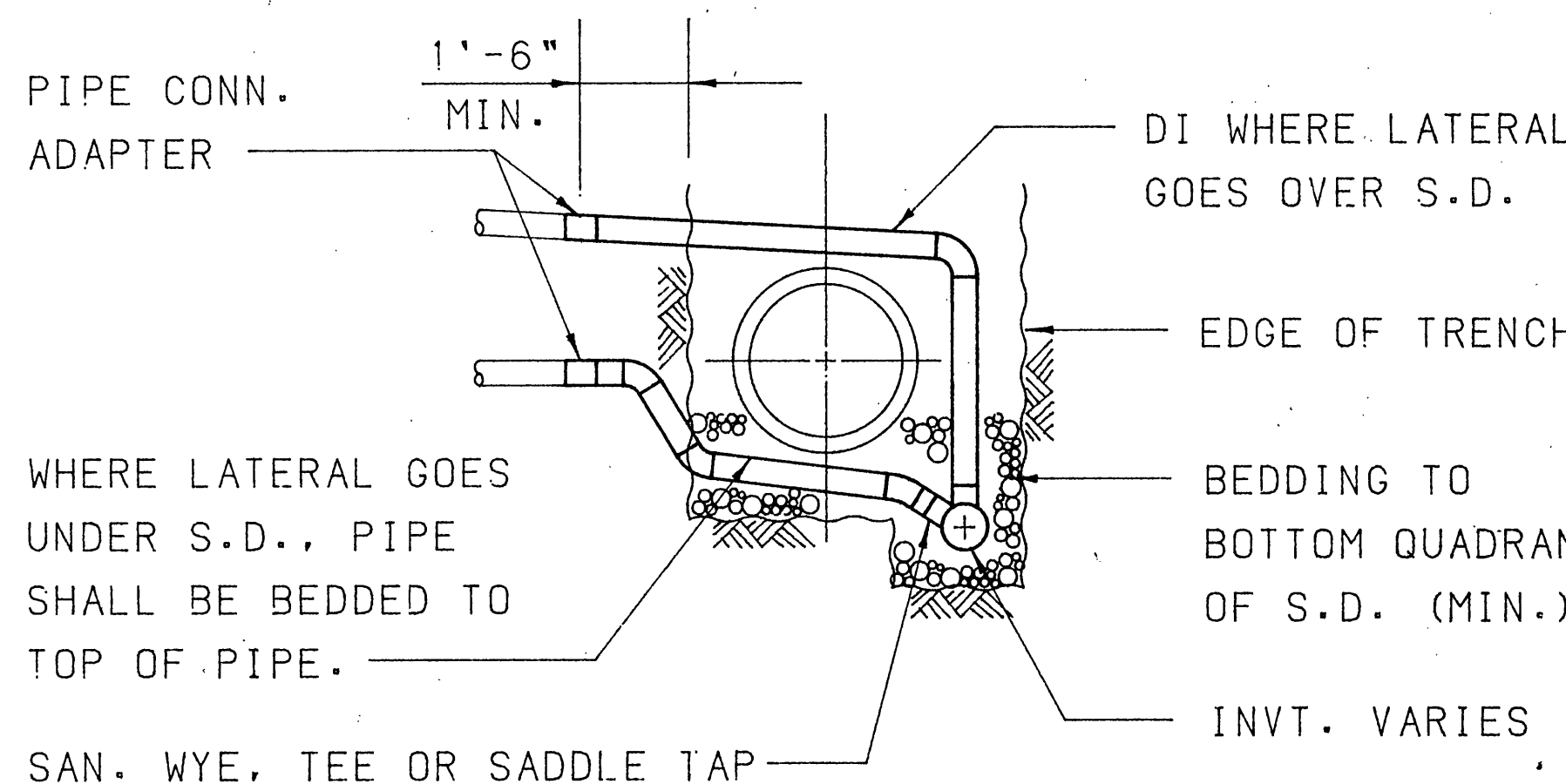
- EXISTING TOPOGRAPHIC INFORMATION IS TAKEN FROM:
A. AERIAL PHOTOGRAPHY TAKEN BY AERIAL DATA REDUCTION ASSOCIATES.
B. FIELD SURVEYS PERFORMED BY MATTERN & CRAIG IN APRIL, 1987.
- ELEVATIONS ARE USGS DATUM, UNLESS OTHERWISE INDICATED.
- GRID CO-ORDINATES SHOWN ARE VIRGINIA STATE PLANE CO-ORDINATE SYSTEM.
- BEARINGS ARE FROM TRUE NORTH.
- CONTRACTOR SHALL CONFIRM THE LOCATION OF EXISTING HORIZONTAL AND VERTICAL CONTROL POINTS AND SHALL ESTABLISH ANY ADDITIONAL CONTROL POINTS REQUIRED FOR CONSTRUCTION.
- THE LOCATION OF EXISTING UTILITIES, INCLUDING UNDERGROUND UTILITIES, IS INDICATED ON THE DRAWINGS INsofar AS THEIR EXISTENCE AND LOCATION WERE KNOWN AT THE TIME OF PREPARATION OF THE DRAWINGS. HOWEVER, NOTHING IN THESE CONTRACT DOCUMENTS SHALL BE CONSTRUED AS A GUARANTEE THAT SUCH UTILITIES ARE IN THE LOCATION INDICATED OR THAT THEY ACTUALLY EXIST, OR THAT OTHER UTILITIES ARE NOT WITHIN THE AREA OF OPERATIONS. THE CONTRACTOR SHALL MAKE ALL NECESSARY INVESTIGATIONS TO DETERMINE THE EXISTENCE AND LOCATIONS OF SUCH UTILITIES. THE CONTRACTOR SHALL PAY FOR ANY DAMAGE TO AND FOR MAINTENANCE AND PROTECTION OF EXISTING UTILITIES AND STRUCTURES. PARTICULAR CARE SHALL BE TAKEN IN WORKING AROUND THE LARGE, HIGH PRESSURE GAS MAINS AND THE LARGE DIAMETER WATER PIPES.
- THE CONTRACTOR IS DIRECTED TO DIG AND LOCATE ALL UTILITIES, IN ADVANCE OF THE PIPELAYING, TO ALLOW FOR ADJUSTMENTS, DUE TO CONFLICTS WITH THE UTILITIES, IN THE HORIZONTAL AND VERTICAL LOCATION OF THE PIPE LINE.
- ALL EXISTING AND NEW MANHOLE, HAND HOLE AND VALVE BOX TOPS SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO PLACING PAVEMENT SURFACE COURSE.
- ALL CURB AND GUTTER IS VDOT STANDARD CO-6 UNLESS OTHERWISE NOTED. TRANSITION OF NEW CURB AND GUTTER TO EXISTING SHALL MATCH EXISTING EITHER CITY OF ROANOKE STANDARD OR VDOT STANDARD CO-6.
- BENCH MARK: USGAS DISC STAMPED GLADE AZ1. DISC IS ON WILLIAMSON ROAD 58 YARDS NORTH OF CENTERLINE OF SYCAMORE AVENUE AT NORTH EDGE OF SERVICE STATION DRIVE, 57 YARDS SOUTH OF CENTERLINE OF THURSTON AVENUE LEADING WEST IN TOP 10-INCH CONCRETE WALL, AND 7 FEET WEST OF EAST END OF WALL, 10 INCHES ABOVE SIDE WALK.
- NEW SEWER LATERALS SHALL BE EXTENDED SHALL BE EXTENDED TO R/W / CLEANOUT * R/W LINE * COORDINATE LOCATION WITH PROPERTY OWNER. PLUG END OF PIPE IF NOT CONNECTED TO HOUSE HOUSE LATERAL.
- THE CONTRACTOR SHALL NOTE THE REQUIREMENTS AT SEVERAL LOCATIONS IN THE PLANS FOR ADVANCE DIGGING TO LOCATE EXISTING UNDERGROUND UTILITIES.
- NOTE THE SEQUENCE FOR CONSTRUCTION AND RESTORATION REQUIREMENTS IN THE SPECIFICATIONS.
- NOTE THE STANDARD DETAILS IN THE SPECIFICATIONS.
- CONTRACTOR SHALL ARRANGE FOR UTILITY POLE RELOCATIONS AS HIS SCHEDULE REQUIRES.
- FACE OF ALL NEW CURB AND GUTTER AND CURB INLETS SHALL BE SET 8' (EIGHT FEET) FROM RIGHT OF WAY LINE UNLESS OTHERWISE NOTED.
- ALL CONCRETE PIPE SHALL BE CLASS III UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL REPLACE PAVEMENT OVER TRENCHES AND SHALL OVERLAY OR RECONSTRUCT STREETS ONLY WHERE INDICATED.
- CONTRACTOR SHALL PROVIDE REQUIRED FILL MATERIAL BEHIND CURB TO TRANSITION TO PRIVATE PROPERTY, AND SHALL PROVIDE ADDITIONAL PAVEMENT AND FILL TO TRANSITION NEW ENTRANCES TO EXISTING DRIVEWAYS. SEE DETAIL BELOW.
- SANITARY SEWER LATERALS, WATER SERVICE LATERALS, AND GAS SERVICE LATERALS ARE GENERALLY NOT SHOWN; HOWEVER, CONTRACTOR IS REQUIRED TO MAINTAIN THESE SERVICES. SANITARY SEWER LATERALS CROSSING THE TRENCH SHALL BE REPLACED WITH DUCTILE IRON PIPE.
- CONTRACTOR SHALL PROVIDE A HANDICAP RAMP WHETHER INDICATED OR NOT AT ALL CORNERS OF ALL INTERSECTIONS WHERE NEW SIDE-WALK IS INDICATED.
- PRIOR TO PLUGGING OR ABANDONING EXISTING SEWERS, THE CONTRACTOR SHALL CONNECT ALL EXISTING SEWER LATERALS TO THE NEW SEWER LINES SO THAT SERVICE IS MAINTAINED TO EXISTING CONNECTIONS ASSOCIATED WITH THIS WORK. THE CONTRACTOR'S ATTENTION IS SPECIFICALLY CALLED TO THE FACT THAT EXISTING SEWER LINES ARE OLD AND RECORD DRAWINGS OF SEWER CONNECTIONS ARE INCOMPLETE. THE CONTRACTOR SHALL USE EXCAVATION, T.V. INSPECTION, DYE TESTING AND OTHER TECHNIQUES AS REQUIRED TO LOCATE ALL EXISTING SEWER LATERALS. CITY OF ROANOKE SHALL PROVIDE CONTRACTOR WITH ONE (1) COPY OF THE EXISTING SEWER MAPS OF THE PROJECT AREA.
- THE PLANS AND SUPPLEMENTARY DRAWINGS SHALL NOT BE SCALED, AND CONTRACTOR MUST VERIFY ALL DIMENSIONS AND ELEVATIONS AT THE SITE PRIOR TO PROCEEDING WITH THE WORK.

24. CONTRACTOR SHALL EXCAVATE TO LOCATE WATER LINE & DETERMINE IF IT CONFLICTS WITH STORM DRAIN. IF IT DOES, CONTRACTOR SHALL NOTIFY ENGINEER AT LEAST 3 WEEKS IN ADVANCE OF REQ'D RELOCATION. CITY WILL RELOCATE WATER LINE.



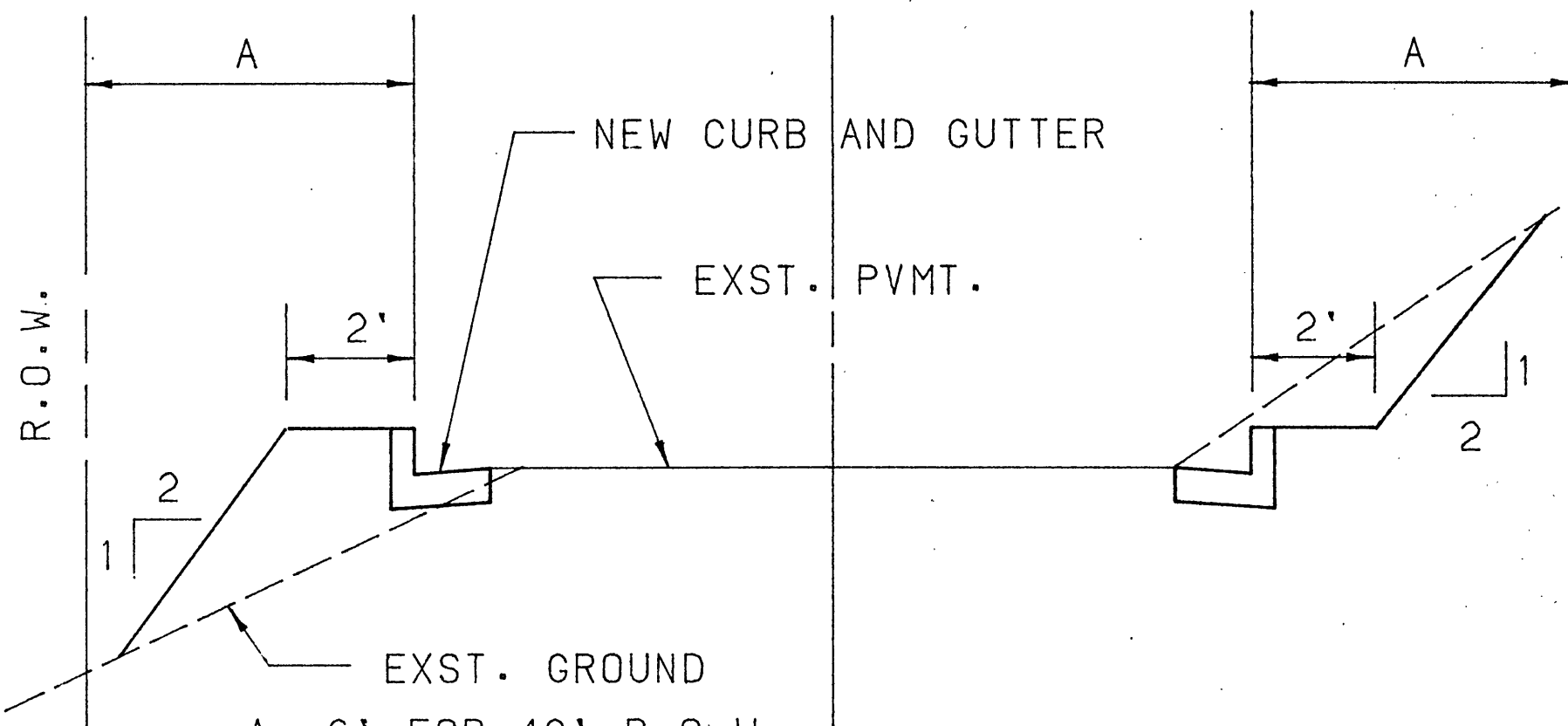
SEWER LATERAL REPLACEMENT DETAIL

NO SCALE



SECTION

NO SCALE



A = 6' FOR 40' R.O.W.
A = 7' FOR 45' R.O.W.
A = 8' FOR 50' R.O.W. OR GREATER
R.O.W. UNLESS OTHERWISE NOTED

CURB AND GUTTER IN FILL AREAS

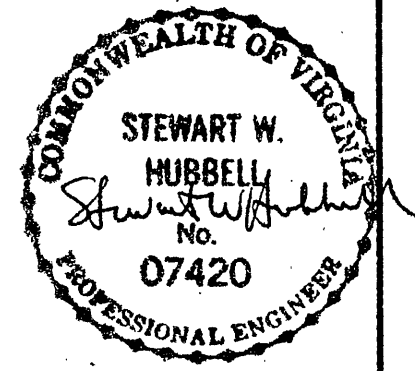
NO SCALE



Mattern & Craig
CONSULTING ENGINEERS - SURVEYORS

701 FIRST STREET, ROANOKE, VIRGINIA 24016 (703) 345-9342

DESIGNED: JLU
CHECKED: SWH
APPROVED: SWH



REVISION	DATE	DESCRIPTION	BY	APP.

DATE
JULY 1986
COMM.
582

WILLIAMSON ROAD STORM DRAIN- PHASE 2
CONTRACT I-C
ROANOKE, VIRGINIA
ABBREVIATIONS, LEGEND AND GENERAL NOTES

SHEET
3