

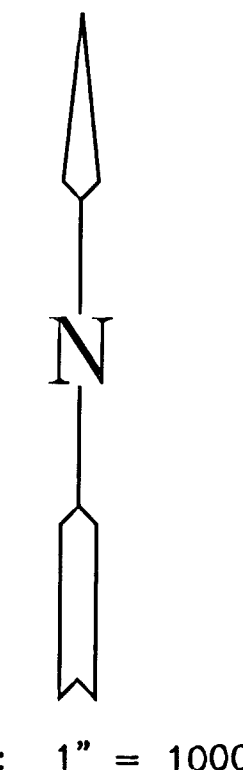
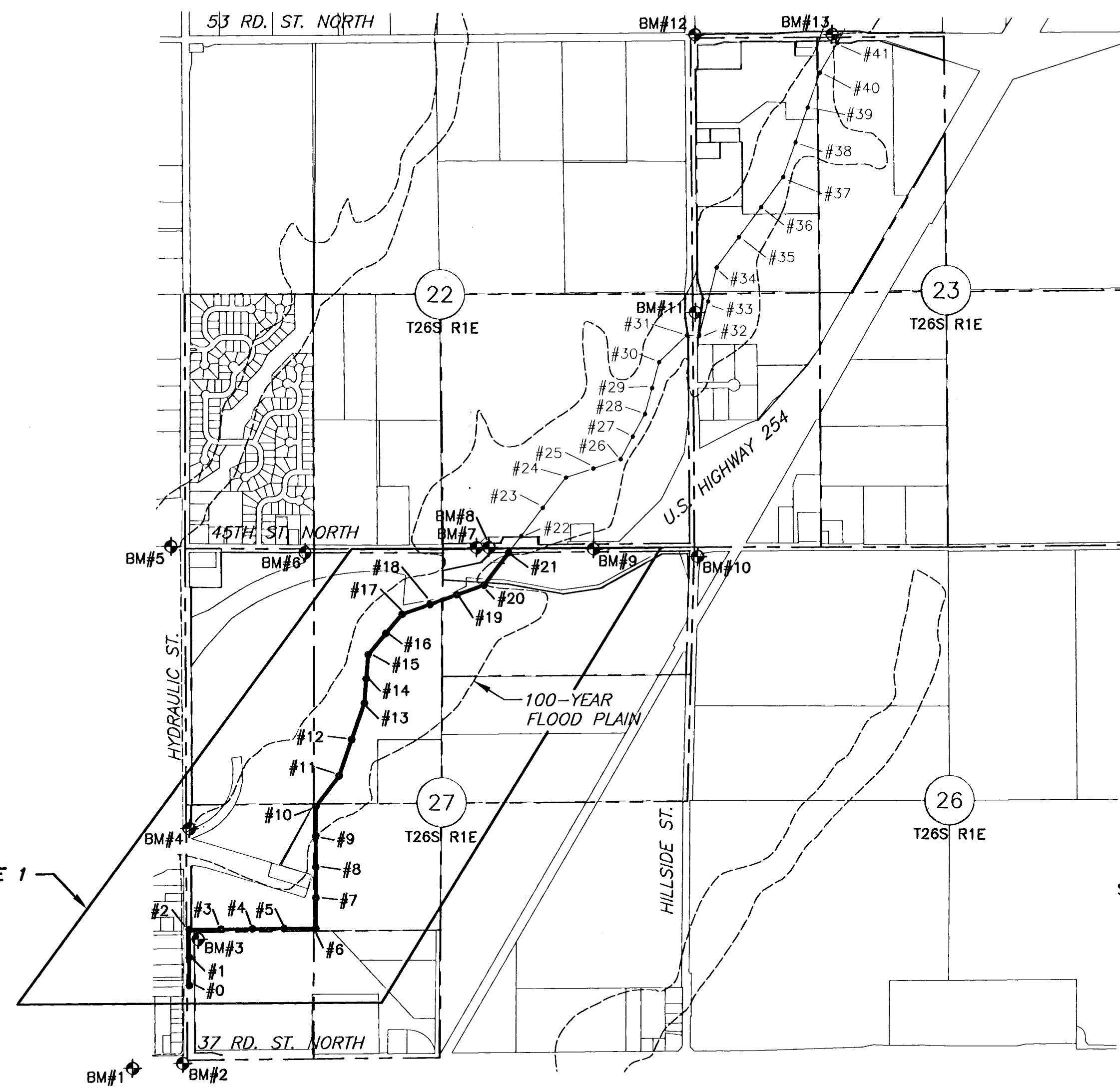
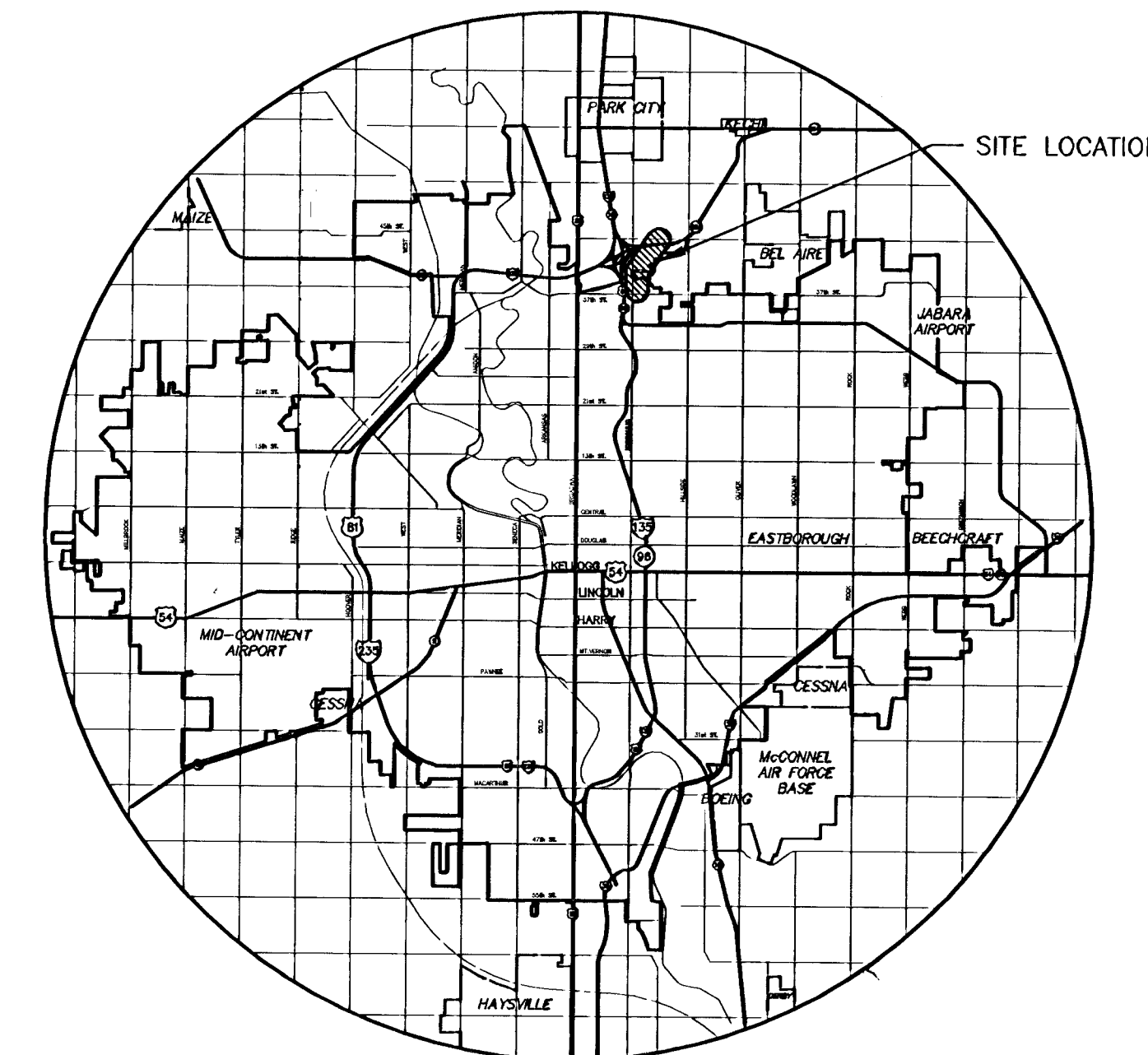
GENERAL NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS SHOWN ON PLANS. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
- EXISTING UTILITIES AND THEIR LOCATIONS AS SHOWN ON THE PLANS REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY BE ENCOUNTERED.
- CONTRACTOR SHALL PROVIDE A MINIMUM ADVANCE NOTICE OF FORTY-EIGHT (48) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:
 KANSAS ONE-CALL 1-800-344-7233 OR 687-2470 (LOCAL WICHITA)
 THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:
 SOUTHWESTERN BELL TELEPHONE COMPANY 1-800-734-7590
 WICHITA PUBLIC SCHOOLS TELEPHONE CABLE 1-316-833-2000
 CABLEVISION 1-316-262-0661
 K&E (GAS & ELECTRIC) 1-316-383-8600
 CITY OF WICHITA WATER & SEWER MAINTENANCE 1-316-262-4908
 BEL AIR (WATER) 1-316-744-2451
 PARK CITY (WATER) 1-316-744-3865
 KECHI (WATER & GAS) 1-316-744-9287
 WILLIAMS NATURAL GAS 1-316-529-6600
 PHILLIPS PIPELINE 1-800-324-9696
 JAYHAWK PIPELINE 1-316-838-3411
 KINNET, INC FIBER OPTIC 1-800-967-6969
- UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNERS DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WILL REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U. S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WILL REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION. COST OF EXCAVATION HAULING, AND DUMPING OF EXCESS EXCAVATION SHALL BE SUBSIDIARY TO THE PROJECT.
- THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ADJUTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF (48) HOURS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.
- ALL CONSTRUCTION AND MATERIALS SHALL COMPLY WITH CITY OF WICHITA STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
- THE CONTRACTOR SHALL RESTORE ALL DITCHES, CHANNELS, BANK STABILIZATION, SWALES, ROAD SHOULDERS, PAVEMENT ENTRANCES, AND BANKS TO THEIR ORIGINAL SLOPES AND GRADES. WHERE EXISTING ENTRANCE PIPE, DRAINAGE PIPE, SPRINKLER SYSTEMS, SIDEWALKS, DRIVES, SIGNS, FENCES, MAIL BOXES, ETC., CONFLICT WITH THE PROPOSED WORK HEREIN THEY SHALL BE REMOVED AND REPLACED OR RESE IN LIKE KIND. ALL OF THE ABOVE INCLUDING TREES, SHRUBS, GRASS, SOO AND OTHER LANDSCAPING, WHERE NOTED, SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS BID.
- TREES AND SHRUBS IN PUBLIC RIGHTS-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR AS NOTED IN THE DRAWING OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL RESTORE AND REPLACE LANDSCAPE FEATURES AND PLANTINGS AS NOTED IN THE DRAWINGS OR AS DIRECTED BY THE ENGINEER. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE. COSTS SHALL BE INCLUDED IN THE PRICE BID FOR THE SITE CLEARING.
- POSITIVE DRAINAGE SHALL BE PROVIDED FOR ALL AREAS ON OR NEAR SPOIL AREAS. NATURAL DRAINAGE WAYS SHALL BE MAINTAINED. THE COST OF GRADING SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS BID.
- WHERE REMOVAL OF EXISTING FENCES NEXT TO THE CONSTRUCTION IS DEEMED NECESSARY BY THE CONTRACTOR, THE CONTRACTOR SHALL COORDINATE REMOVAL WITH ADJACENT PROPERTY OWNERS. ALL REMOVAL AND RESETTING OF FENCES SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS BID.
- ALL ELEVATIONS SHOWN ARE NGVD DATUM. CITY DATUM = NGVD - 1187.4.
- ALL EXISTING GRASSED AREAS WHICH ARE DISTURBED OR DAMAGED DURING CONSTRUCTION OPERATIONS SHALL BE RESTORED TO ORIGINAL CONDITIONS, AND RE-SEEDED OR RE-SODDED IN LIKE KIND, UNLESS OTHERWISE NOTED ON THE PLANS. COSTS SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS BID. APPLICATION RATE FOR THE VARIOUS SEED MIXTURES SHALL BE AS APPROVED BY THE ENGINEER. SEEDING SHALL CONFORM TO APPLICABLE REQUIREMENTS OF STANDARD SPECIFICATIONS. SODDING SHALL CONFORM TO APPLICABLE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATIONS.
- SLOPES STEEPER THAN 10 TO 1 SHALL BE MULCHED AS REQUIRED BY STANDARD SPECIFICATIONS. COST OF MULCHING SHALL BE INCLUDED IN PRICE BID FOR SITE RESTORATION.
- THE COST OF EXCAVATION, HAULING, AND DUMPING, SHALL BE SUBSIDIARY TO OTHER ITEMS BID.
- CONTRACTOR SHALL INSTALL PLASTIC SEWER MANHOLE MARKERS. SEWER DEPARTMENT WILL PROVIDE THE MATERIALS. COST TO INSTALL MARKERS SUBSIDIARY TO MANHOLES.

MAIN 13, SS #23

PHASE 1 PROJECT NO. 468-83262

CITY OF WICHITA, KANSAS
 MICHAEL E. LINDEBAK, CITY ENGINEER
 OCA 624072



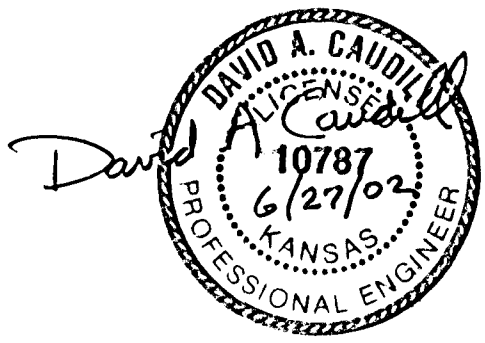
INDEX TO DRAWINGS


SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	MANHOLE DETAILS
3	MISCELLANEOUS DETAILS, BENCHMARKS, AND CONTROL POINTS
4	SOIL EROSION BMP DETAILS
5	SOIL EROSION BMP SUBDIVISION
6-11	DEVELOPMENT DETAILS PLAN / PROFILE SHEETS

LEGEND

<ul style="list-style-type: none"> ○ 3IN - TREE AND DIAMETER SN - SN - SIGN AND POSTS ○ 1P-1/2" MID-KANSAS BAR - IRON PIPE AND DESCRIPTION 214 x 49 - SPOT ELEVATION AND LOCATION PP - POWER POLE AND DEADMAN KGE - ELECTRIC BOX - - - DRAINAGE ARROW - - - EDGE OF TREES -E- - UNDERGROUND ELECTRIC LINE -OHE- - OVERHEAD ELECTRIC LINE -X-X- - FENCE BM - BENCHMARK SSMH - STORM WATER MANHOLE 	<ul style="list-style-type: none"> SSMH - SANITARY SEWER MANHOLE - - - RETAINING WALL LP - LIGHT POLE FH - FIRE HYDRANT WV - WATER VALVE WM - WATER METER ICV - IRRIGATION CONTROL VALVE GI - GRATE INLET TR - TELEPHONE RISER - - - STORM SEWER PIPE -W- - WATER LINE -SS- - SANITARY SEWER LINE -G- - GAS LINE -T- - TELEPHONE LINE
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*Built Per Plan
 6/5/03 RDL
 PDF*





MKEC
ENGINEERING CONSULTANTS

411 N. WEBB ROAD
WICHITA, KS. 67208
316-684-9600

MAIN 13, SS #23 (PHASE 1)
PROJECT NAME

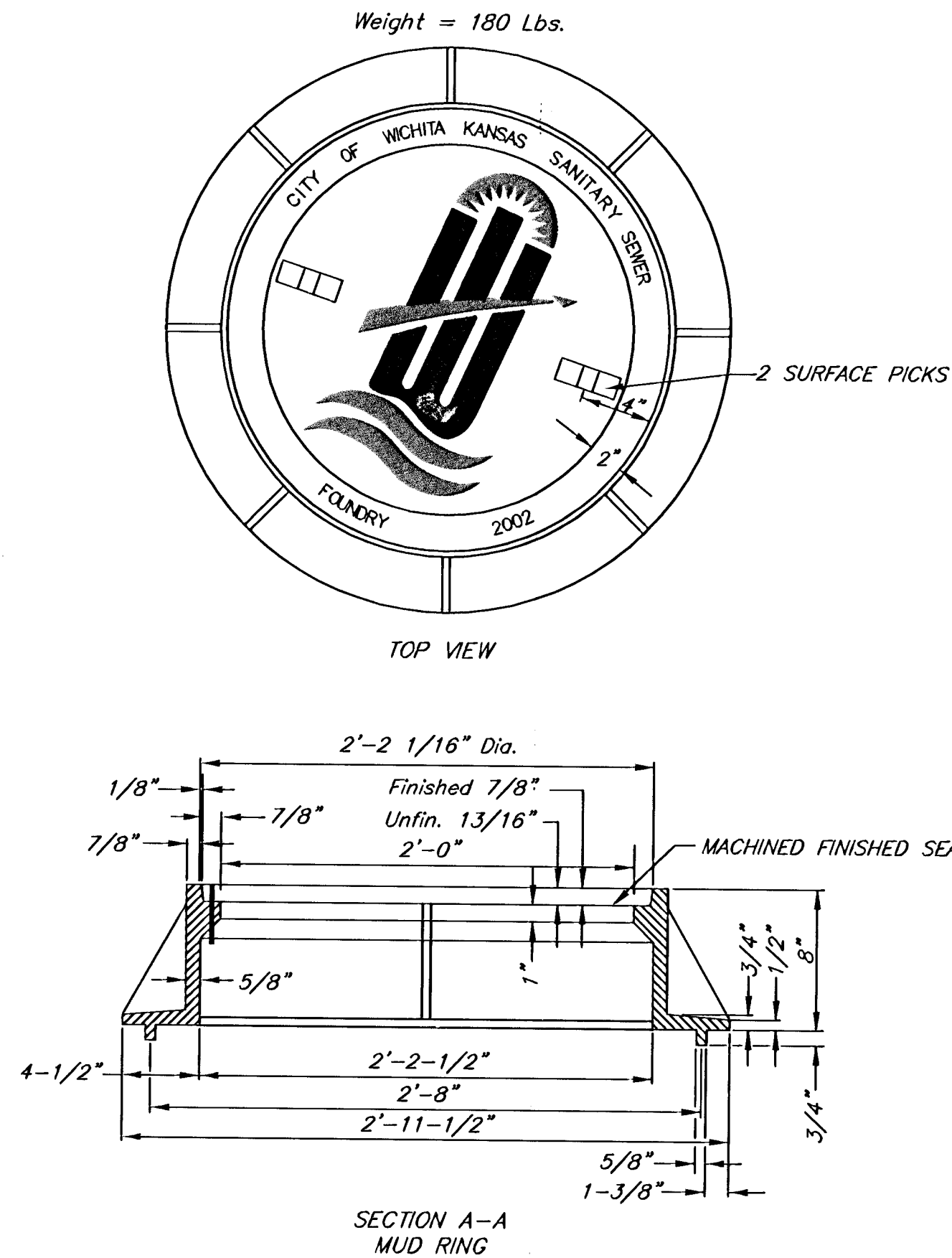
TITLE SHEET
SHEET TITLE

DESIGN BY: **D. CAUDILL** DRAWN BY: **RDH** CHECKED BY: **D. CAUDILL**

DATE: **JUNE 27, 2002** DRAWING NAME: **O1138bt** SHEET / OF: **1 / 11**

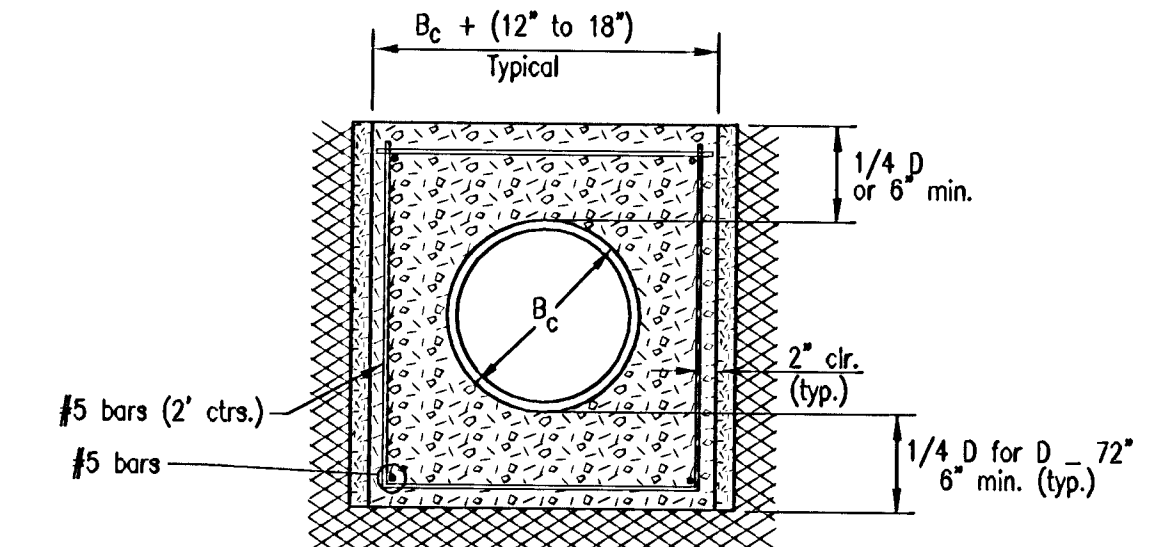
BENCHMARKS

- BM#1 1344.21 Datum Bench Mark #1
USGS Bench Mark Disk in the East end of the South bridge abutment of the I-135 Southbound Bridge over 37th Street North. 75' +/- South of the centerline of 37th Street North and 26.5' +/- East of the centerline of the Southbound Lanes.
- BM#2 1325.69 City of Wichita Bench Mark Disk in the North side of the concrete base of a steel High Line Pole, 50' +/- West of the centerline of Hydraulic Avenue and 36' +/- South of the centerline of 37th Street North. Published Elevation = 1325.73 (City of Wichita Bench Mark Book).
- BM#3 1330.16 Chiseled Square on the West end of the North Headwall of the RCB under the North drive into the U.S.D. # 259 Food Services Building. 1295' North and 45' East of the SW Corner Sec 27, T 26 S, R 1 E.
- BM#4 1341.17 City of Wichita Bench Mark Disk in the North end of the East Hub Guard of the Hydraulic Avenue Bridge over Middle Fork Chisholm Creek. 250' +/- South of the West 1/4 Corner of Sec 27, T 26 S, R 1 E. Published Elevation = 1341.07 (Sedgwick County Bench Mark Book).
- BM#5 1340.89 City of Wichita Bench Mark Disk in the East end of the North Hub Guard of a Bridge on 45th Street North, 150' +/- West of Hydraulic Avenue. RM 55 on FEMA FIRM Map 200321 0150 A. Published Elevation = 1340.72.
- BM#6 1354.11 RR Spike in the North face of a Power Pole on the South side of 45th Street North, 95' +/- West of the SE Corner, West 1/2, SW 1/4, Sec 22, T 26 S, R 1 E.
- BM#7 1346.25 City of Wichita Bench Mark Disk in the middle of the North Hub Guard of the 45th Street Bridge over Middle Fork Chisholm Creek.
- BM#8 1346.24 Chiseled Square on the East end of the South Hub Guard of the 45th Street Bridge over Middle Fork Chisholm Creek. RM 51 on FEMA FIRM Map 200321 0150 A. Published Elevation = 1346.07.
- BM#9 1348.18 Chiseled Square on the West nose of Traffic Island under Highway K-254 at the West Bound Entrance Ramp on 45th Street North.
- BM#10 1359.70 Chiseled Square on the middle of the East Headwall of a RCB under Hillside Avenue, 100' +/- South of the centerline of 45th Street North and 35' +/- East of the centerline of Hillside Avenue. Published Elevation = 1359.54 (Sedgwick County Bench Mark Book).
- BM#11 1354.49 City of Wichita Bench Mark Disk in the South end of the East concrete traffic rail on the Hillside Avenue Bridge over Middle Fork Chisholm Creek. 190' South and 26.7' East of the West 1/4 Corner Sec 23, T 26 S, R 1 E.
- BM#12 1369.43 RR Spike in the SW Face of a Guy Pole, 45' +/- East of the centerline of Hillside Avenue and 36' +/- North of the centerline of 53rd Street North. Published Elevation = 1369.36 (Sedgwick County Bench Mark Book).
- BM#13 1356.79 Datum Bench Mark #2
City of Wichita Bench Mark Disk in the East end of the North Hub Guard of the 53rd Street North Bridge over Middle Fork Chisholm Creek. 185' East and 14' North of the SW Corner, East 1/2, SW 1/4, Sec 14, T 26 S, R 1 E. RM 53 on FEMA FIRM Map 200321 0150 A. Published Elevation = 1356.79.



MANHOLE COVER

N.T.S.



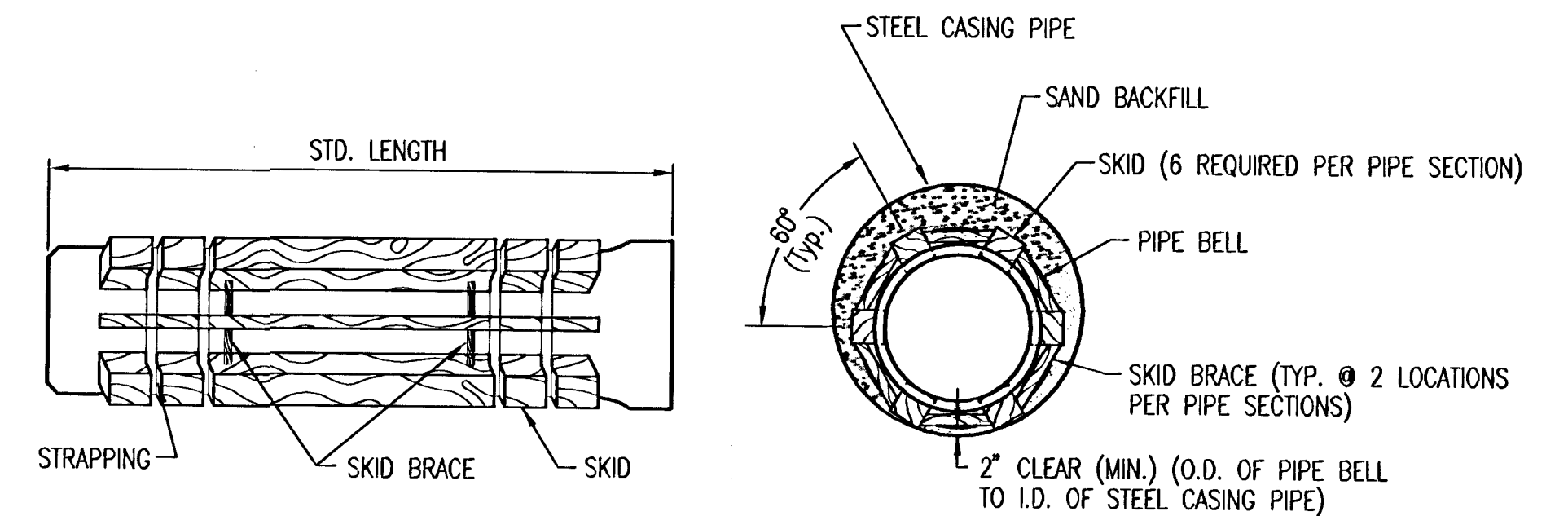
- B_c = Outside Pipe Diameter
- D = Inside Pipe Diameter
- d = Depth of Bedding Material Below Pipe
- = Compacted Embedment
- = Concrete

CONCRETE ENCASEMENT

N.T.S.

CONTROL POINTS

H.C.#100	South 1/4 Corner Sec. 27, T26S, R1E 1/2" Pipe in Thimble 0.6' below Road Surface N=1710013.77 E=1657043.47	H.C.#109	Southeast Corner West 1/2, SW 1/4, Sec. 14, T26S, R1E 5/8" Bar in Thimble 0.6' below Road Surface N=1720667.64 E=1660903.25	H.C.#208	5/8" Bar with Red "MKEC Design Point" Cap N=1718906.47 E=1660473.22
H.C.#101	Southwest Corner Sec. 27, T26S, R1E 3/4" Pinched Pipe in Thimble N=1709965.27 E=1654411.86	H.C.#110	South 1/4 Corner Sec. 14, T26S, R1E 3/4" Pipe N=1720685.46 E=1662223.54	H.C.#209	5/8" Bar with Red "MKEC Design Point" Cap N=1719427.07 E=1660852.32
H.C.#102	West 1/4 Corner Sec. 27, T26S, R1E 5/8" Bar 1.6' below Road Surface N=1712621.61 E=1654379.52	H.C.#112	Center Sec. 27, T26S, R1E 5/8" Bar with "Mid Kansas" Cap N=1712661.27 E=1657040.56	H.C.#210	5/8" Bar with Red "MKEC Design Point" Cap N=1718264.33 E=1659600.74
H.C.#103	Southwest Corner Sec. 22, T26S, R1E 3/4" Bar at Road Surface N=1715289.85 E=1654349.09	H.C.#6607	Southeast Corner, West 1/2, NW 1/4, Sec. 23, T26S, R1E 0.3' North-South by 0.5' East-West Stone N=1718007.13 E=1660946.25	H.C.#212	5/8" Bar with Red "MKEC Design Point" Cap N=1716758.97 E=1659253.10
H.C.#104	SE Corner West 1/2, SW 1/4, Sec. 22, T26S, R1E 1" Bar N=1715297.26 E=1655693.55	H.C.#200	5/8" Bar with Red "MKEC Design Point" Cap N=1710958.39 E=1654430.98	H.C.#400	5/8" Bar with Red "MKEC Design Point" Cap N=1720653.60 E=1661212.71
H.C.#105	South 1/4 Corner Sec. 22, T26S, R1E 1" Pipe at Road Surface N=1715304.75 E=1657037.64	H.C.#201	5/8" Bar with Red "MKEC Design Point" Cap N=1711753.61 E=1654409.13	H.C.#501	5/8" Bar with Red "MKEC Design Point" Cap N=1715076.52 E=1657551.05
H.C.#106	Southwest Corner Sec. 23, T26S, R1E 5/8" Bar in Thimble N=1715346.96 E=1659659.97	H.C.#202	5/8" Bar with Red "MKEC Design Point" Cap N=1711297.75 E=1654800.96	H.C.#1827	5/8" Bar with Red "MKEC Design Point" Cap N=1719896.45 E=1660852.51
H.C.#107	West 1/4 Corner Sec. 23, T26S, R1E 3/4" Pipe 0.9' below Road Surface N=1717983.42 E=1659623.41	H.C.#203	5/8" Bar with Red "MKEC Design Point" Cap N=1711328.27 E=1655686.44	H.C.#4000	5/8" Bar with Red "MKEC Design Point" Cap N=1716252.43 E=1659217.15
H.C.#108	Southwest Corner Sec. 14, T26S, R1E 3/4" Pipe 0.1' below Road Surface N=1720649.63 E=1659582.57	H.C.#204	5/8" Bar with Red "MKEC Design Point" Cap N=1711953.35 E=1655818.52	H.C.#4001	5/8" Bar with Red "MKEC Design Point" Cap N=1715989.82 E=1658630.93
		H.C.#205	5/8" Bar with Red "MKEC Design Point" Cap N=1712518.77 E=1655728.21	H.C.#4003	5/8" Bar with Red "MKEC Design Point" Cap N=1711279.69 E=1655317.86
		H.C.#207	5/8" Bar with Red "MKEC Design Point" Cap N=1718269.13 E=1660082.86	H.C.#4004	5/8" Bar with Red "MKEC Design Point" Cap N=1714649.28 E=1657217.52
				H.C.#5000	5/8" Bar with Red "MKEC Design Point" Cap N=1715280.64 E=1657738.96
				H.C.#5002	5/8" Bar with Red "MKEC Design Point" Cap N=1715547.85 E=1657839.45



STEEL ENCASEMENT DETAIL

N.T.S.

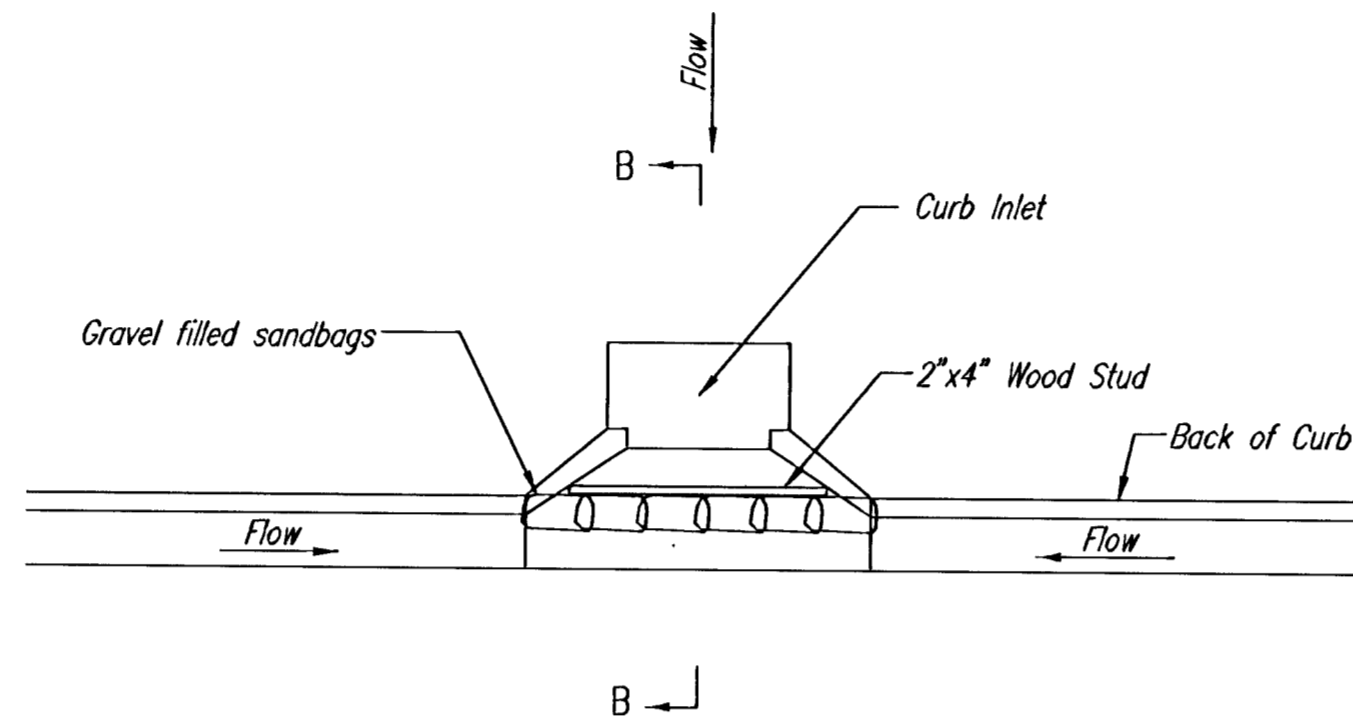
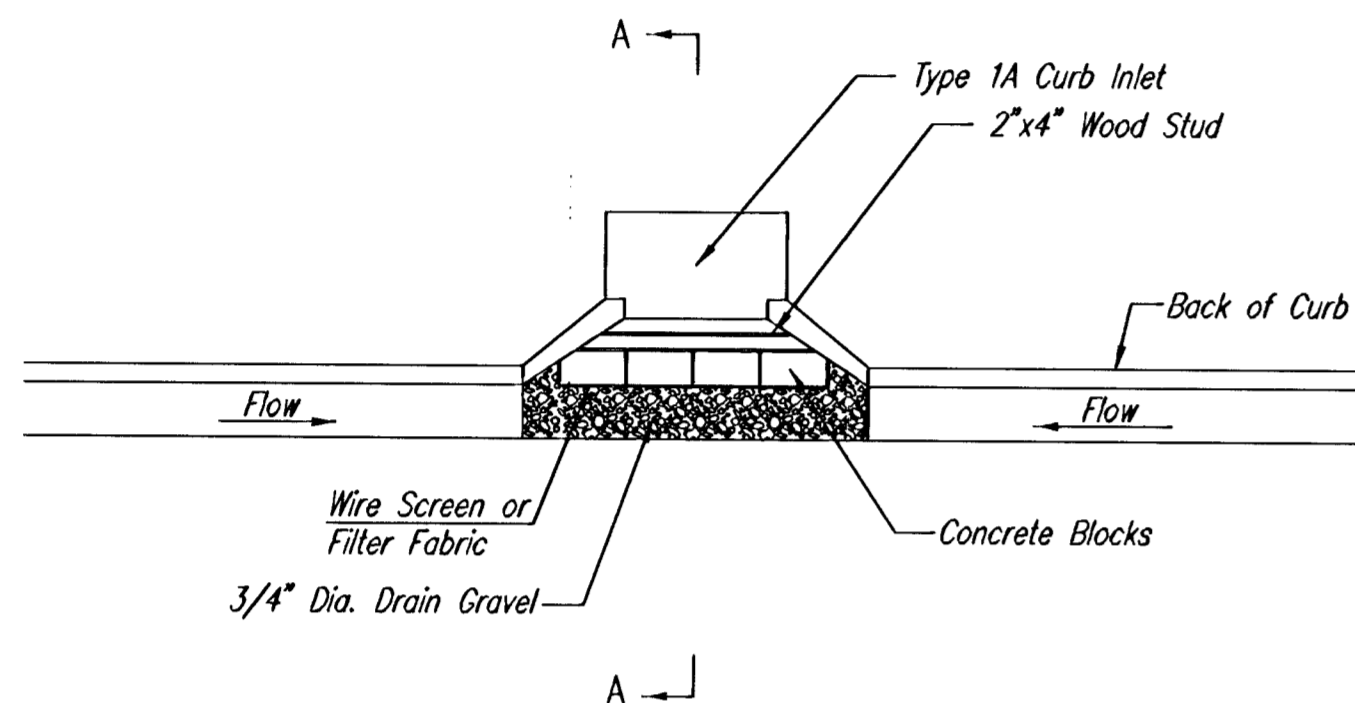
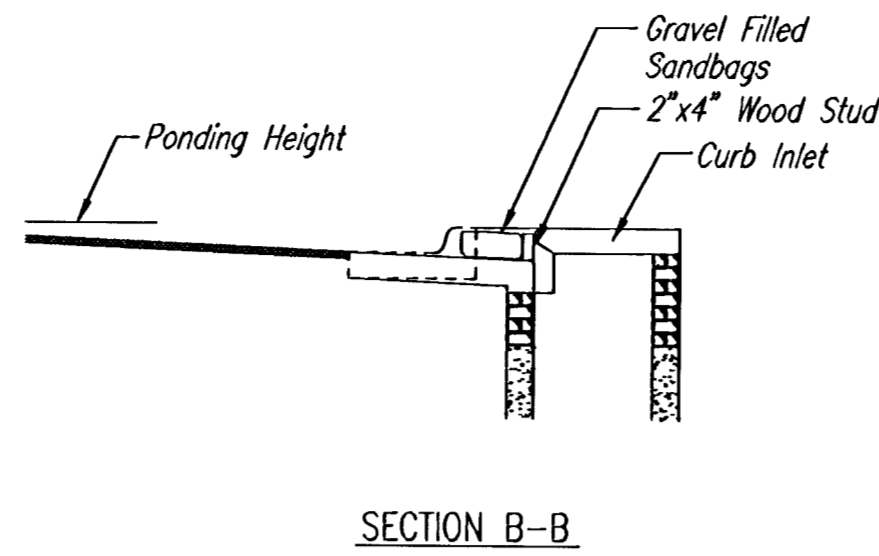
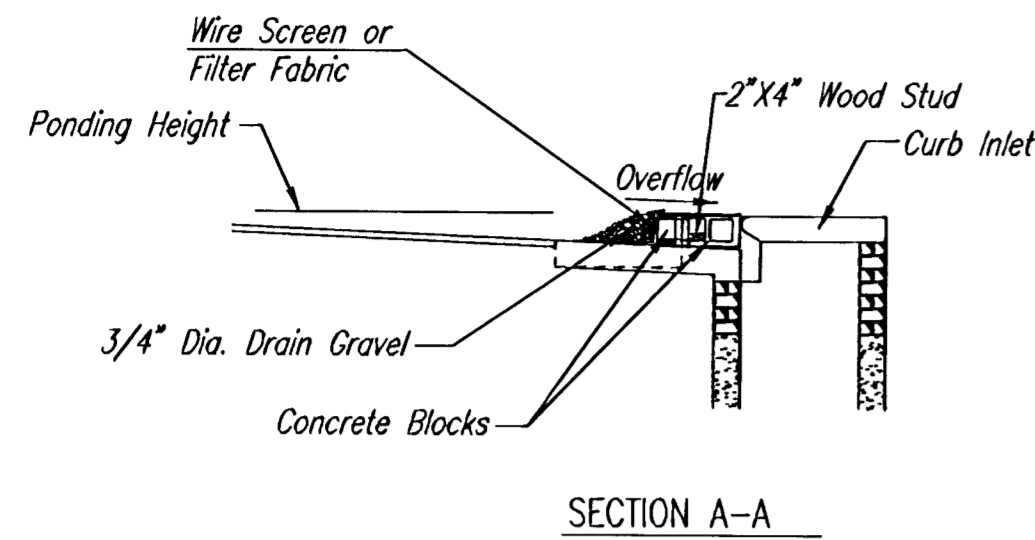


MAIN 13, SS #23 (PHASE 1)
PROJECT NAME

**MISC. DETAILS, BENCHMARKS,
AND CONTROL POINTS**
SHEET TITLE

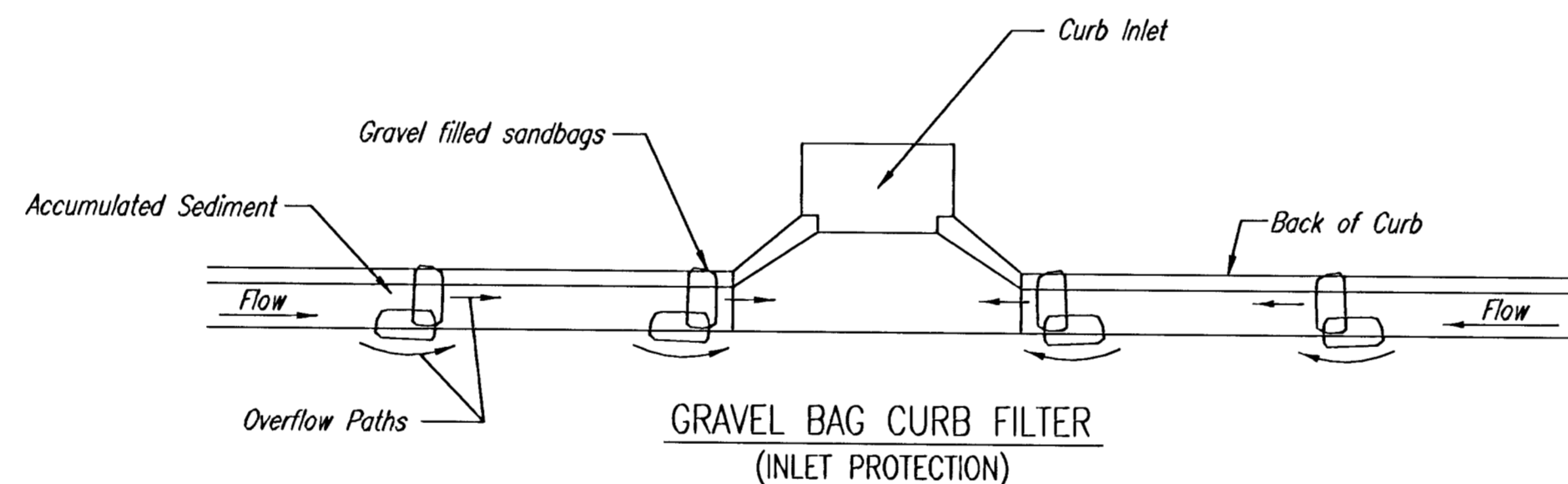
D. CAUDILL DESIGN BY: **RDH** DRAWN BY: **D. CAUDILL** CHECKED BY:

JUNE 27, 2002 DATE: **01138bd2** DRAWING NAME: **3 / 11** SHEET / OF



CURB INLET SANDBAG FILTERS
(INLET PROTECTION)

NOTE: Other types of curb inlet protection may be approved by the City so long as equal protection is provided.



GRAVEL BAG CURB FILTER
(INLET PROTECTION)

NOTE: Place two or more sets of bags in a manner that results in maximum support. The flow line bag must be lower than top of curb.

CURB SEDIMENT TRAPS

When inlets are located on streets having a grade (i.e., sump conditions do not exist), installing gravel (or sand) bags in the gutter flow line to create small sediment traps can be considered. Gravel bags are recommended over sand bags to allow for drainage.

If the spacing between bags becomes too large, little sediment may be trapped. Spacing of bags should be completed using the table or graph that illustrates placement distances based upon street slope. When installed in the gutter, bag tops must be lower than the sidewalk.

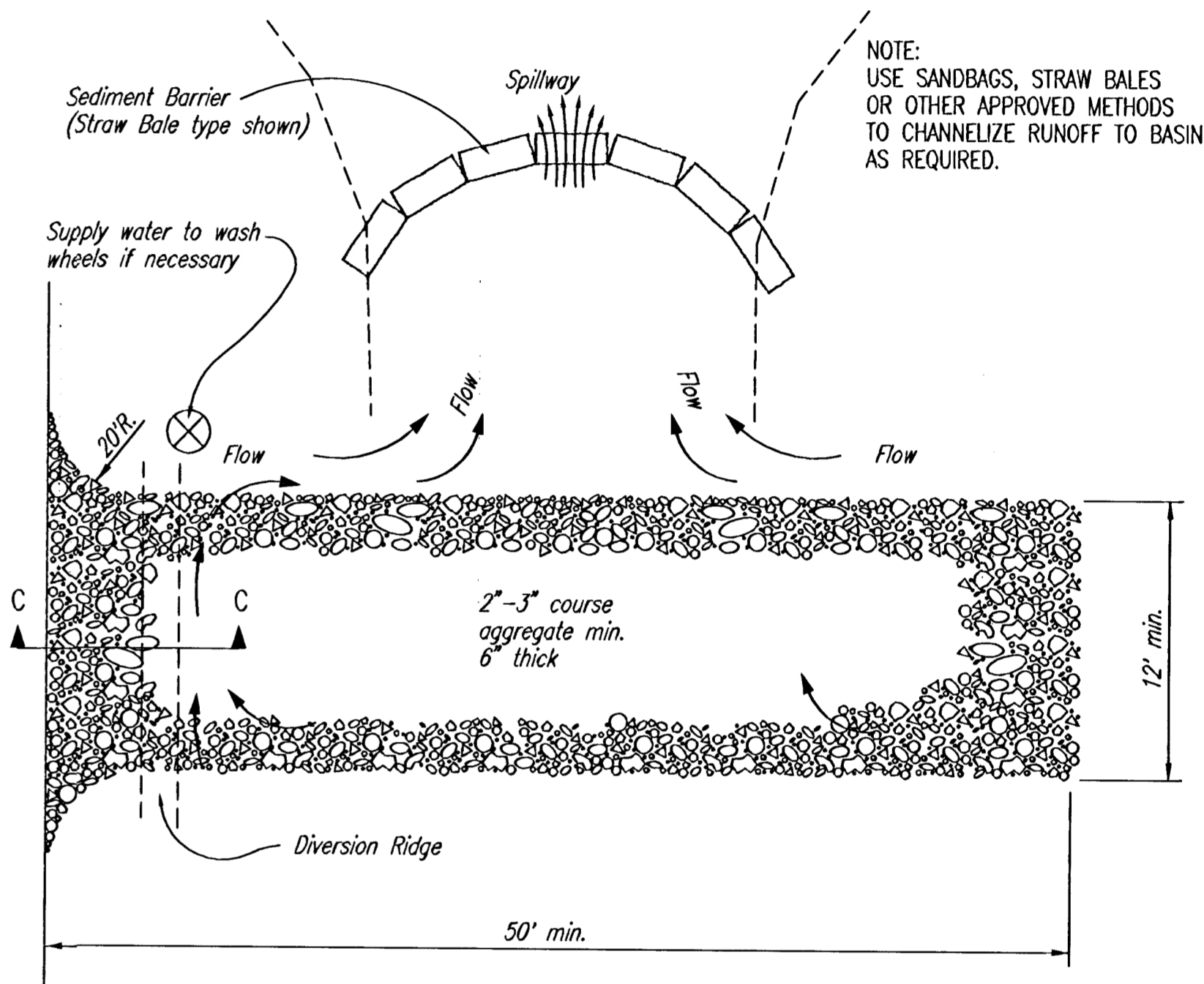
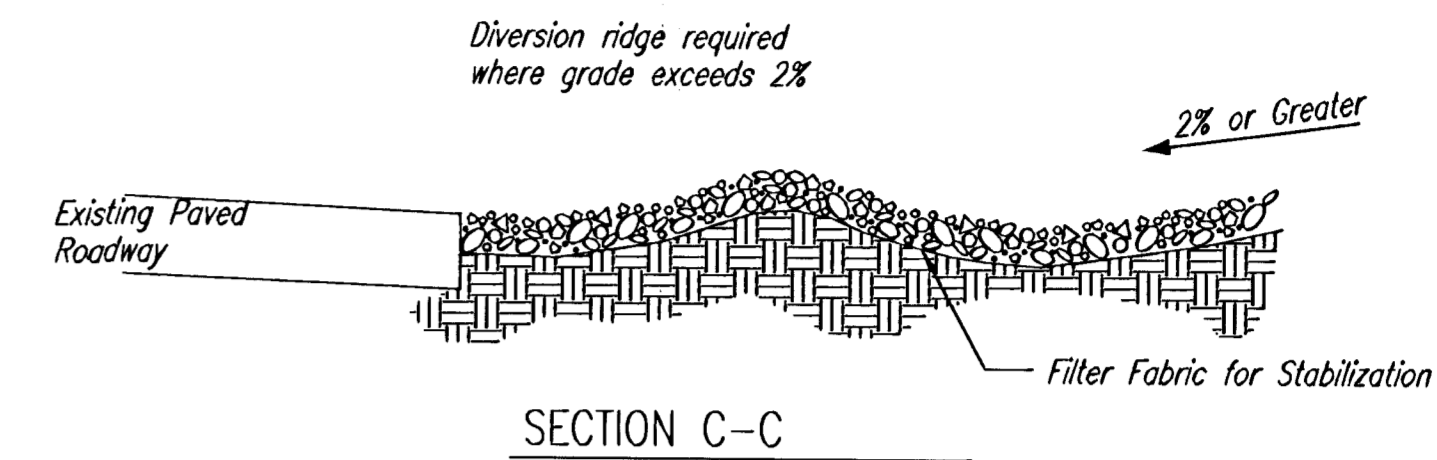
Spacing:

Gravel bags are to be placed according to street grades using the following table or graph that appears below.

GRADE (%)	SPACING (FEET)
0.5	75
1.0	45
2.0	18
3.0	12
4.0	9
5.0	6

Maintenance:

Collected sediment shall be removed after every runoff event. Bags that are destroyed by vehicular traffic or through natural deterioration are to be immediately replaced.



STABILIZED CONSTRUCTION ENTRANCE

NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
4. DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.

CURB INLET GRAVEL FILTERS
(INLET PROTECTION-RESIDENTIAL STREETS ONLY)

NOTE: Other types of curb inlet protection may be approved by the city so long as equal protection is provided.

A gravel inlet filter shall be installed at sump locations on residential streets. This type of protection is not to be used on arterial or collector streets at any time that it would pose an undue traffic hazard.

Instructions for Installing:

- STEP 1: Place concrete blocks around the inlet as shown on drawing. Insert 2x4 board as shown.
- STEP 2: Wrap 1/2" mesh wire screen around the concrete blocks.
- STEP 3: Place 1" to 1-1/2" diameter rock around the blocks and wire screen. Be sure the rock extends down from the top of the concrete block.
- STEP 4: To prevent damage to vehicles, signs warning drivers about the structures may be necessary. An alternative installation is the use of gravel bags supported by a 2x4" board to prevent collapsing.

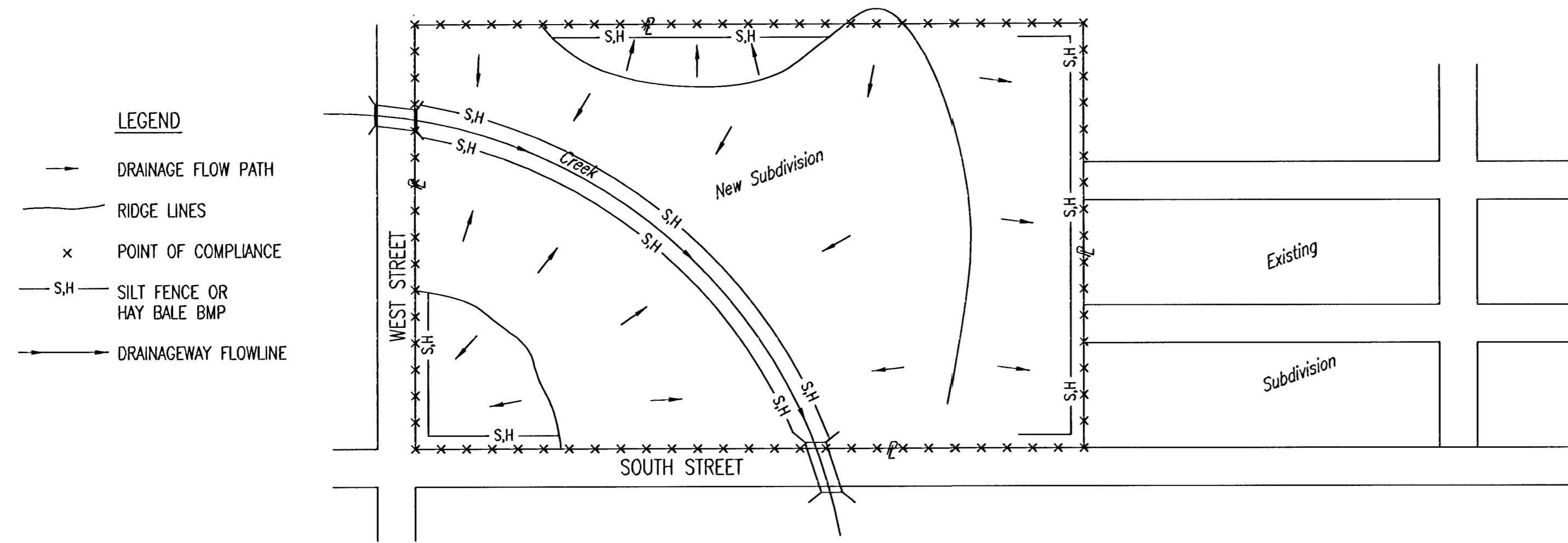
Use of rock with diameters smaller than 1" in the bag may result in clogging of pores and reduce the amount of water flowing into an inlet.

Maintenance:

All curb inlet gravel filters shall be inspected and repaired after each runoff event. Sediment deposits are to be removed once material is within 8 cm (3 inches) of the top of any block. Periodically, the gravel shall be raked to increase infiltration and filtering of runoff waters. Accumulated sediment is to be removed immediately from roads and streets.

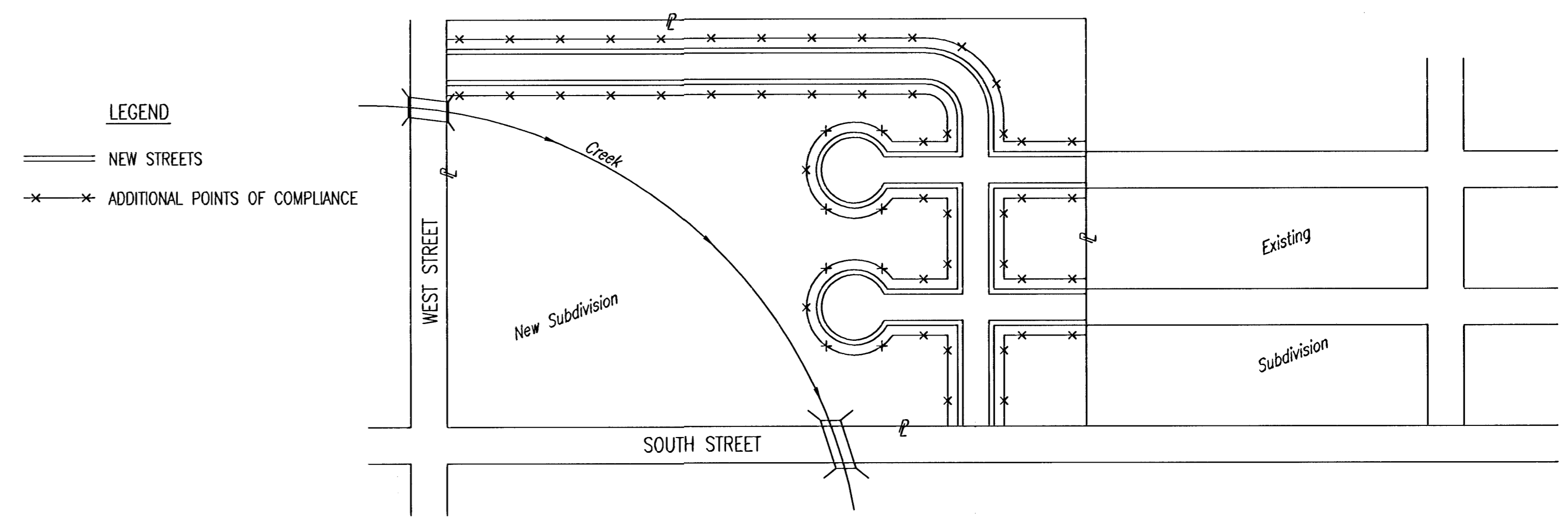
		SOIL EROSION BMP DETAILS	
		CHRISTOPHER M. CARRIER, P.E. STORM WATER ENGINEER	
PROJECT NUMBER 468-83262	OCA NO. 624072		
DATE JUNE 27, 2002	SHEET 4 OF 11		

PHASE 1 - INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)



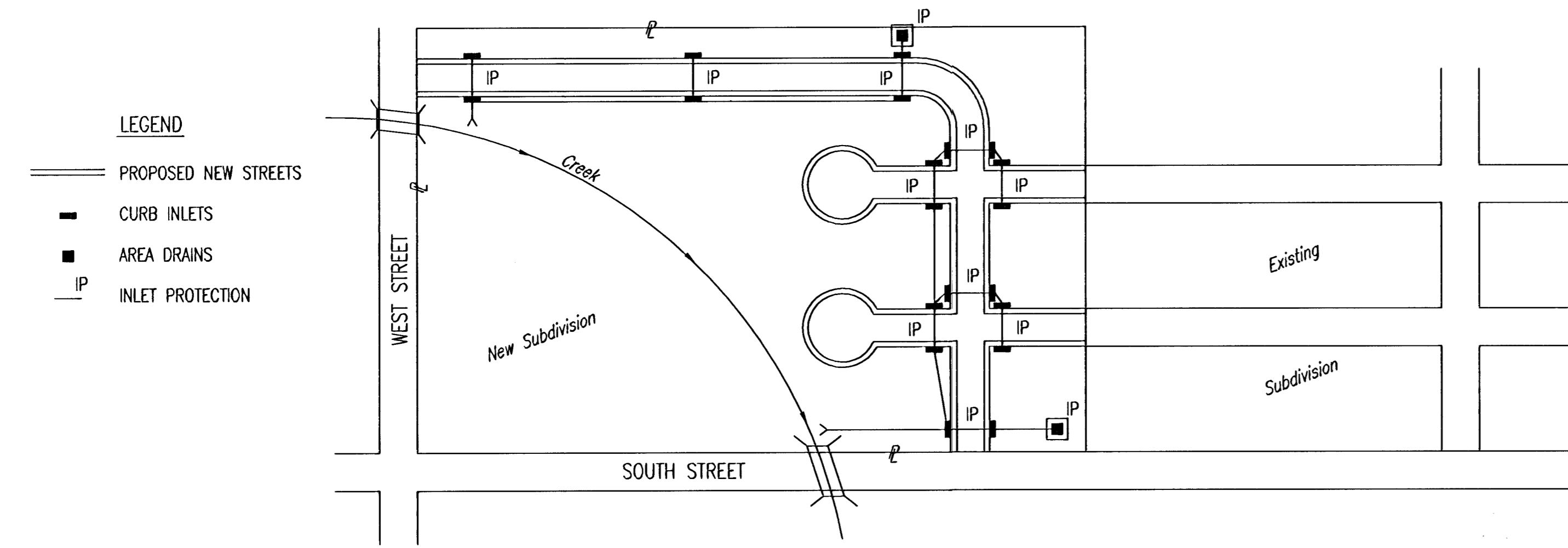
- DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE LAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
- HAYBALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE BMP'S WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
- SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR GUTTERLINES ON THE ADJACENT BOUNDARY STREETS, APPROPRIATE BMP'S WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
- ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED AT THE END OF EACH WORK DAY.
- CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL BMP'S AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDARY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE BMP'S AT THEIR WORK LOCATIONS, AS NEEDED.
- UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
- THE SUBDIVISION DEVELOPER (OWNER) SHALL INSTALL AND MAINTAIN THE ON-SITE BMP'S.

PHASE 3 - STREET CONSTRUCTION

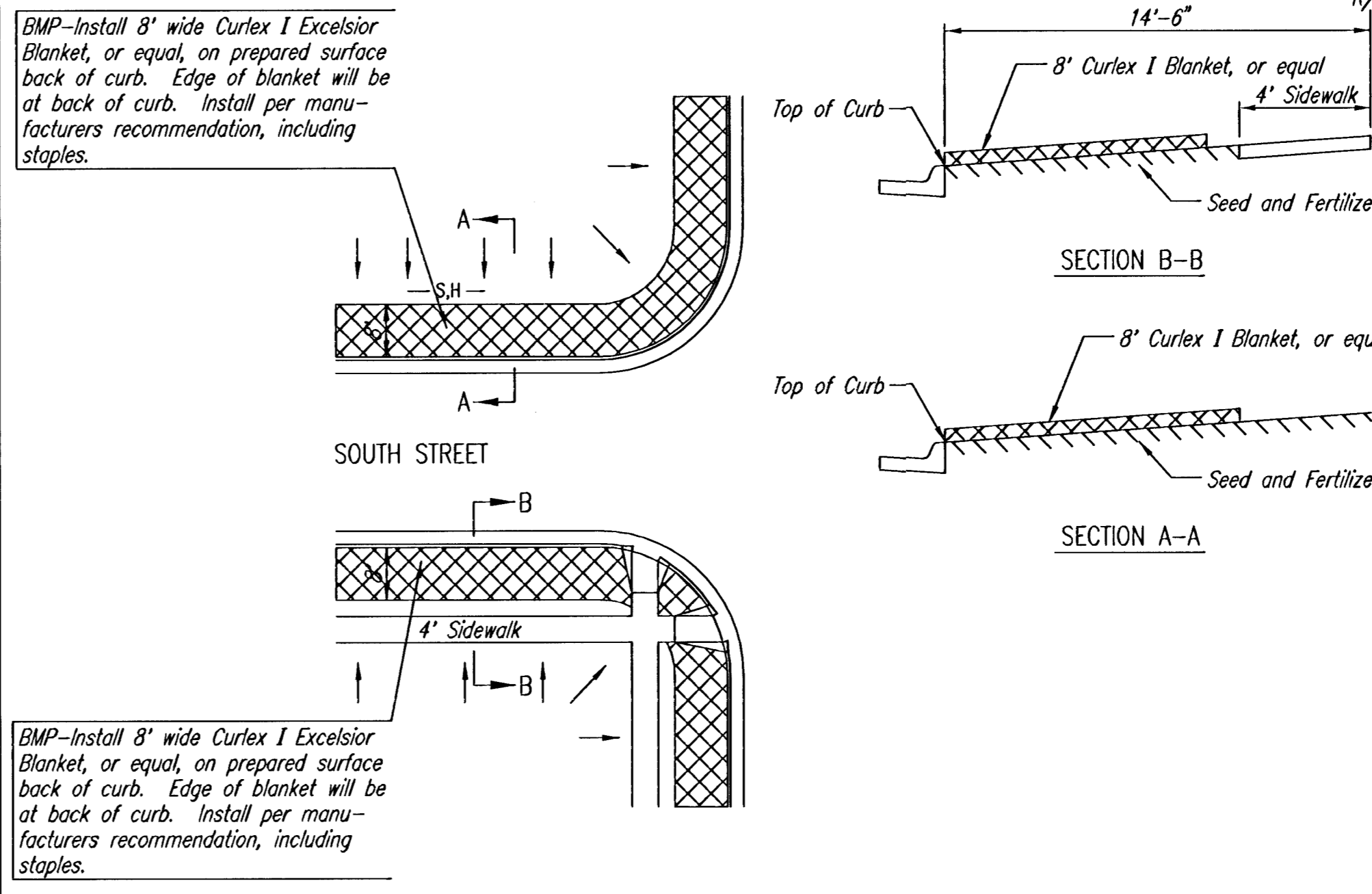


- DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL BMP'S INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
- CURB OPENING INLET PROTECTION:
 - SUMP AREAS - INLET PROTECTION SHALL BE PROVIDED WHEN STREET SUBGRADE WORK IS COMPLETED.
 - NON-SUMP LOCATIONS - PROVIDE INLET PROTECTION AS SOON AS BASE COURSE ASPHALT IS INSTALLED, BEFORE THE SURFACE COURSE LIFT.
- BMP'S WILL BE REQUIRED BACK OF CURB WHEREVER WATER CAN FLOW OVER THE CURB AND THE CURB HAS BEEN BACKFILLED TO WITHIN 3" OR LESS OF THE TOP OF CURB (SEE CURB BACKFILL DETAIL). FOR CURBS NOT YET ENTIRELY BACKFILLED (3" OR MORE BELOW TOP OF CURB), BMP'S WILL BE REQUIRED AT POINTS WHERE WATER BREAKS OVER CURB WHICH COULD RESULT IN THE PLACEMENT OF SEDIMENT IN THE GUTTER.
- SEE DETAIL THIS SHEET ON BACK OF CURB PROTECTION.
- THE BACK OF CURB PROTECTION SPECIFIED ON THIS PLAN MAY HAVE TO BE SUPPLEMENTED WITH HAYBALE OR SILT FENCE BMP'S AT LOCATIONS WHERE CONCENTRATED FLOW RESULTS IN SEDIMENT BEING CARRIED OVER THE EXCELSIOR MATS.
- THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB BMP'S.
- THE INDIVIDUAL LOT OWNERS WILL BE RESPONSIBLE FOR MAINTAINING THE BACK OF CURB BMP'S IN FRONT OF THEIR LOTS UNTIL SUCH TIME AS ADJACENT DISTURBED EARTH IS STABILIZED WITH GRASS OR SOD.

PHASE 2 - INSTALLATION OF STORM SEWER



- DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL BMP'S REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
- AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
- AREA DRAINS - AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAYBALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
- CURB OPENING INLETS - AS SOON AS WATER CAN FLOW INTO THESE DRAINS, INLET PROTECTION BMP'S MUST BE INSTALLED. SEE PHASE 3 - STREET CONSTRUCTION.
- THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE BMP'S. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION.
- THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE BMP'S ONCE INSTALLED.
- ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.



- GENERAL NOTES:
- THE INTENT OF ALL BEST MANAGEMENT PRACTICES (B.M.P.'S) IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, OR ANY OTHER DRAINAGE FEATURE.
 - THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF BMP'S WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
 - BMP'S SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS TO REMAIN EFFECTIVE. MAINTENANCE SHALL BE AS INDICATED ON THE BMP DETAIL SHEETS.
 - PERSONS DESTROYING BMP'S SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT BMP'S.
 - THE DEVELOPMENT OF ANY SUBDIVISION THAT DISTURBS 5 ACRES OR MORE WILL REQUIRE A FEDERAL/STATE NPDES STORMWATER PERMIT. THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. EROSION CONTROL BMP'S ARE REQUIRED. THE DETAILS SHOWN ON THIS SHEET ARE THE MINIMUM STANDARDS TO BE SHOWN ON POLLUTION PREVENTION PLAN.
 - FOR SUBDIVISIONS SMALLER THAN 5 ACRES, SOIL EROSION BMP'S ARE REQUIRED. ALSO, DEVELOPERS AND CONTRACTORS ARE ENCOURAGED TO DEVELOP POLLUTION PREVENTION PLANS FOR EACH PROJECT PRIOR TO CONSTRUCTION.
 - FAILURE TO USE AND MAINTAIN BMP'S IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE SUBDIVISION DEVELOPER AND CONTRACTORS TO THE PENALTIES PROVIDED THEREIN.
 - THE APPLICATION OF BMP'S SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE A DIFFERENT BMP OTHER THAN THAT SHOWN. BMP'S, OTHER THAN THOSE SHOWN, MAY BE UTILIZED SO LONG AS THEY ARE EFFECTIVE AND MAINTAINED.
 - A STABILIZED EARTH SURFACE IS DEFINED AS ONE THAT IS HARD SURFACED WITH CONCRETE, ASPHALT, OR THE LIKE, OR ONE ON WHICH 70% OF THE GRASS HAS GERMINATED ON THE ENTIRE SURFACE.

DSNR: DEP OPER DEP SCALE: 1=1.00
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		SOIL EROSION BMP'S SUBDIVISION DEVELOPMENT PROCESS	
		CHRISTOPHER M. CARRIER, P.E. STORM WATER ENGINEER	
PROJECT NUMBER	468-83262	OCA NO.	624072
DATE	JUNE 27, 2002	SHEET 5 OF 11	

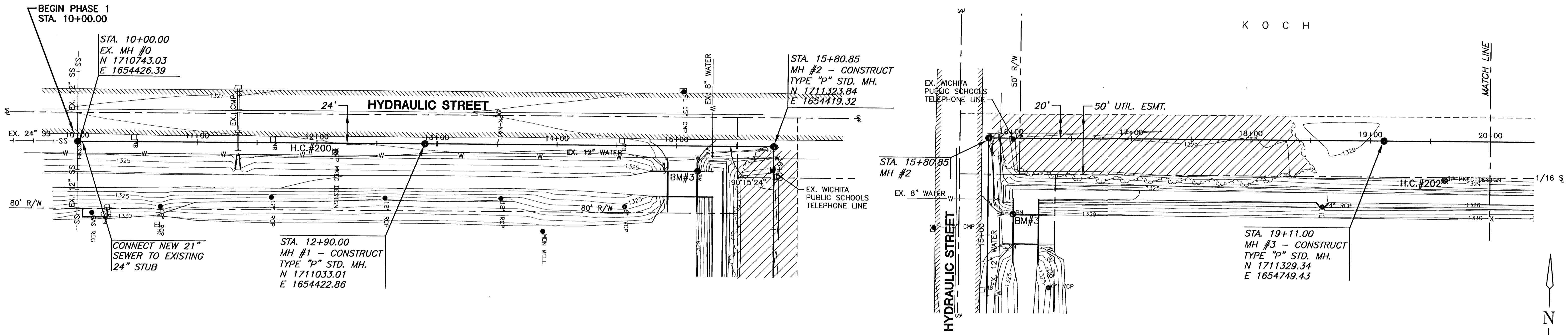
BM#3 1330.16 Chiseled Square on the West end of the North Headwall of the RCB under the North drive into the U.S.D. # 259 Food Services Building, 1295' North and 45' East of the SW Corner Sec 27, T 26 S, R 1 E.

H.C.#200 3/4" Bar with Red "MKEC Design Point" Cap
N=1710958.39 E=1654430.98

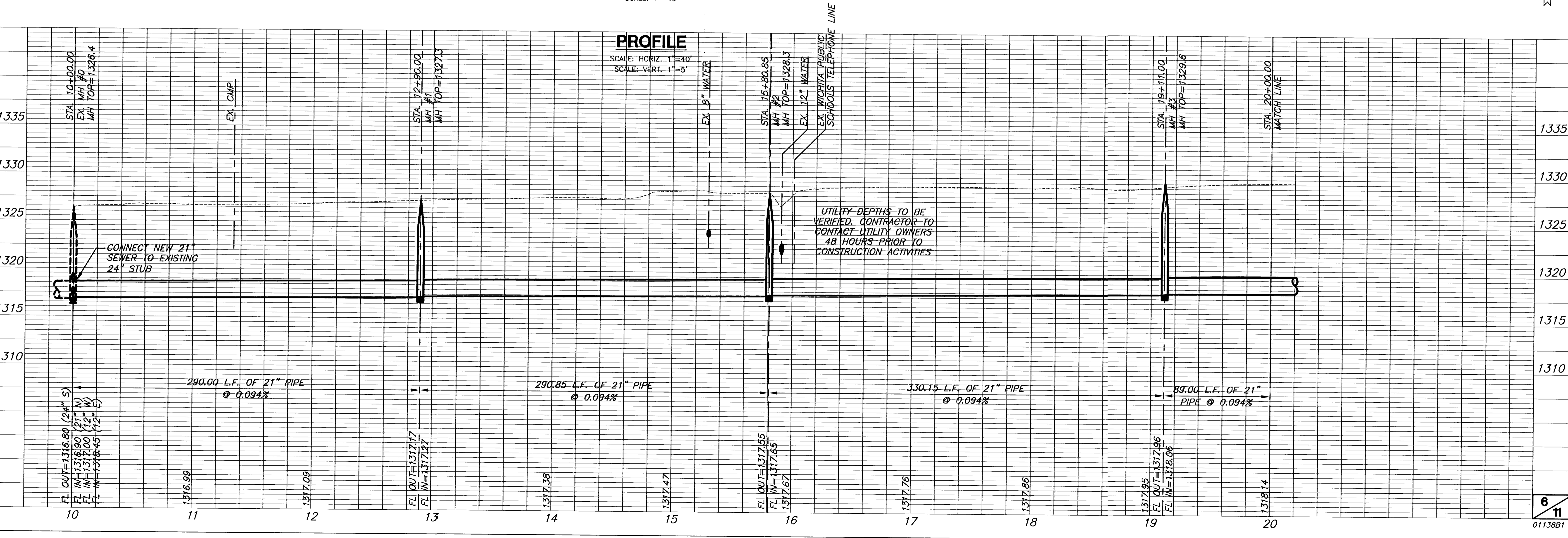
H.C.#202 3/4" Bar with Red "MKEC Design Point" Cap
N=1711297.75 E=1654800.96

REMOVE TREES AS NECESSARY WITH ENGINEER'S APPROVAL

**MAIN 13, SS #23
PLAN & PROFILE**



PLAN
SCALE: 1"=40'



H.C.#202 3/8" Bar with Red "MKEC Design Point" Cap
N=1711297.75 E=1654800.96

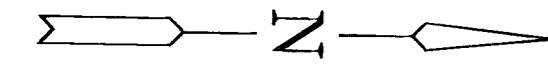
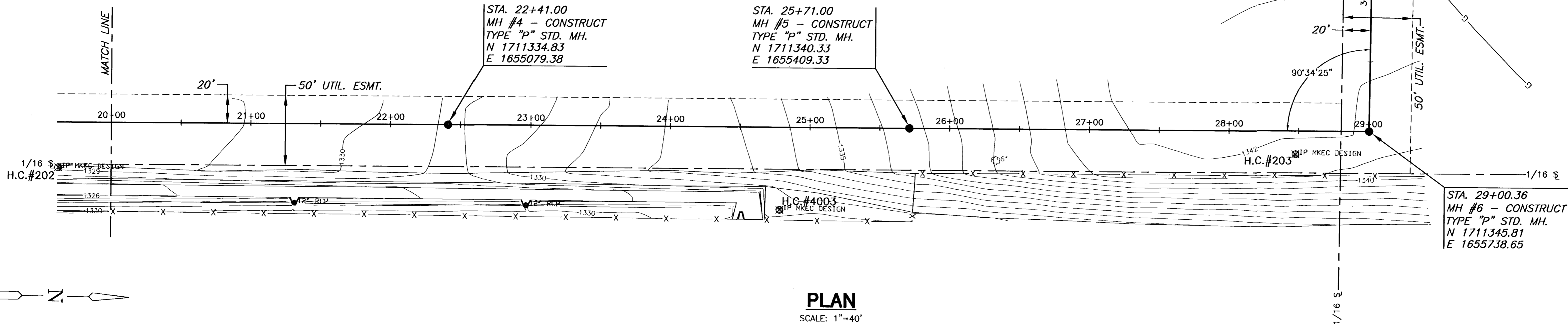
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H.C.#4003 3/8" Bar with Red "MKEC Design Point" Cap
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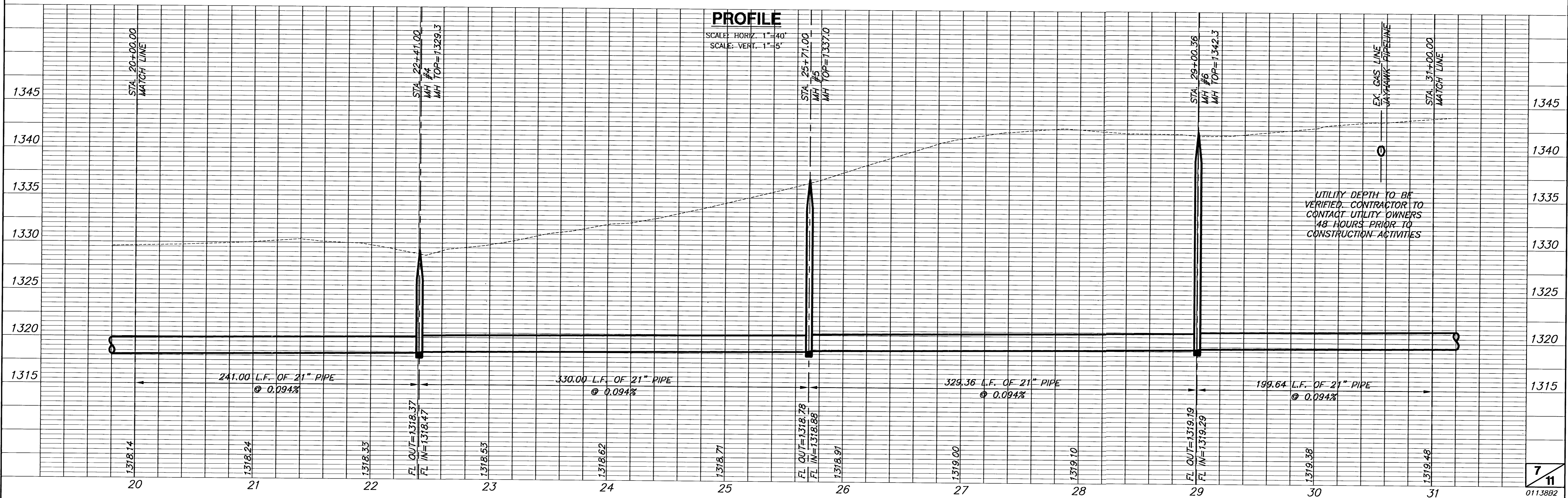
**MAIN 13, SS #23
PLAN & PROFILE**

K O C H

K O C H



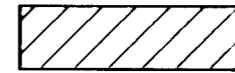
PLAN
SCALE: 1"=40'



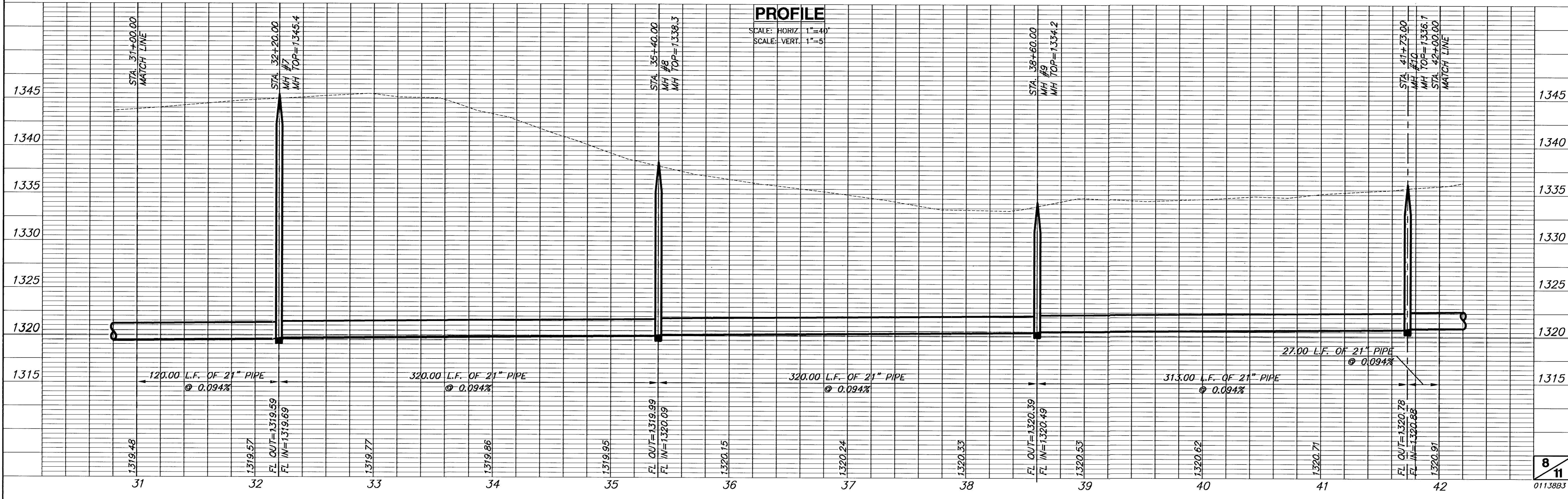
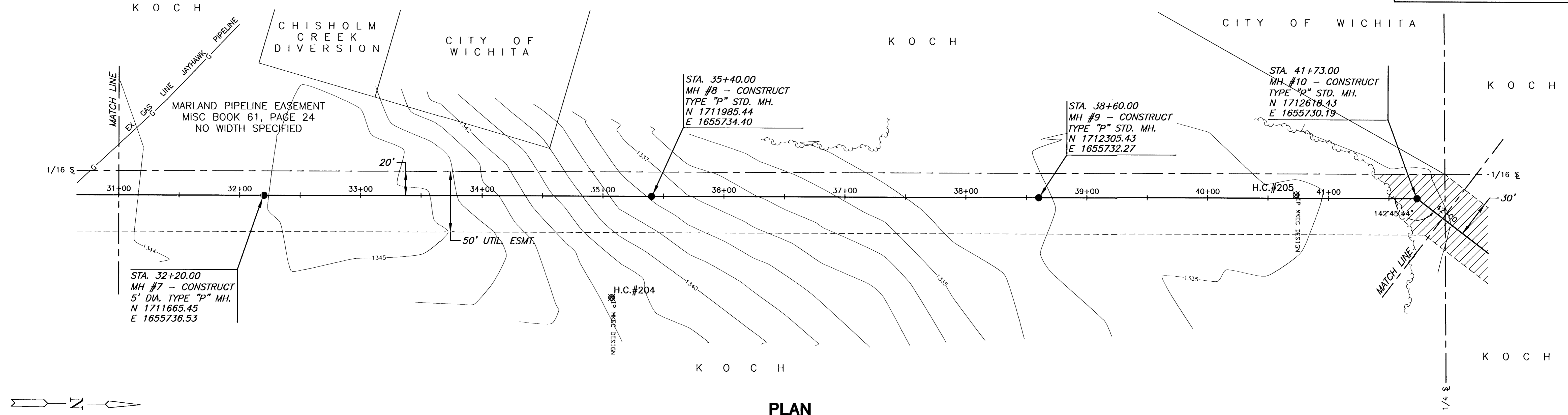
UTILITY DEPTH TO BE VERIFIED. CONTRACTOR TO CONTACT UTILITY OWNERS 48 HOURS PRIOR TO CONSTRUCTION ACTIVITIES

H.C.#204 3/8" Bar with Red "MKEC Design Point" Cap
N=1711953.35 E=1655818.52

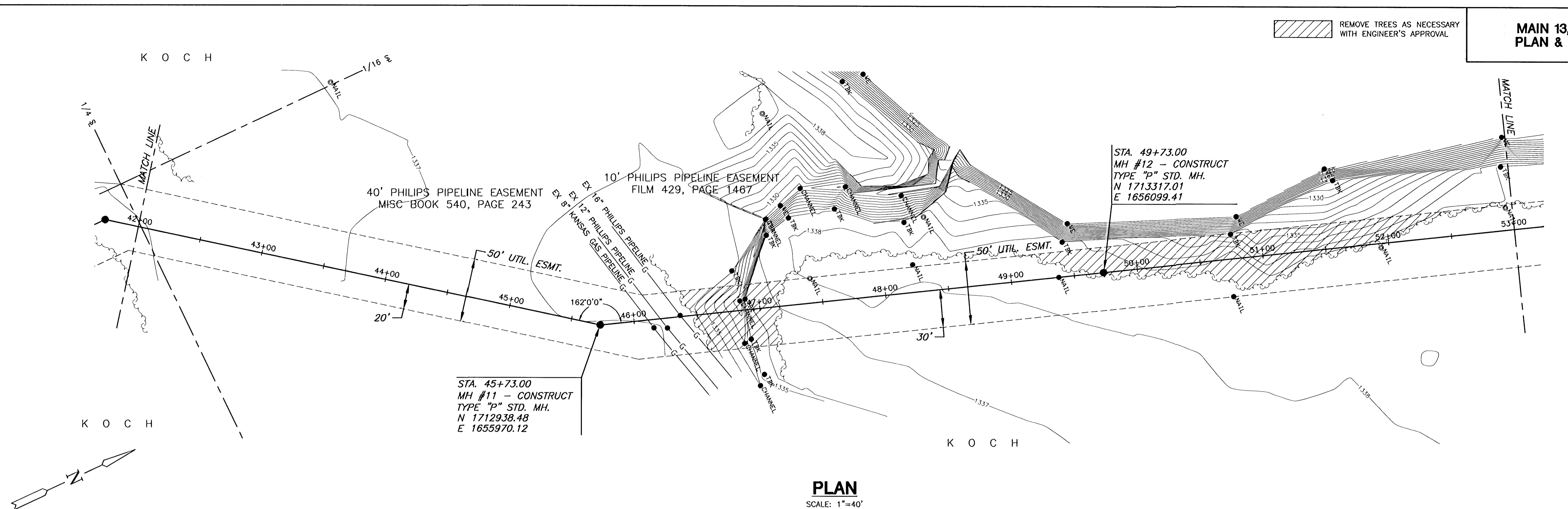
H.C.#205 3/8" Bar with Red "MKEC Design Point" Cap
N=1712518.77 E=1655728.21

 REMOVE TREES AS NECESSARY
WITH ENGINEER'S APPROVAL

**MAIN 13, SS #23
PLAN & PROFILE**

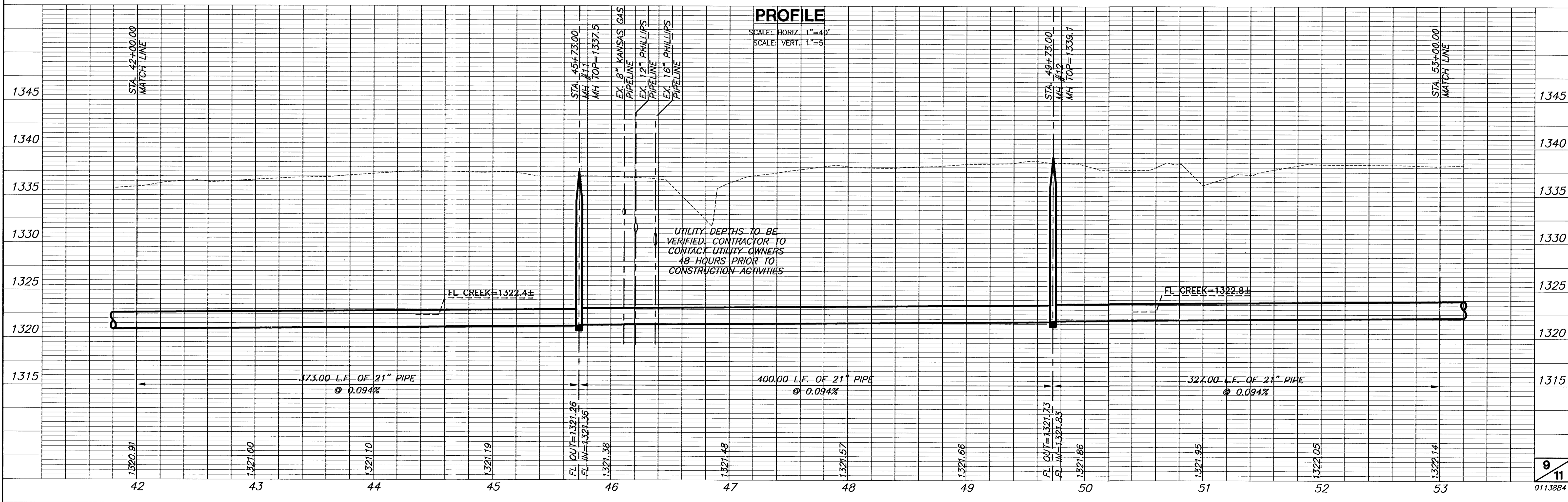


REMOVE TREES AS NECESSARY
WITH ENGINEER'S APPROVAL



PLAN
SCALE: 1"=40'

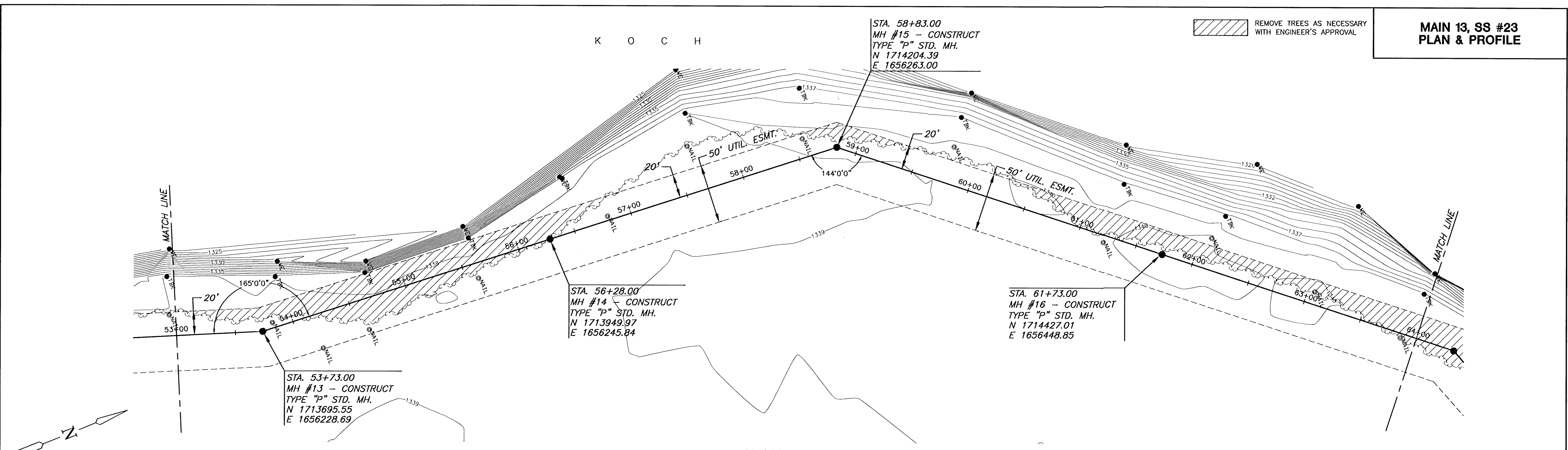
PROFILE
SCALE: HORIZ. 1"=40'
SCALE: VERT. 1"=5'



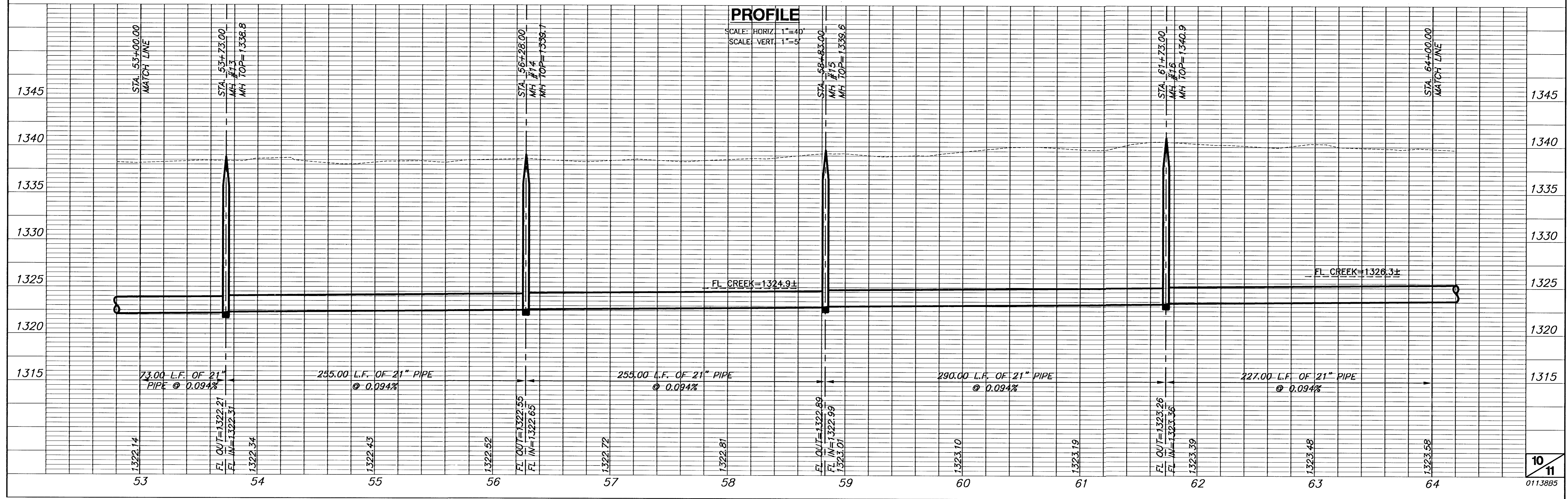
**MAIN 13, SS #23
PLAN & PROFILE**

REMOVE TREES AS NECESSARY
WITH ENGINEER'S APPROVAL

K O C H



PLAN
SCALE: 1"=40'



PROFILE
SCALE: HORIZ 1"=40'
SCALE: VERT 1"=5'

