

CITY OF COLUMBUS, OHIO
DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF WATER

STATE ROUTE 317 - LONDON/GROVEPORT 24" WATER MAIN - PART 2

CONTRACT NO. 913

CAPITAL IMPROVEMENT PROJECT NO. 383

2005

CITY OFFICIALS

MICHAEL B. COLEMAN ~ MAYOR

CHERYL ROBERTO ~ DIRECTOR
DEPARTMENT OF PUBLIC UTILITIES

RICHARD C. WESTERFIELD, P.E., Ph.D. ~ ADMINISTRATOR
DIVISION OF WATER

MEMBERS OF CITY COUNCIL

MATTHEW D. HABASH ~ PRESIDENT

MICHAEL C. MENDEL ~ PRESIDENT PRO-TEM

KEVIN L. BOYCE

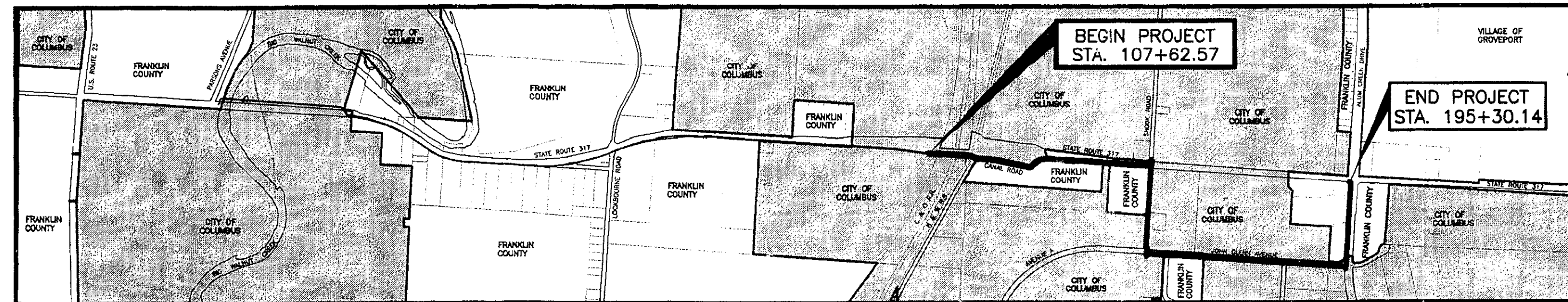
MARY JO HUDSON

MARYELLEN O'SHAUGHNESSY

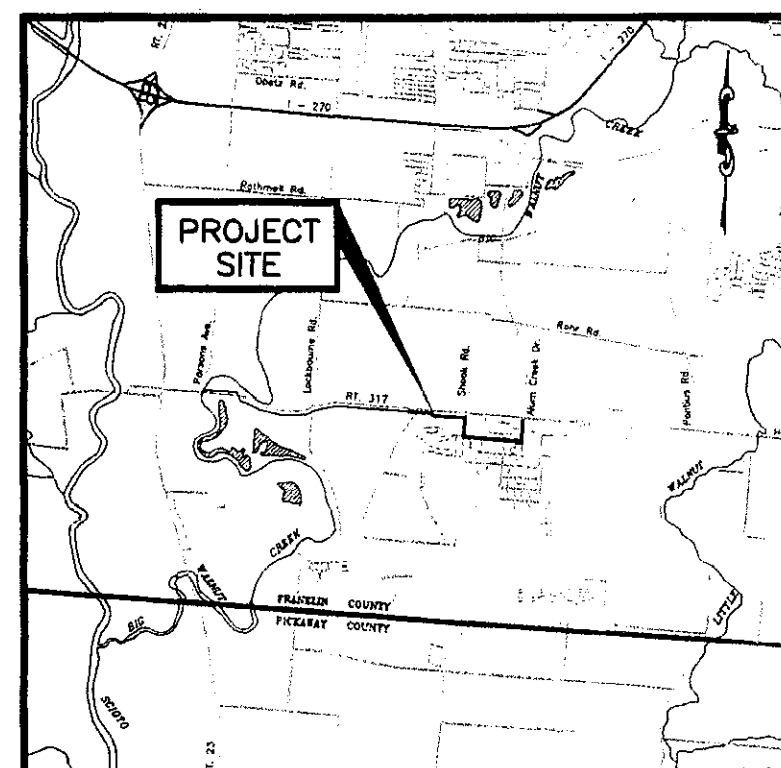
CHARLETA B. TAVARES

PATSY A. THOMAS

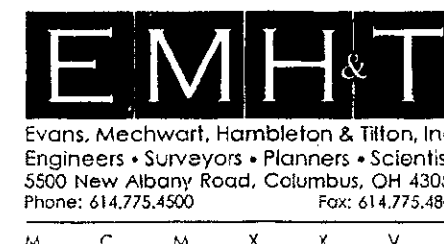
The City of Columbus Construction and Material Specifications (CMSC), 2002 edition, including special provisions and supplemental specifications listed in the proposal shall govern this improvement.



LOCATION MAP
1" = 1500'



VICINITY MAP
1" = 10,000'



BY Leroy E. Smith 9/9/2005
OHIO REG. NO. 52339 DATE

2530 100

TITLE SHEET

APPROVALS

SIGNATURES BELOW SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSES AND GENERAL LOCATION OF THE PROJECT. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLANS.

CITY OF COLUMBUS

[Signature]
DESIGN ENGINEER, DIVISION OF WATER
DATE: 9/14/05

[Signature]
HYDRANT SUPERVISOR, DIVISION OF FIRE
DATE: 10/12/05

[Signature]
ADMINISTRATOR, DIVISION OF ELECTRICITY
DATE: 9/21/05

[Signature]
CITY ENGINEER, TRANSPORTATION DIVISION
DATE: 10/5/05

[Signature]
DESIGN AND PLAN SERVICES ENGINEER, TRANSPORTATION DIVISION
DATE: 10/5/05

[Signature]
ADMINISTRATOR, DIVISION OF SEWERAGE AND DRAINAGE
DATE: 9-20-05

[Signature]
ADMINISTRATOR, DIVISION OF WATER
DATE: 10-26-05

[Signature]
DIRECTOR, DEPARTMENT OF PUBLIC SERVICE
DATE: 10/26/05

[Signature]
DIRECTOR, DEPARTMENT OF PUBLIC UTILITIES
DATE: 10/26/05

FRANKLIN COUNTY

APPROVAL BY FRANKLIN COUNTY IS FOR THE PORTION WITHIN FRANKLIN COUNTY RIGHT-OF-WAY ONLY.

[Signature]
FRANKLIN COUNTY ENGINEER
DATE: 11-02-05

[Signature]
FRANKLIN COUNTY CHIEF DEPUTY ENGINEER
DATE: 10/31/05

HAMILTON TOWNSHIP

APPROVAL BY HAMILTON TOWNSHIP IS FOR THE PORTION WITHIN HAMILTON TOWNSHIP ONLY.

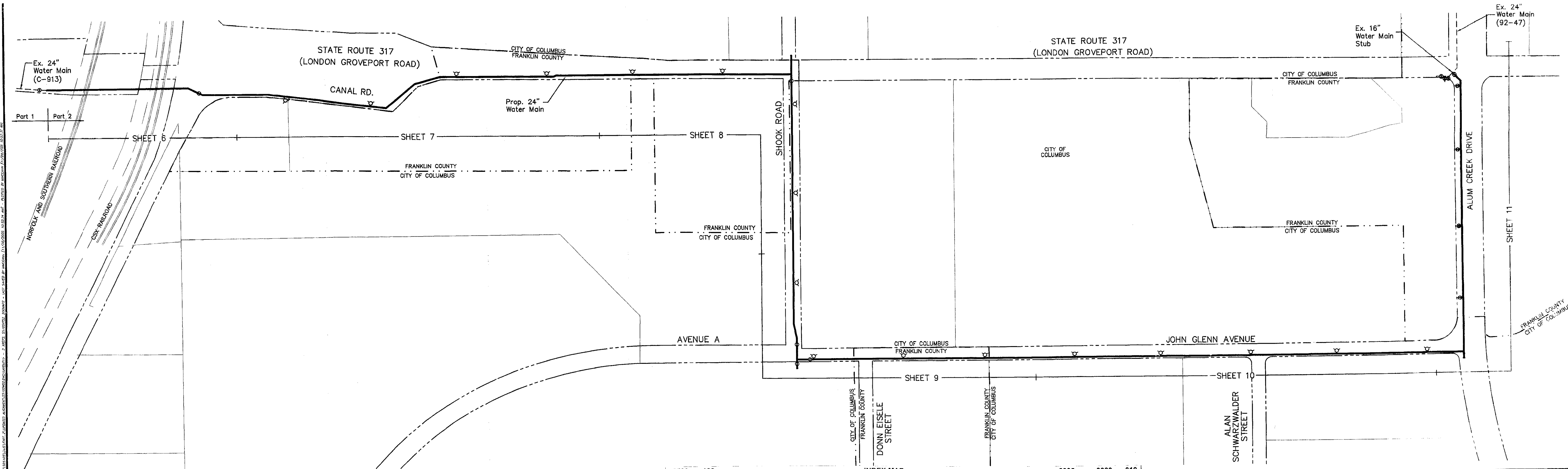
[Signature]
FIRE CHIEF, HAMILTON TOWNSHIP FIRE DEPARTMENT
DATE: 11-10-05

MADISON TOWNSHIP

APPROVAL BY MADISON TOWNSHIP IS FOR THE PORTION WITHIN MADISON TOWNSHIP ONLY.

[Signature]
FIRE CHIEF, MADISON TOWNSHIP FIRE DEPARTMENT
DATE: 10/26/05

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GENERAL NOTES

1. SPECIFICATIONS

The City of Columbus, Construction and Material Specifications, 2002 Edition, including special provisions and supplemental specifications listed in the proposal shall govern this improvement, unless otherwise noted.

All water line materials and installations shall be in accordance with the current rules and regulations of the City of Columbus, Division of Water, unless otherwise shown on the plans or ordered by the Engineer.

2. COMMENCEMENT OF WORK

The Contractor shall notify the Construction Inspection Office of the Transportation Division, City of Columbus, Ohio, Telephone (614) 645-3182, the Franklin County Utilities Coordinator at (614) 462-3063, and the Franklin County Traffic Department at (614) 462-6158 at least 48 hours prior to commencing work on this project, holidays and weekends excluded. Work shall not commence until a Pre-Construction Conference is held at the Construction Inspection Office, 1800 E. Seventeenth Avenue, Columbus, Ohio 43219.

3. SCHEDULE

THE CONTRACTOR SHALL COMPLETE THE PORTION OF THE PROJECT FROM THE EASTERNMOST POINT-OF-CONNECTION AT STATE ROUTE 317 AND ALUM CREEK DRIVE (W.L. STA. 195+30.14) SOUTH ALONG ALUM CREEK DRIVE, THEN CONTINUING WEST ALONG JOHN GLENN AVENUE TO SHOOK ROAD, THEN HEADING NORTH ON SHOOK ROAD TOWARDS STATE ROUTE 317 (W.L. STA. 152+50.00), WITHIN 60 DAYS OF NOTICE TO PROCEED. TO BE CONSIDERED COMPLETE, ALL WORK WITHIN THIS ALIGNMENT SHALL BE COMPLETED, TESTED, AND THE WATER MAIN DISINFECTED, TESTED, AND ACCEPTED BY THE CITY, READY FOR USE.

The Contractor shall coordinate with the school on Shook Road at least five working days before work begins in the vicinity.

4. FRANKLIN COUNTY ENGINEER'S MONUMENTATION

The Contractor shall contact the Franklin County Engineer's Office, Survey Department at (614-462-2489) two working days before disturbing any Franklin County Geodetic Monuments (vertical and/or horizontal) for reference and replacement.

5. CITY OF COLUMBUS STREET OPENING PERMIT

The Contractor shall obtain a street opening permit from the Transportation Division (645-7113), 109 N. Front Street, Columbus, Ohio, prior to open cut operations in any street inside the Corporation Limits of the City of Columbus. Original permits must be on site at the start of, and during, construction.

6. FRANKLIN COUNTY PERMIT

The Contractor shall secure a written permit from the Franklin County Engineer's Office, 970 Dublin Rd, a minimum of two working days prior to beginning work within Franklin County right-of-way. The Contractor may be required to post a bond with the Franklin County Engineer prior to issuance of the permit to insure proper restoration of the pavement and right-of-way. The Contractor shall provide the Franklin County Engineer's Office a 24-hour telephone number to be used in case of an emergency.

7. SAFETY REQUIREMENTS

The Contractor and Sub-contractor shall be solely responsible for complying with all federal, state and local safety requirements, together with exercising precautions at all times for the protection of persons (including employees) and property. It is also the sole responsibility of the Contractor and Sub-contractors to initiate, maintain and supervise all safety requirements, precautions and programs in connection with the work.

8. RIGHTS OF WAY

In addition to the direct requirements of the Contract Specifications, the Contractor shall observe and conform to the requirements of all rights-of-way including easements, court entries, rights of entry or action filed in court in accordance with the code of the applicable governing agency. The cost of the operations, necessary to fulfill such requirements, shall be included in the price bid for the various items of the Contract unless specific provision is made in the Contract Specifications for such cost under specific items of the Contract.

9. EXISTING UTILITIES

The identity and location of the existing utility facilities known to be located in the construction area have been shown on the plans as accurately as provided by the owner of the underground utility. The City of Columbus and/or the Engineer assumes no responsibility as to the accuracy or the depths of the underground facilities shown on the plans.

Location, support, protection and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor. It shall be the responsibility of the Contractor, prior to construction, to determine in the field the actual location and elevations of all existing utilities whether shown on the plan or not. Cost to be included in the price bid for the various water main items.

The Contractor shall cause notice to be given to the Ohio Utilities Protection Service (Telephone 1-800-362-2764 toll free) and to the owners of the underground utility facilities shown on the plans who are not members of a registered protection service in accordance with Section 153.64 of the Revised Code. The above mentioned notice shall be given at least 48 hours prior to start of construction.

The following utilities are located within the work limits of this project, and the owners do not subscribe to a registered underground utility protection service:

UTILITY	OWNER	TELEPHONE	FAX
Water Facilities	City of Columbus (Division of Water) 910 Dublin Road Columbus, Ohio 43215	(614)645-7788	(614)645-0220
Sewerage Facilities	City of Columbus (Division of Sewerage and Drainage) 910 Dublin Road Columbus, Ohio 43215	(614)645-7102	(614)645-3242
Traffic Control Facilities	City of Columbus (Transportation Division) 109 North Front Street, Third Floor Columbus, Ohio 43215	(614)645-7393	(614)645-5967
Electric Facilities Municipal Electric Light and Power (MELP)	City of Columbus (Division of Electricity) 3500 Indianola Avenue Columbus, Ohio 43214	(614)645-7627	(614)645-7150

UTILITY

OWNER

TELEPHONE

FAX

Storm
Water
Facilities

Columbus Regional
Airport Authority
4600 International Gateway
Columbus, Ohio 43219

(614)239-4000

10. EXPOSE

The Contractor shall expose the existing underground utility or structure indicated on the plans sufficiently in advance of laying the proposed water line in order to verify the proposed location, elevation and material type. Cost to be included in the prices bid for the various water main items.

11. SANITARY FACILITIES

The Contractor shall furnish and maintain sanitary convenience facilities for the workmen and inspectors for the duration of the work.

12. EXTRA COMPENSATION

No extra compensation will be paid the Contractor by reason of compliance with any of the requirements indicated on the plans, but payment shall be deemed to be included among the several items, as bid upon, unless otherwise specifically provided.

13. STATIONING

All stationing refers to water line stationing unless otherwise noted on the plans.

14. NON-RUBBER TIRE VEHICLES

No non-rubber tire vehicles shall be moved on City streets, County roads, and Township roads. Exceptions may be granted by the City for City roads where short distances and special circumstances are involved. Granting of exceptions must be in writing and any resulting damage must be repaired to the satisfaction of the City of Columbus and the Franklin County Engineer where County and/or Township roads are involved.

15. TREES

All trees, whether shown or not shown on the plans, are to be preserved unless approval to remove is given in writing by the Engineer or their removal has been designated on the plans. Trees removed by either of the two preceding authorities shall be paid for under Item 801.

The Contractor shall use special precautions to avoid damage to all other trees. When, in the opinion of the Engineer, trunks or branches would be endangered by the use of mechanical devices, hand excavation will be required. The cost of tree protection and removal, if approved, shall be included in the price bid for the various water main items.

16. SAWING PAVEMENT

Where necessary to disturb pavements or drives, the pavement shall be saw cut to full depth of pavement and in neat straight lines. If the pavement is damaged beyond the original saw cut during construction, the pavement shall be re-cut to neat lines. Cost to be included in the price bid for the various pavement replacement items.

17. TEMPORARY PAVEMENT

All streets and driveways cut by the Contractor shall be provided with temporary pavement on the same day that original pavement is cut. In general, streets shall be provided with temporary asphalt pavement per Item 253 and Standard Drawing 2161 Dr. A. Private driveways shall be temporarily replaced

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GENERAL NOTES

with a minimum of 8 inches of crushed stone or gravel as per Item 815. Trench shall be backfilled to the top of the pavement subgrade per section 801.09. Payment will be made at the contract unit price bid for Item 253.

18. PERMANENT PAVEMENT

Unless otherwise shown on the plans, or when ordered by the Engineer, permanent pavement replacement shall be provided, for all streets and driveways cut by the Contractor, as specified under Item 252 and Standard Drawings 1441 Dr. A and 2160 Dr. A. Trench shall be backfilled to the top of the pavement subgrade per section 801.09.

19. CURBS AND SIDEWALKS

Sidewalk shall be removed from existing joints and replaced as per 2300 Dr. A. Curb or curb and gutter will be removed as per 1441 Dr. A and replaced as per Item 609 and Standard Drawings 2000 & 2010 Dr A. Cost for replacement of sidewalks and curbs shall be included in the prices bid for Items 608 and 609.

20. BACKFILL

All cleanup and backfill operations shall be done within 300' of pipe laying operations during the week. On the weekends, backfill shall be within 20' of the end of the last pipe laid. During non-construction hours, all excavations shall be filled, plated or protected (barrels and fencing) in such a manner as to positively separate vehicles or pedestrians from the work. All trenches under pavement, and as noted in profile, shall be backfilled with compacted granular material, as per Item 912. Cost of Item 912 shall be included within the cost of Item 801.

21. EXISTING VALVES

All existing valves shall be operated by City of Columbus, Division of Water personnel only, as stated in Chapter 1113 of the Columbus City Code.

22. TESTING PROCEDURE

All water mains shall be hydrostatically tested in accordance with section 801.12. Cost of this work is to be included in the unit price bid for the respective pipe under Item 801.

Each valved section of water main shall be tested independently of one another unless otherwise approved by the Engineer. Pressure test shall be conducted with all watch valves open and hydrant foot valves closed.

Any testing performed against existing valves shall be at the Contractor's risk and in strict compliance with the requirements of the Engineer. If satisfactory results cannot be obtained against an existing valve, the new line shall be disconnected from the existing valve, plugged and retested. Disconnection from the existing water main, and any repairs necessary because of damage caused to the existing lines, valves and service connections shall be at the Contractor's expense.

23. DISINFECTING WATER MAINS

All water mains shall be disinfected in accordance with section 801.13. Special attention is directed to the applicable section of A.W.W.A. C-651. Cost of this work is to be included in the unit price bid for the respective pipe under Item 801.

24. HAND SWABBING

The Contractor shall hand swab all pipes and fittings that are not otherwise disinfected. The amount of chlorine to be used during hand swabbing operations will be determined by the City of Columbus, Division of Water.

All visible valve and service boxes on the water line to be abandoned, which will no longer be in service, shall be removed. The required surface restoration shall be paid for under the appropriate bid item(s).

25. SERVICE TRANSFER AND WATER LINE ABANDONMENT

Where indicated on plans, the existing water lines shall be abandoned and existing water services off these lines, indicated on the plans and shown by house number, shall be transferred to the new water line.

Prior to abandonment of existing water lines, the proposed new water lines shall be tested and chlorinated and then the existing services, indicated on the plans and shown by house number, shall be transferred to the new water lines. The Contractor shall maintain water service to all water customers affected by transfer of service.

All other existing services shown on the plans and not indicated as transfers shall be abandoned in place.

To ensure that all existing water services are transferred to the new water line, no water line shall be abandoned until all affected water services have been transferred; the new water line is put in service; and the existing water line to be abandoned has been shut down for 24 hours.

26. FOR ALL VALVES

If the top of the operating nut is more than 36 inches below finished grade, an extension stem shall be furnished to bring the top of the operating nut to within 24 inches of finished grade elevation. Cost to be included under Item 802.

27. BUTTERFLY VALVES

When installing butterfly valves, the operator shall be set on either the south or east side of the proposed water main.

28. EXISTING PLUGS, CAPS, ETC.

Plugs and caps removed from existing water lines shall be delivered to the Water Services Center, 910 Dublin Road, Columbus, Ohio, unless otherwise directed by the Engineer. No additional payment will be made for this delivery.

29. FIRE HYDRANT REPLACED OR RELOCATED

No existing fire hydrants to be replaced or relocated shall be removed, or taken out of service, until the new water lines are in service and the new fire hydrants are accepted by the Division of Fire.

30. SIGNS, FENCES, DRAINAGE STRUCTURES, ETC.

All signs, fences, shrubs, drainage structures or other physical features disturbed or damaged during work under this Contract shall be restored to their original condition by the Contractor. Unless otherwise provided in the Contract, the cost of all such work shall be included in the price bid for the various water main items.

31. REPLACEMENT OF DRAIN TILE AND STORM SEWERS

All drain tile and storm sewers damaged, disturbed or removed as a result of the Contractor's operations shall be replaced with the same quality pipe or better, maintaining the same gradient as existing. Replaced drain tile shall be laid on compacted granular bedding. Cost to be included in the price bid for the various water main items.

32. SEEDING AND MULCHING

The areas to be seeded will be determined by the City. In general grassy areas within street or highway right-of-way will be considered urban in character and seeded as per Item 659.

11/20/2003 11:20:03 AM - LAST SAVED BY: MDC/DAVE/11/20/2003 10:22:21 AM

DR. _____
TR. _____
CK. _____

FIELD BOOK

CITY OF COLUMBUS, OHIO
DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF WATER



Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Fax: 614.775.4800

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GENERAL NOTES

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DIVISION OF WATER CONTRACT NO. 913
CAPITAL IMPROVEMENT PROJECT NO. 383
STATE ROUTE 317 - LONDON/GROVEPORT 24" WATER MAIN PART 2

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33. MAINTAINING MAIL SERVICE

The Contractor shall be responsible for maintaining mail service in the construction area. Prior to disturbing any mail boxes the Contractor shall contact the postal authorities and shall temporarily relocate mailboxes in accordance with the requirements therefore. The Contractor shall restore mailboxes to their original condition and location. Cost to be included in the price bid for the various water main items.

34. TRACKING OF MUD

Any mud tracked or deposition of building materials or debris upon public right-of-way shall be cleaned off immediately. Any work done by the City to clean streets as a result of negligence by the Contractor shall be at the Contractor's expense.

35. CITY OF COLUMBUS, SEWER DIVISION

All existing sewer lines may or may not be shown on the plan. Individual service lines are not shown and should be located by the Contractor prior to commencing any work. Call (645-7490) if assistance is needed in locating these services.

Location, support, protection and restoration of all sewer lines, services and appurtenances shall be the responsibility of the Contractor. If a facility is damaged by the Contractor, all repairs shall be made in accordance with the City of Columbus Construction and Material Specifications, at the Contractor's expense.

Maintain eighteen (18) inches vertical and ten (10) feet horizontal separation between any existing sanitary sewers and all proposed water mains.

Maintain twelve (12) inches vertical and three (3) feet horizontal separation between any existing storm sewers and all proposed water mains.

36. FOR THE DIVISION OF ELECTRICITY

The Division of Electricity, City of Columbus, Ohio, has underground street lighting on both sides of Alum Creek Dr. The Contractor is hereby REQUIRED to contact the Division of Electricity by fax (614) 645-7150 (fax) forty eight hours prior to conducting any activity within the construction area. The Division of Electricity's dispatch office number is: (614) 645-7627 (voice). "Please identify the location of DOE poles and their relation to project construction".

Any required relocation, support, protection, or any other activity concerned with the City's electrical system in the construction area is to be performed by the Contractor under the direction of Division of Electricity (DOE) personnel and at the expense of the project, unless otherwise noted. DOE shall make all final connections to DOE's existing electrical system at the expense of the project. The contractor shall use material and make repairs to the City of Columbus street lighting system by following the Division of Electricity's "Material and Installation Specifications" (MIS) and the City of Columbus "Construction and Material Specifications" (CMS). Any new or re-installed underground streetlight system shall require testing as referred to in Section 1000.18 of the CMS manual. The Contractor shall conform to the Division of Electricity's existing Conductor Safety Policy and Hold Card System (MIS-95), copies of which are available from the Division of Electricity. If you have any questions, call Linda Scothorn at (614) 645-7295.

If any electric facility belonging to the Division of Electricity is damaged in any manner by the Contractor, its agents, servants, or employees, and requires emergency repairs, the Division of Electricity shall make all necessary repairs, and the expense of such repairs and other related costs shall be paid by the Contractor to the Division of Electricity, City of Columbus, Ohio.

37. MAINTAINING TRAFFIC

Unless otherwise provided for in the Contract, the cost of all work associated with Maintaining Traffic notes shall be included in the unit price bid for Item 614, Maintaining Traffic.

All temporary traffic control (TTC) devices shall be furnished, erected, maintained and removed by the Contractor in accordance with the Ohio Manual of Uniform Traffic Control Devices For Construction And Maintenance Operations (Current Edition). Copies are available from Ohio Department of Transportation, Bureau of Traffic, 1980 West Broad Street, Columbus, Ohio 43223. **NOTE:** All devices shall comply for condition and location with the NCHRP 350 Crash Testing Guidelines.

The Contractor shall give advance notification (written and verbally) to Temporary Traffic Control Coordinator (645-6269 or 645-5845), the Columbus Paving The Way Program Coordinator (645-7283 or 645-6061), Franklin County Traffic Engineer (462-5318) and the Project Manager, informing them of all upcoming traffic pattern changes. Notification shall include, but not be limited to, what, where, when, and how pedestrian and vehicular traffic will be affected, and the temporary traffic control procedures the Contractor is planning to use. The type of traffic change shall determine the length of advance notification required:

TYPE OF CHANGE	ADVANCE NOTIFICATION NEEDED
Detours/road closures	30-day notification prior to closure.
Lane closures lasting 2 weeks or more	2-weeks
Lane closure of less than 2 weeks	3-days
Lane closures of 2 days or less	1-day
Any other unforeseen impacts to traffic shall be immediately reported as they occur.	

A TTC Plan (TTCP) including pedestrian control shall be submitted to the TTC Coordinator (645-6269 or 645-5845) and Franklin County at the pre-construction meeting or a minimum of ten (10) working days prior to beginning work. Copies of the approved TTCP shall be given to the Project Engineer and kept on site along with the Street Closure/Occupancy Permit.

PORTABLE CHANGEABLE MESSAGE SIGN (PCM)

The contractor shall furnish, install, maintain, and remove, two (2) changeable message signs as directed by the Engineer.

Each sign shall be trailer mounted and equipped with a functional dimming mechanism to adjust the brightness under varying light conditions and a tamper and vandal proof enclosure. Each sign shall have operation instructions to enable on-site operation and troubleshooting. The sign shall also be capable of being powered by an electrical service drop from a local utility company.

The PCM shall be in place 1 week prior to construction to advise the public. The PCMs shall be located in a highly visible location, yet protected from traffic. The contractor shall at the direction of the Engineer, relocate the PCMs to improve visibility or accommodate changed conditions. When not in use, the PCMs shall be off, facing away from all traffic and shall display one or more high intensity yellow reflective sheeting surfaces of 9-inch by 15-inch minimum size facing traffic.

The Contractor is responsible for changing messages within 2 hours following notification from the Engineer.

The sign shall have the capability to store up to 99 messages. Message memory or preprogrammed displays shall not be lost as a result of power failures to the on board computer. The sign legend shall be capable of being changed in the field. The PCM shall have a full matrix display with the ability to show multiple line formats with up to six message phases.

The PCMs shall contain an accurate clock and programming logic which will allow the sign to be activated, deactivated or changed automatically at different times of the day for different days of the week.

The PCMs shall be maintained in good working order by the Contractor. Any failure shall not result in the sign being out of service for more than 12 hours including weekends. Failure to comply may result in an order to stop work and open all traffic lanes and/or in the City, County, or State taking appropriate action to safely control traffic. Any costs accrued by these authorities having jurisdiction will be deducted from moneys due, or to become due the Contractor on the contract.

The Contractor shall be responsible for 24 hours per day operation and maintenance of these signs on the project.

Payment for the PCMs shall be at the contract unit price bid per sign-month for each Item 614 portable changeable message sign, and shall include all labor, materials, equipment, fuels, lubricating oils, software, hardware, and incidentals to perform the above described work.

Steady burning Type C lights shall be required on all barricades, drums, and similar traffic control devices in use at night. Only 42" reflectorized channelizing devices (cones) shall be permitted for nighttime work with the approval of the TTC Coordinator (645-6269 or 645-5845) or O.D.O.T. standards.

A flashing arrow panel (48"X96"-Type C) shall be used in lane closures as per the Ohio Manual of Uniform Traffic Control Devices.

All trenches within the road right-of-way shall be backfilled or securely plated during non-working hours.

Access for pedestrian and vehicular traffic to all adjoining properties shall be maintained at all times.

The Contractor shall be responsible for the protection and safe movement of pedestrians through, around, or detoured away from the construction site. Traffic control for pedestrian movement shall be as per figures TA-28 and TA-29 of Part VI of the Ohio Manual of Uniform Traffic Control Devices.

The Transportation Division shall locate and mark all underground traffic control cables. The Traffic Engineering Shop shall be notified (645-7393; fax 645-5967) at least forty-eight (48) hours (excluding Sat. & Sun.) prior to the beginning of any work within 450 feet of any signalized intersection(s) or within any posted area where the Division has underground cable. Signals Management personnel (645-0423) (cell 419-4501) shall be notified six (6) weeks in advance for signal revisions or pole relocations.

No excavation shall be made within five (5) feet of any pole that supports traffic signal displays or signs by mast arm or signal span. Excavation within eight (8) feet, but more than five (5) feet shall require additional support (down guy, head guy, base guy, etc.) The Contractor shall contact Transportation Division Signals Management personnel at (645-0423) (cell 419-4501) at least forty-eight (48)

hours (excluding Sat. & Sun.) prior to the beginning of such excavation so that the City can approve the stabilization setup by the Contractor. Stabilization will be done by the Contractor at the Owners'/Contracting Agency's expense.

When any traffic control device, conduit, or cable gets damaged the Contractor shall notify Signals Management personnel at (645-0423) (cell 419-4501) between 8:00 am and 4:30 pm, Monday through Friday. At other times or if Signals Management personnel cannot be reached, contact the Traffic Engineering Maintenance Shop at 645-7393. Leave message on the answering machine if necessary.

The Contractor shall maintain all permanent traffic control not in conflict with the temporary traffic controls throughout this project. Permanent traffic control may be temporarily relocated or covered, as approved by the Engineer. The Contractor shall assume all liability for missing, damaged, or improperly placed signs. All costs associated with reinstalling pavement markings disturbed due to maintenance of traffic shall be included in Item 614, Maintaining Traffic.

Any work done by the Transportation Division, including installation, relocation, removal and/or replacement of temporary traffic control devices as a result of work done by the Contractor or as a result of negligence of the Contractor, shall be at the Contractor's expense.

All traffic lanes shall be open to traffic from 6:00 a.m. to 9:00 a.m and 4:00 p.m. to 7:00 p.m., Monday through Friday on all roads and streets. If pre-approved by the authority having jurisdiction, one lane of traffic may be temporary closed for the delivery of construction equipment and materials between 9:00 a.m. and 4:00 p.m. Unless otherwise authorized by the City of Columbus, all work within the pavement area shall be performed between the hours of 7:00 p.m. and 6:00 a.m. each working day. All trench plating, surface clean up, traffic control, traffic control barrier devices, etc. work shall be completed by the 6:00 a.m. hour.

38. STANDARD DRAWINGS

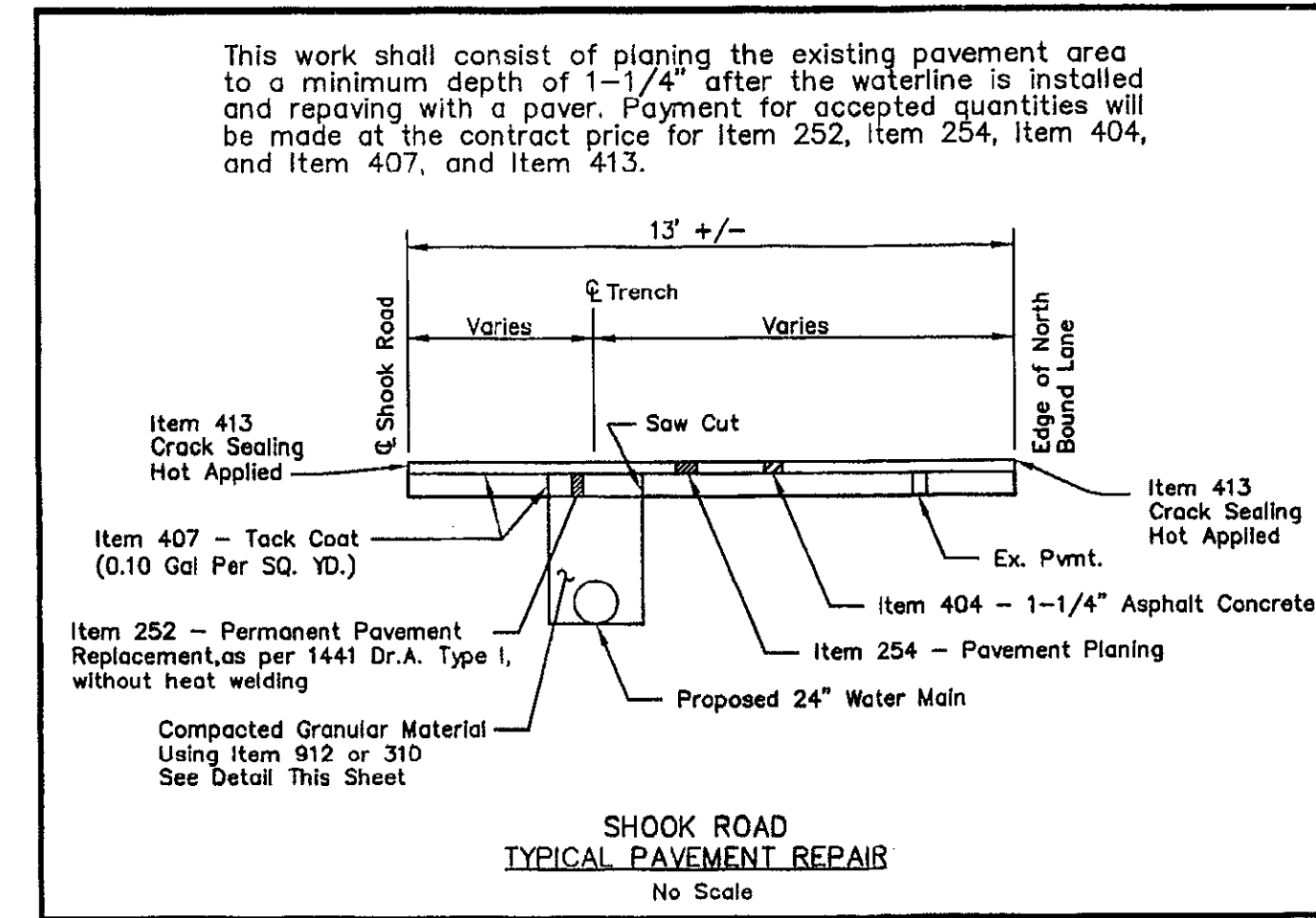
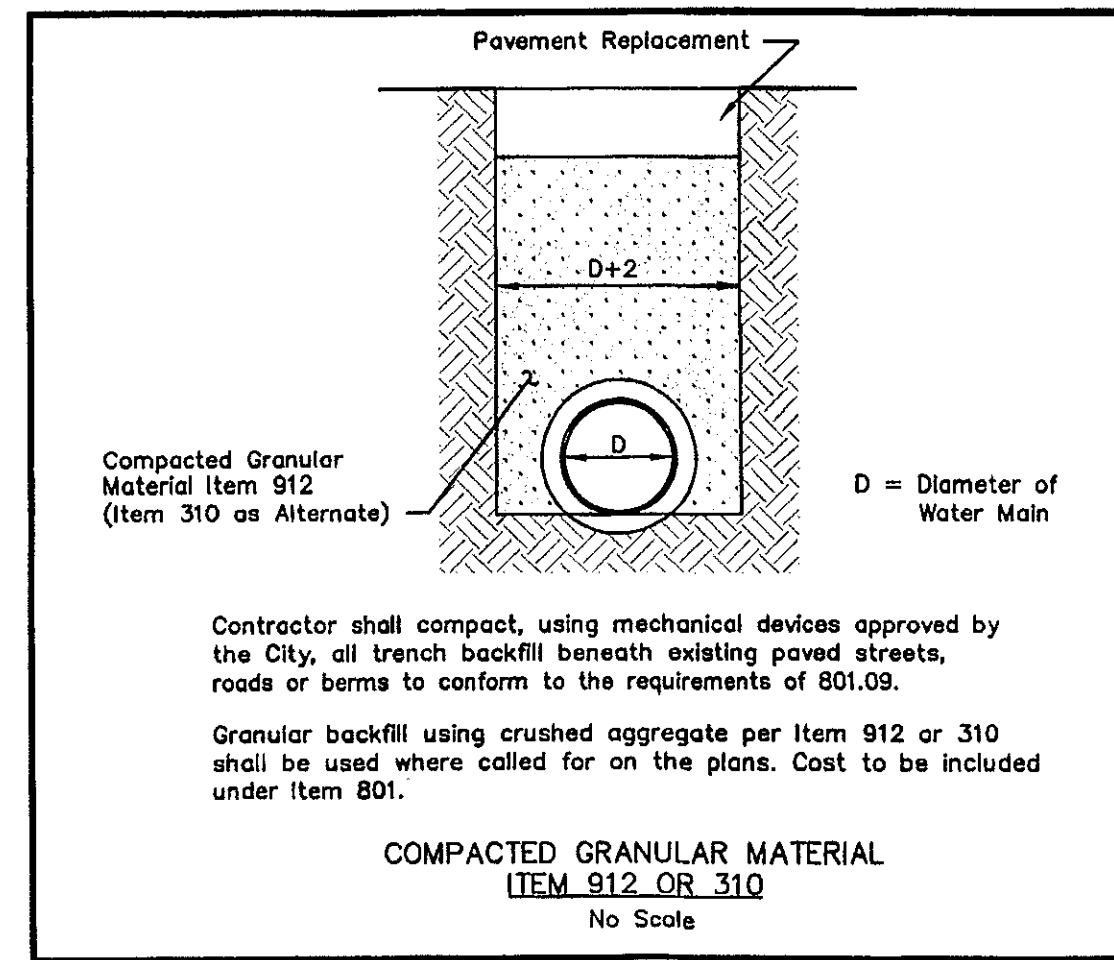
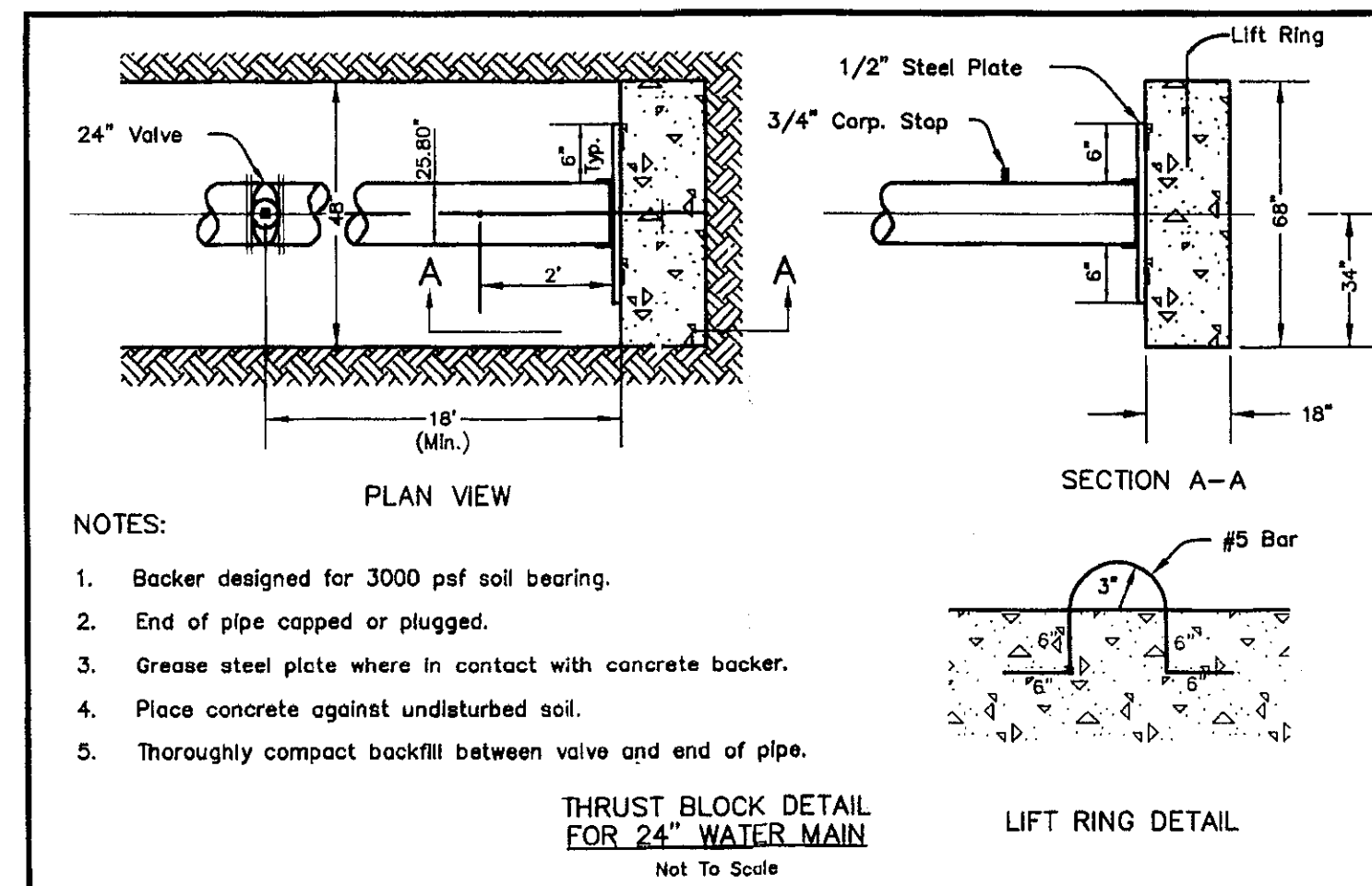
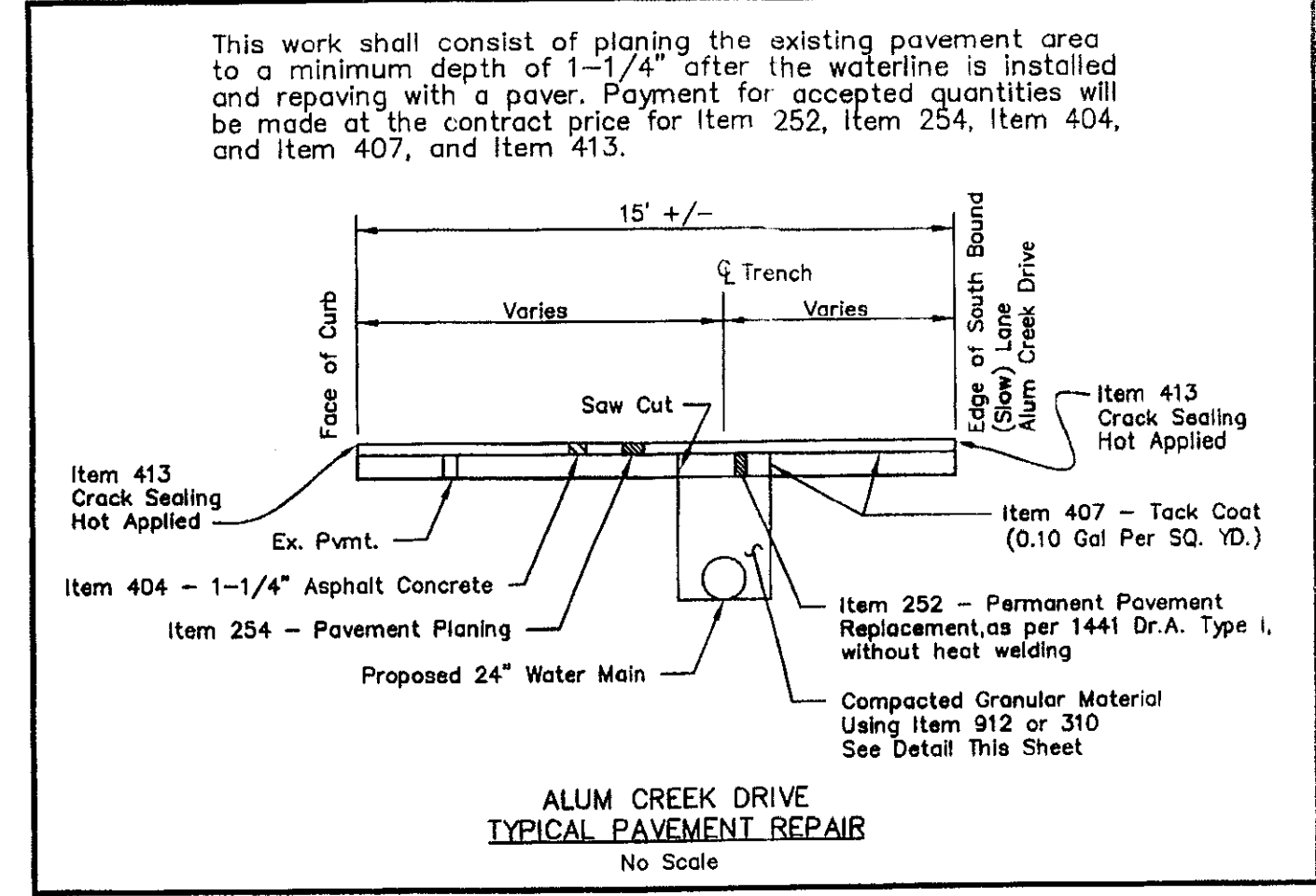
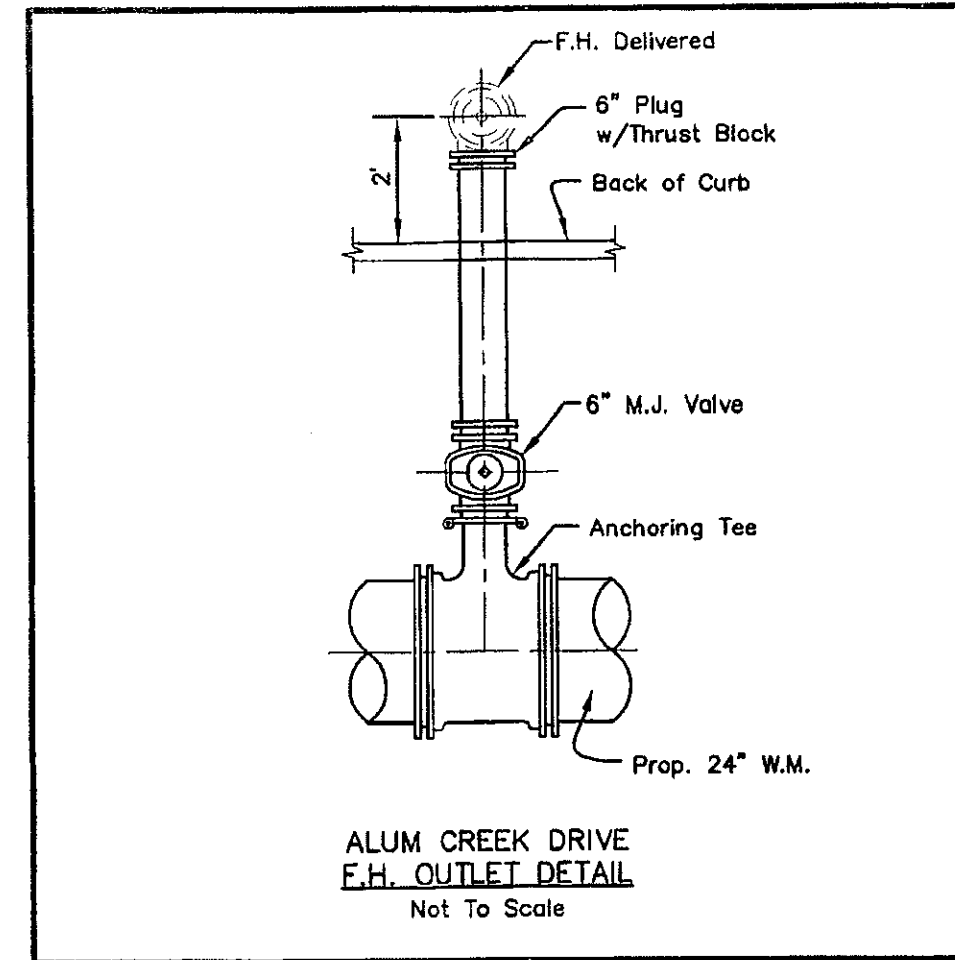
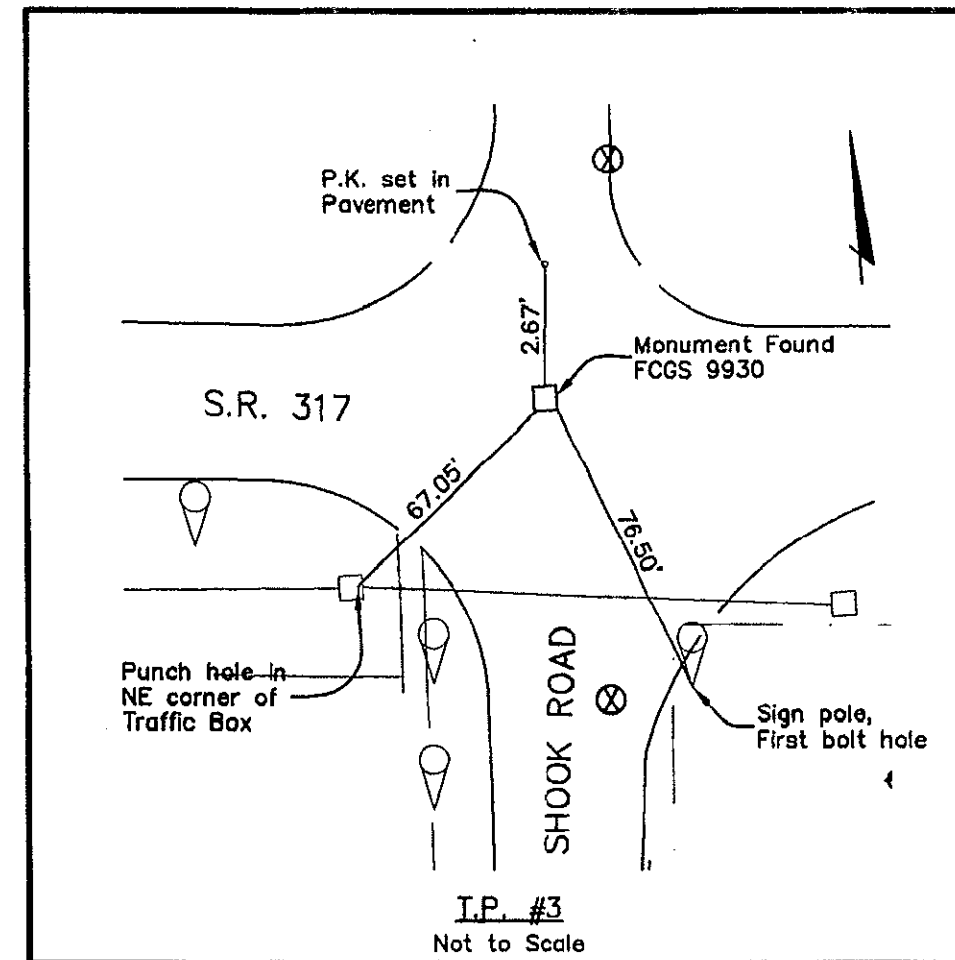
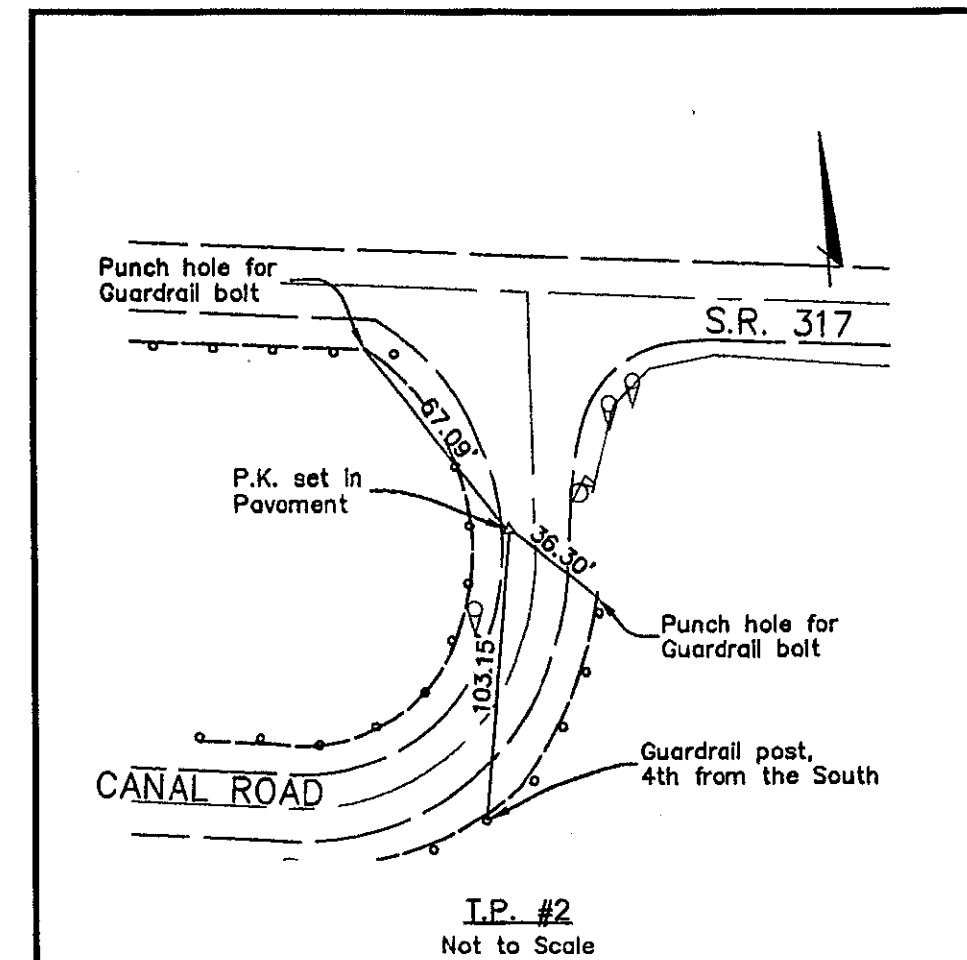
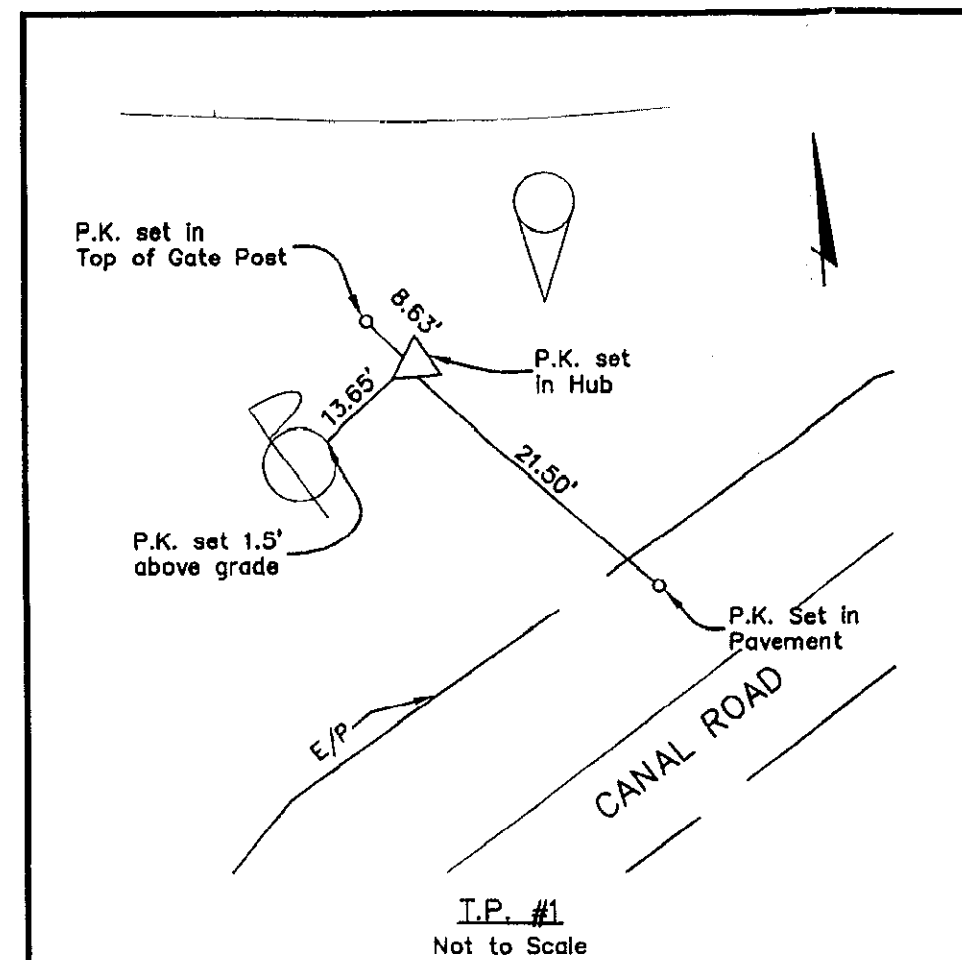
The following Standard Drawings shall be considered a part of these plans:

L-6306	Concrete Valve Supports
L-6310	Backing for Vertical Bends
L-6311	Backing for Bends
L-6312	Backing for Tees
L-6316	Columbus Standard Heavy Duty Valve Box Cover
L-6320	C. I. Ferrule Valve Box and Cover
L-6324	Casing Pipe
L-6409	Typical Hydrant Setting, Type "B" 3/4" Thru 2"
L-6473	Typical Air Release
L-6637	Typical Hydrant Setting, Type "A"
L-6640	Allowable Leakage Table
L-7001	Thrust Block Detail, End of Pipe
L-7002	Drain Tile Replacement
L-7401	Typical Water Line Lowering
L-7601	Typical Hydrant Setting, Type "A" Modified
1441 Dr. A	Pavement and Utility Cut Repair Standards
2000 Dr. A	Straight 18" Concrete Curb, Item 609
2010 Dr. A	Standard Concrete Combined Curb & Gutter, Item 609
2160 Dr. A	Pavement Replacement (Driveways)
2161 Dr. A	Pavement Replacement (Temporary)
2179 Dr. A	Backfilling within Highway Right-of-Way
2300 Dr. A	Standard Sidewalks, Item 608 and Specifications
AA-S166	Cast in Place Pipe Culvert Headwalls - 8" to 36" Diameter

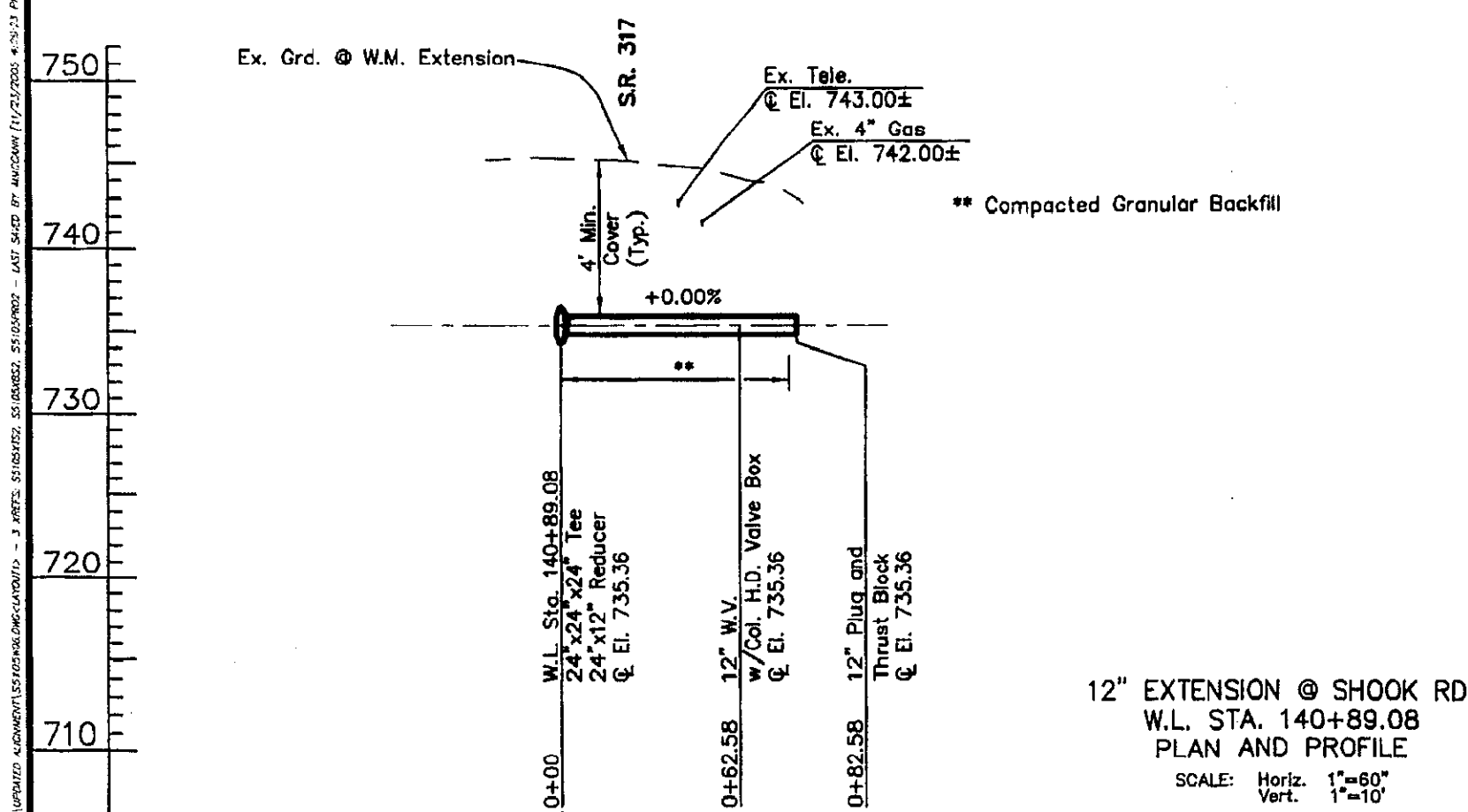
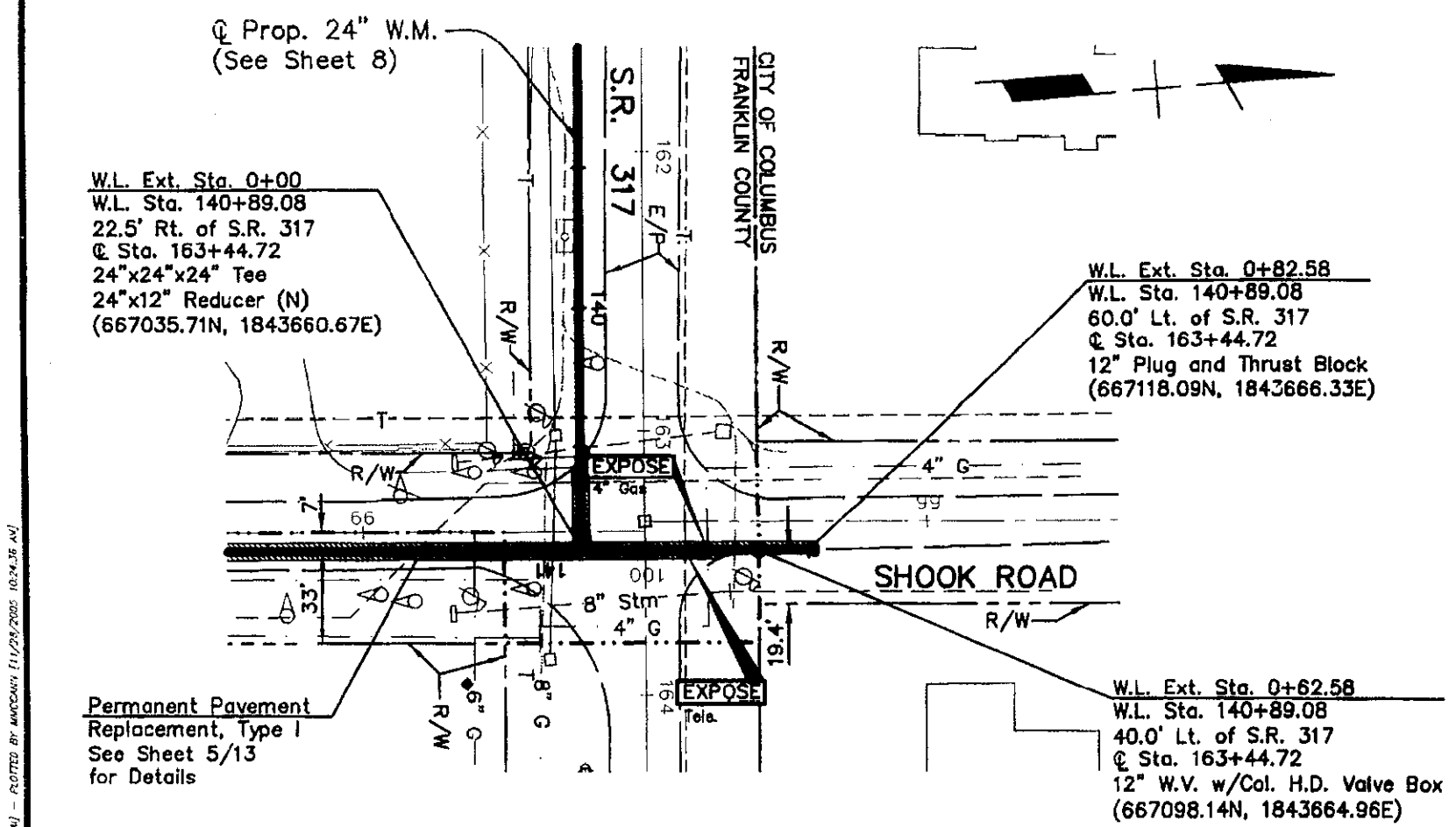
ESTIMATE OF QUANTITIES				
REF	ITEM	QTY.	UNIT	TITLE
1	202	6	EA.	FIRE HYDRANTS REMOVED
2	207	4,000	L.F.	FILTER FABRIC FENCE
3	252	373	C.Y.	ARTERIAL PERMANENT PAVEMENT REPLACEMENT, TYPE I
4	252	7	C.Y.	DRIVEWAY PAVEMENT REPLACEMENT, TYPE IIIA
5	252	13	C.Y.	DRIVEWAY PAVEMENT REPLACEMENT, TYPE IIIB
6	252	19	C.Y.	DRIVEWAY PAVEMENT REPLACEMENT, TYPE IIIC
7	253	373	C.Y.	TEMPORARY PAVEMENT
8	254	4,200	S.Y.	PAVEMENT PLANING
9	404	300	TON	1 1/4" ASPHALT CONCRETE
10	407	465	GAL.	TACK COAT (@ 0.10 GAL/SY)
11	413	5,264	L.F.	CRACK SEALING, HOT APPLIED
12	604	1	EA.	HEADWALL FOR 15" PIPE
13	609	200	L.F.	STRAIGHT 18" CONCRETE CURB
14	614	1	L.S.	MAINTAINING TRAFFIC
15	614	6	EA.**	PORTABLE CHANGEABLE MESSAGE SIGN (** SIGN MONTH)
16	659	6,564	S.Y.	SEEDING AND MULCHING
17	801	8,808	L.F.	24" DUCTILE IRON WATER PIPE AND FITTINGS, CLASS 54
17A	801	8,808	L.F.	24" PRESTRESSED CONCRETE WATER PIPE WITH FITTINGS
18	801	113	L.F.	12" DUCTILE IRON WATER PIPE AND FITTINGS, CLASS 54
19	801	320	L.F.	6" DUCTILE IRON WATER PIPE AND FITTINGS, CLASS 53
20	801	1	EA.	REMOVE EXISTING 6" TEE, INSTALL 6" 90° BEND
21	801	1	EA.	REMOVE EXISTING 6" CROSS, INSTALL 6" 90° BEND
22	801*	10	C.Y.	CONCRETE BLOCKING, CLASS C, INCREASE OR DECREASE
23	801*	105	LBS.	FITTINGS, INCREASE OR DECREASE
24	802	5	EA.	24" BUTTERFLY VALVE AND APPURTENANCES
25	802	2	EA.	12" VALVE AND APPURTENANCES
26	802	25	EA.	6" VALVE AND APPURTENANCES
27	805	1	EA.	12" WATER SERVICE TAP, COMPLETE
28	805	5	EA.	6" WATER SERVICE TAP, COMPLETE
29	805	1	EA.	2" WATER SERVICE TAP, COMPLETE
30	805	1	EA.	1" WATER SERVICE TAP, COMPLETE
31	806	440	L.F.	42" CASING PIPE
32	808	1	EA.	CUT AND PLUG 12" WATER SERVICE
33	808	3	EA.	CUT AND PLUG 6" WATER SERVICE
34	809	17	EA.	FIRE HYDRANT
35	809	4	EA.	FIRE HYDRANTS, DELIVERED
36	810	2	EA.	24" HYDRANT EXTENSION
37	810	2	EA.	18" HYDRANT EXTENSION
38	810	2	EA.	12" HYDRANT EXTENSION
39	810	2	EA.	6" HYDRANT EXTENSION
40	811*	260	C.Y.	INCREASE OR DECREASE IN EXCAVATION AND BACKFILL
41	813*	105	C.Y.	ROCK EXCAVATION
42	816	1	EA.	CUT AND PLUG 1" WATER SERVICE
43	Spec.	1	EA.	RELOCATION OF EXISTING 4'X4' SHELTER
		10	E.A.	Hold Poles
		1		Fig. 24"

* DENOTES CONTINGENCY ITEM

DR. _____ TR. _____ CK. _____	FIELD BOOK	CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER	EMHT Evans, Mechwart, Hambleton & Tilton, Inc. Engineers • Surveyors • Planners • Scientists 5500 New Albany Road, Columbus, OH 43054 Phone: 614.775.4500 Fax: 614.775.4600 M C M X X V I	2530 100	GENERAL NOTES AND ESTIMATE OF QUANTITIES	2005 0040 010	DIVISION OF WATER CONTRACT NO. 913 CAPITAL IMPROVEMENT PROJECT NO. 383 STATE ROUTE 317 - LONDON/GROVEPORT 24" WATER MAIN PART 2	C-913	4 13
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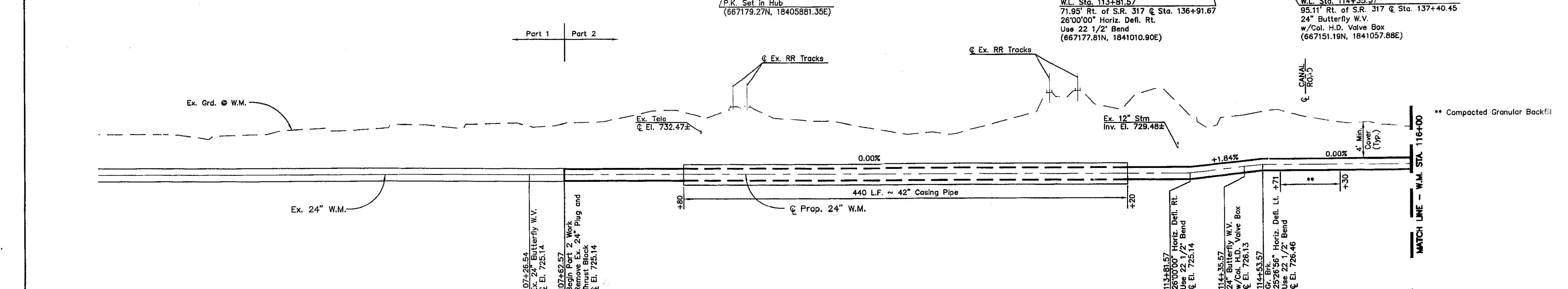
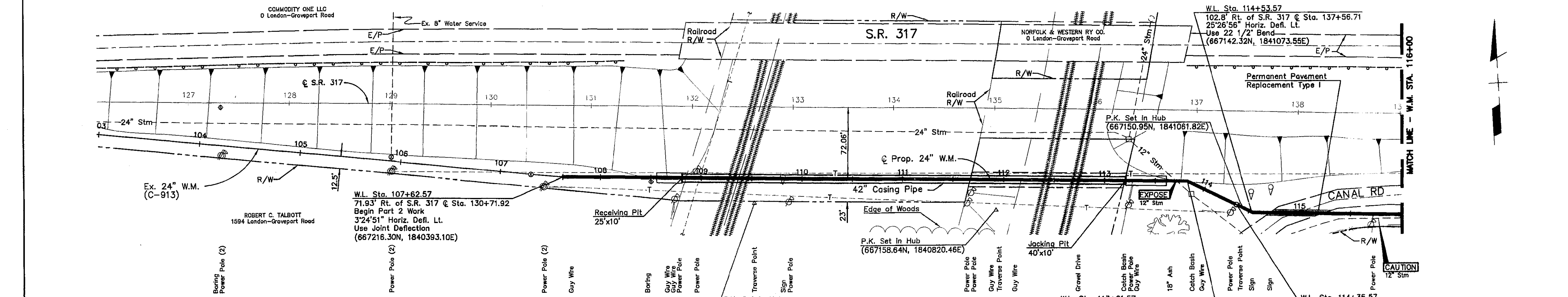


<u>BENCHMARKS</u>	
NAVD 1988	
B.M. #1	Brass Plate in a Concrete Monument at the intersection of S.R. 317 and Shook Road, 88' Southeast of center of intersection, 65' South of S.R. 317 @ 55' East of Shook Road @, 2' North of fence line, 2.5' North of metal witness post, flush with ground El. 744.06
B.M. #2	Chisled square on Southeast corner of inlet on North side of S.R. 317, East of driveway at 1912 London-Groveport Road El. 742.07
B.M. #3	Northwest corner of traffic signal box on South side of S.R. 317, 300'± West of Alum Creek Drive El. 738.89



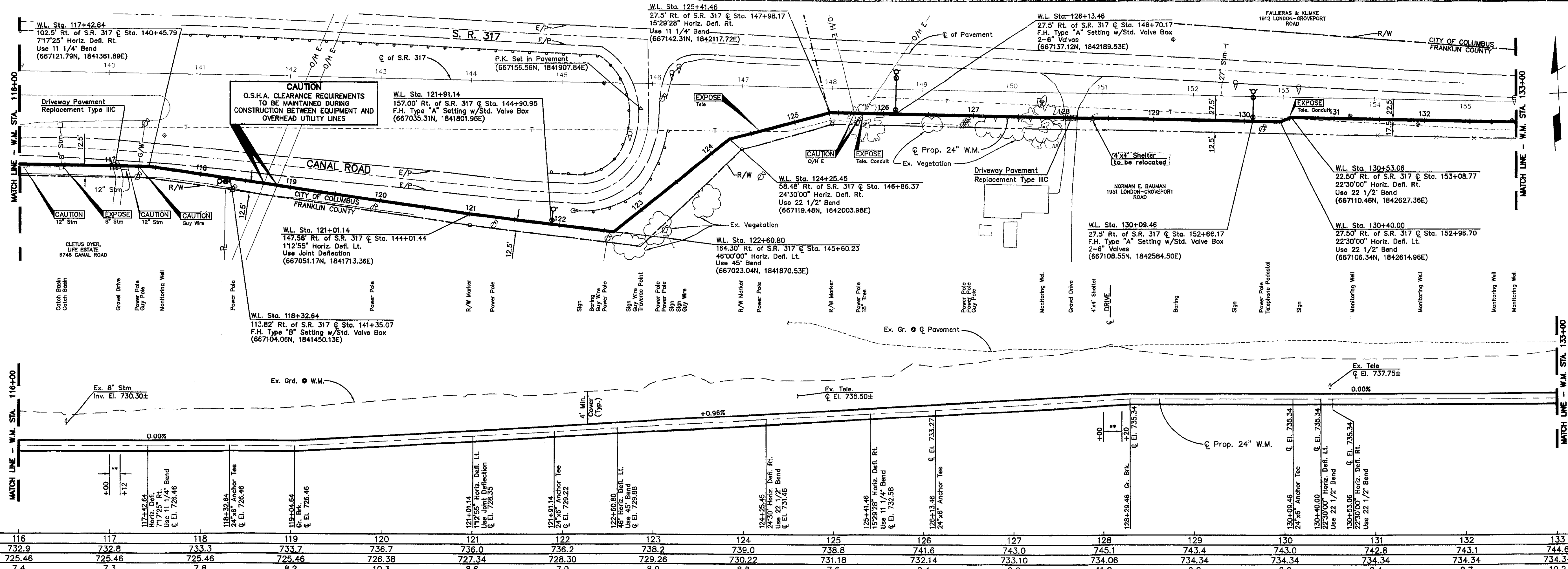
W.L. STATION	GROUND	BOTTOM OF PIPE	CUT
0	745.2	734.86	10.3
103	732.1		
104	732.1		
105	732.1		
106	732.9		
107	733.8		
108	734.2	724.14	10.1
109	734.9	724.14	10.8
110	734.2	724.14	10.1
111	731.7	724.14	7.6
112	734.1	724.14	10.0
113	735.0	724.14	10.9
114	735.2	724.48	10.7
115	734.5	725.46	9.0
116	732.9	725.46	7.4

DR. _____	FIELD BOOK _____	CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER		Engineers • Surveyors • Planners • Scientists 5500 New Albany Road, Columbus, OH 43054 Phone: 614.775.4500 Fax: 614.775.4600	2530 100 107+62.57 TO 116+00 ALIGN PLAN AND PROFILE STATION 107+62.57 TO STATION 116+00	DIVISION OF WATER CONTRACT NO. 913 CAPITAL IMPROVEMENT PROJECT NO. 383 STATE ROUTE 317 - LONDON/GROVEPORT 24" WATER MAIN PART 2	SCALE HORIZ. 1"=60' VERT. 1"=10'	C-913 6 13
TR. _____								
CK. _____								

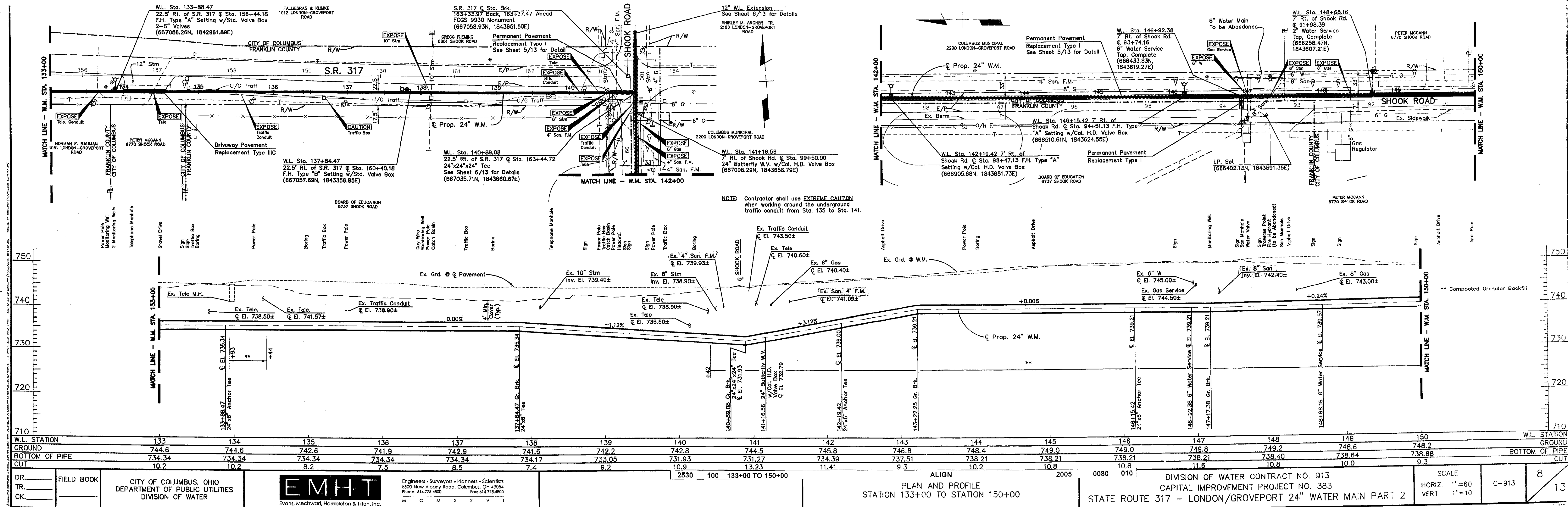


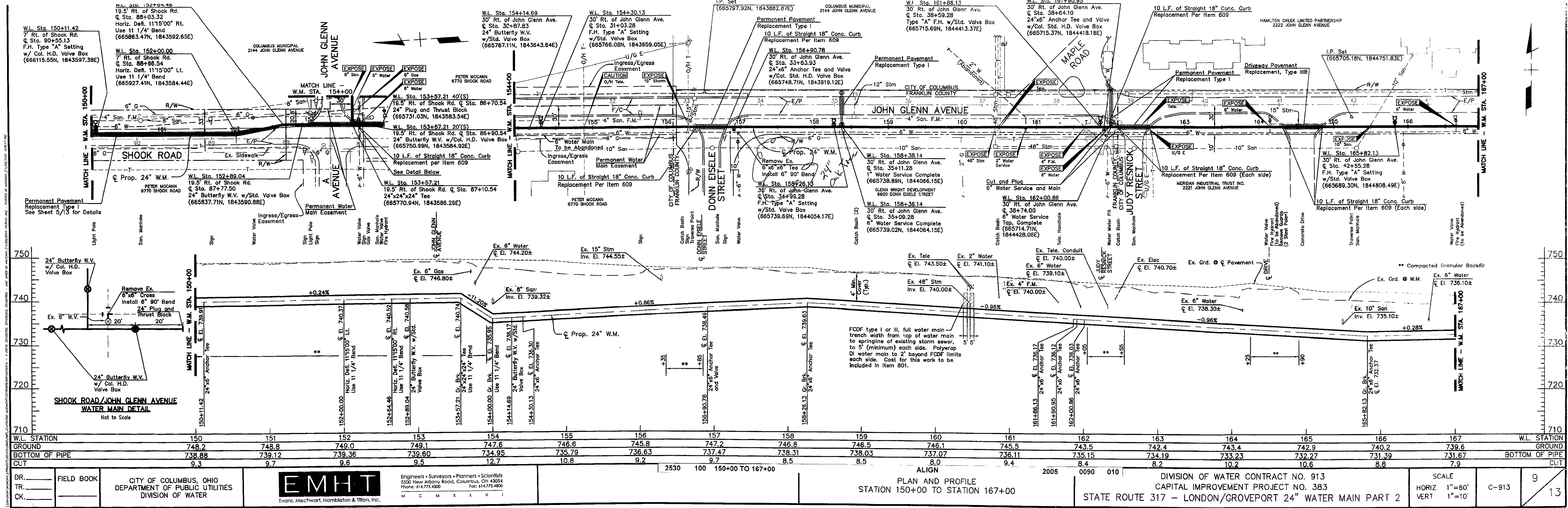
W.L. STATION	GROUND	BOTTOM OF PIPE	CUT
103	732.1		
104	732.1		
105	732.1		
106	732.9		
107	733.8		
108	734.2	724.14	10.1
109	734.9	724.14	10.8
110	734.2	724.14	10.1
111	731.7	724.14	7.6
112	734.1	724.14	10.0
113	735.0	724.14	10.9
114	735.2	724.48	10.7
115	734.5	725.46	9.0
116	732.9	725.46	7.4

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TR. _____								
CK. _____								

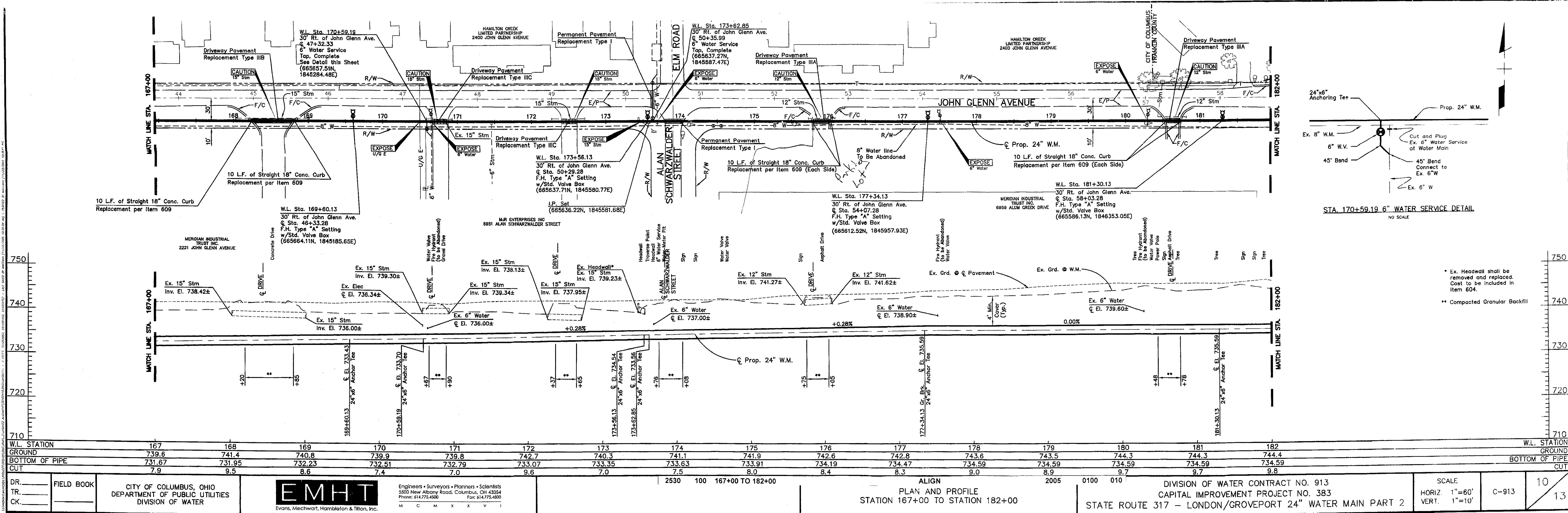


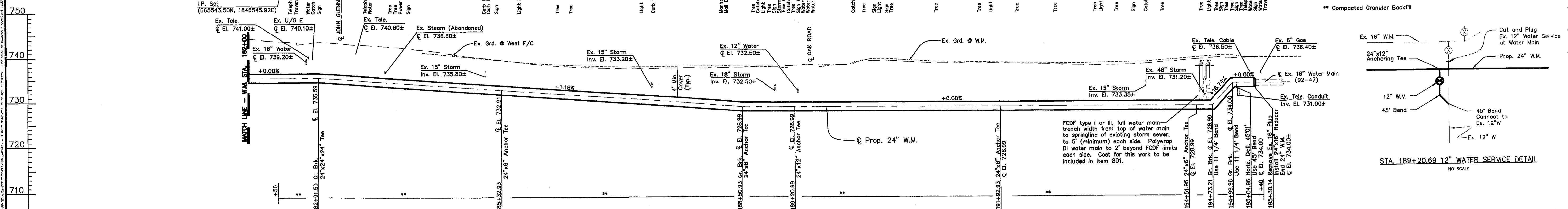
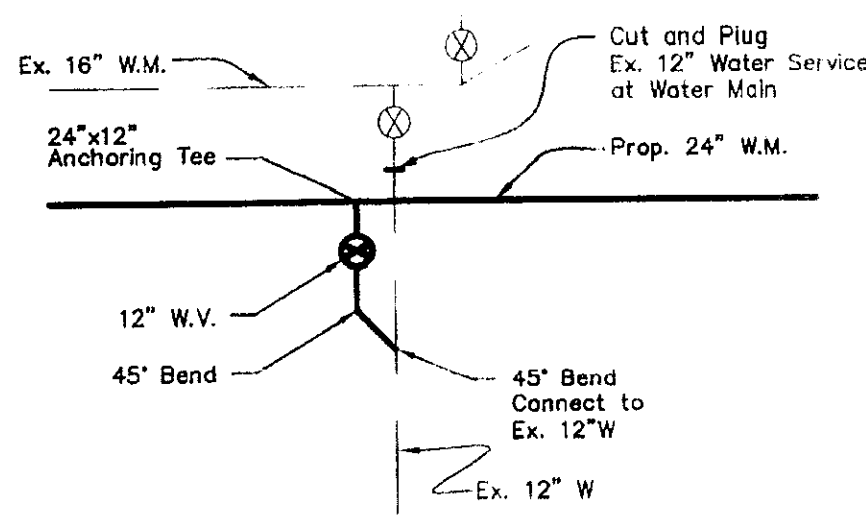
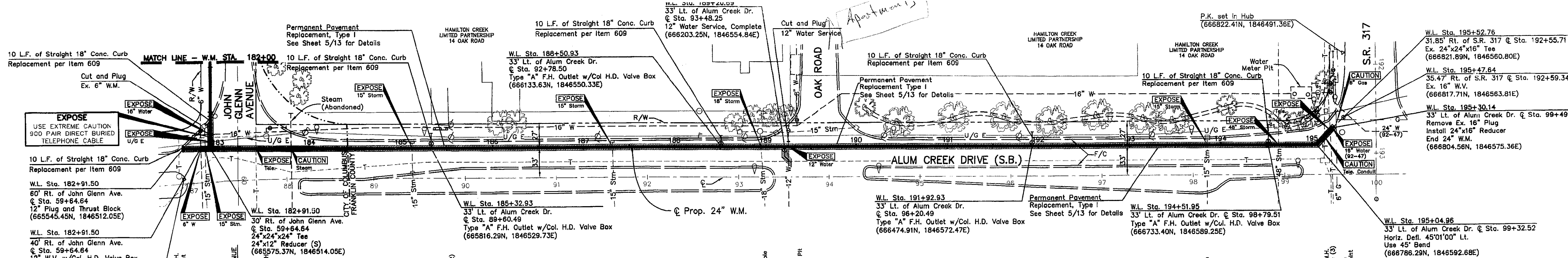
W.L. STATION	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	W.L. STATION
GROUND	732.9	732.8	733.3	733.7	736.7	736.0	736.2	738.2	739.0	738.8	741.6	743.0	745.1	743.4	743.0	742.8	743.1	744.6	GROUND
BOTTOM OF PIPE	725.46	725.46	725.46	725.46	726.38	727.34	728.30	729.26	730.22	731.18	732.14	733.10	734.06	734.34	734.34	734.34	734.34	734.34	BOTTOM OF PIPE
CUT	7.4	7.3	7.8	8.2	10.3	8.6	7.9	8.9	8.8	7.6	9.4	9.9	11.0	9.0	8.6	8.4	8.7	10.2	CUT






DR. _____	FIELD BOOK	CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC UTILITIES DIVISION OF WATER	EMHT Evans, Mechwart, Hambleton & Tilton, Inc.	Engineers • Surveyors • Planners • Scientists 5500 New Albany Road, Columbus, OH 43054 Phone: 614.775.4500 Fax: 614.775.4800	2530 100 150+00 TO 167+00	ALIGN PLAN AND PROFILE STATION 150+00 TO STATION 167+00	2005 0090 010	DIVISION OF WATER CONTRACT NO. 913 CAPITAL IMPROVEMENT PROJECT NO. 383 STATE ROUTE 317 - LONDON/GROVEPORT 24" WATER MAIN PART 2	SCALE HORIZ. 1"=60' VERT. 1"=10'	C-913	9 13
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W.L. STATION		182	183	184	185	186	187	188	189	190	191	192	193	194	195	W.L.									
GROUND		744.4	743.5	742.2	740.3	738.2	737.5	738.3	738.3	738.5	738.8	738.7	738.8	739.3	739.8										
BOTTOM OF PIPE		734.59	734.59	733.45	732.27	731.09	729.91	728.73	727.99	727.99	727.99	727.99	727.99	727.99	733.00	BOTTOM									
CUT		9.8	8.9	8.8	8.0	7.1	7.6	9.6	10.3	10.5	10.8	10.7	10.8	11.3	6.8										
DR. _____		2530 100 182+00 TO 195+30.14										ALIGN				2005		0110 010		DIVISION OF WATER CONTRACT NO. 913		SCALE		1	
TR. _____		CITY OF COLUMBUS, OHIO										PLAN AND PROFILE								CAPITAL IMPROVEMENT PROJECT NO. 383		HORIZ. 1"=60'		C-913	
CK. _____		DEPARTMENT OF PUBLIC UTILITIES										STATION 182+00 TO STATION 195+30.14								STATE ROUTE 317 - LONDON/GROVEPORT 24" WATER MAIN PART 2		VERT. 1"=10'		1	
		DIVISION OF WATER																							
																									
		Engineers • Surveyors • Planners • Scientists 5500 New Albany Road, Columbus, OH 43204 Phone: 614.775.4500 Fax: 614.775.4800																							
		M C M X X V I																							

It may become necessary to remove portions of the barrier during construction to facilitate the grading operations in certain areas. However, the barrier shall be in place in the evening or during any inclement weather.

Note: All erosion and sediment control practices are subject to field modification at the discretion of the City of Columbus and/or the Ohio EPA in order to comply with applicable laws & regulations.

Permanent seeding shall be done between March 15 and September 15. If seeding is done between September 15 and March 15, it shall be classified as "Temporary Seeding." Permanent seed shall be 40% Kentucky Bluegrass, 40% Creeping Red Fescue, 20% Annual Ryegrass. Permanent seeding shall consist of fertilizing, watering and seeding rates indicated under Item 659.

Seed:	2 lbs./1,000 Sq.Ft.
Fertilizer:	20 lbs./1,000 Sq.Ft.
Mulch: (Straw or Hay)	2 tons/acre

SCHEDULE: The Contractor shall provide a schedule of operations to the City of Columbus. Sedimentation and erosion control features shall be placed in accordance with this schedule.

Please contact Paul Parsons by phone @ 645-6700 or fax @ 645-1840.

DR. _____
TR. _____
CK. _____

CITY OF COLUMBUS, OHIO
DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF WATER

EMHT
Evans, Mechwart, Hambleton & Tilton, Inc.

Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Fax: 614.775.4800

A

EROSION & SEDIMENTATION CONTROL

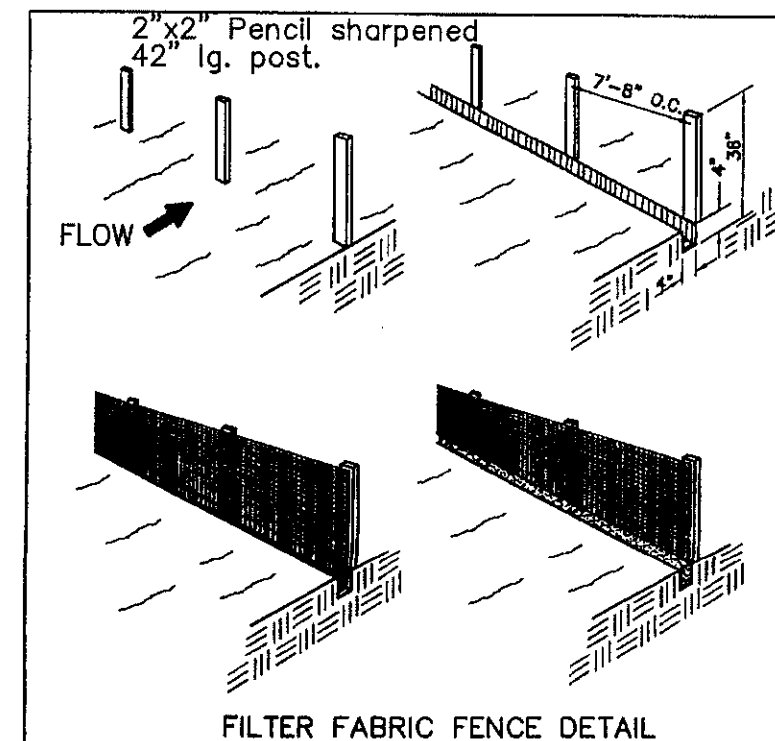
2005 0120 010

TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL

DIVISION OF WATER CONTRACT NO. 913
CAPITAL IMPROVEMENT PROJECT NO. 383
STATE ROUTE 317 - LONDON/GROVEPORT 24" WATER MAIN PART 2

C-913

15



FILTER FABRIC FENCE DETAIL

FABRIC FILTER FENCE: This sediment barrier utilizes standard strength or extra strength synthetic filter fabrics. It is designed for situations in which only sheet or overland flows are expected.

1. The height of a silt fence shall not exceed 36" (higher fences may impound volumes of water sufficient to cause failure of the structure).
2. The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum of a 6" overlap, and securely sealed.
3. Posts shall be spaced a maximum of 10 feet apart at the barrier location and driven securely into the ground (minimum of 12"). When extra strength fabric is used without the wire support fence, post spacing shall not exceed 6 feet.

4. A trench shall be excavated approximately 4" wide and 4" deep along the line of posts and upslope from the barrier.

5. When standard strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least 1" long, tie wires or hog rings. The wire shall extend into the trench a minimum of 2" and shall not extend more than 36" above the original ground surface.

6. The standard strength filter fabric shall be stapled or wired to the fence, and 8" of the fabric shall be extended into the trench. The fabric shall not extend more than 36" above the original ground surface. Filter fabric shall not be stapled to existing trees.

7. When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts with all other provisions of Item No. 6 applying.

8. The trench shall be backfilled and soil compacted over the filter fabric.

9. Silt fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.

MAINTENANCE: Silt fences and filter barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly. Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately one-half the height of the barrier. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform with the existing grade, prepared and seeded.

