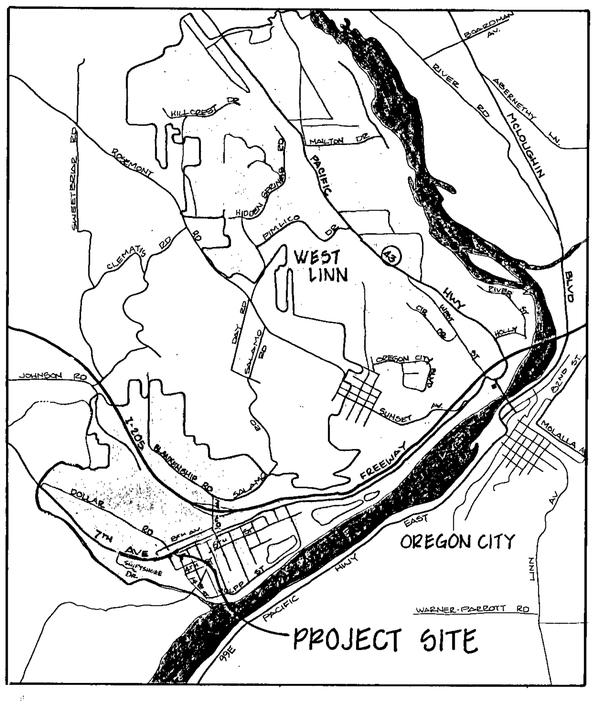
CITY OF WEST LINN

WILLAMETTE DISTRICT
CLACKAMAS COUNTY, OR.

7th AVENUE, 10th TO 12th STREETS

STREET, STORM & WATER IMPROVEMENTS



VICINITY MAP

INDEX

1. TITLE SHEET, VICINITY MAP & INDEX
2. STREET PLAN & PROFILE
3. STREET PLAN & PROFILE
4. STORM SEWER PROFILE
5. WATER PLAN
6. DETAILS
7. DETAILS
8. PLANTING PLAN
9. IRRIGATION PLAN
10. DETAILS

AS BUILT
BY: DES DATE: AUG 31, 1987

RB Designed	3/86 Date
RB Drawn	3/86 Date
KN Checked	3/86 Date

Revisions
6/3/86 RB

REGISTERED PROFESSIONAL ENGINEER 10659 OREGON JULY 18, 1980 KENNETH A. NELSON

TITLE SHEET, VICINITY MAP & INDEX

7th AVENUE, 10th TO 12th STREETS
STREET & STORM SEWER IMPROVEMENTS

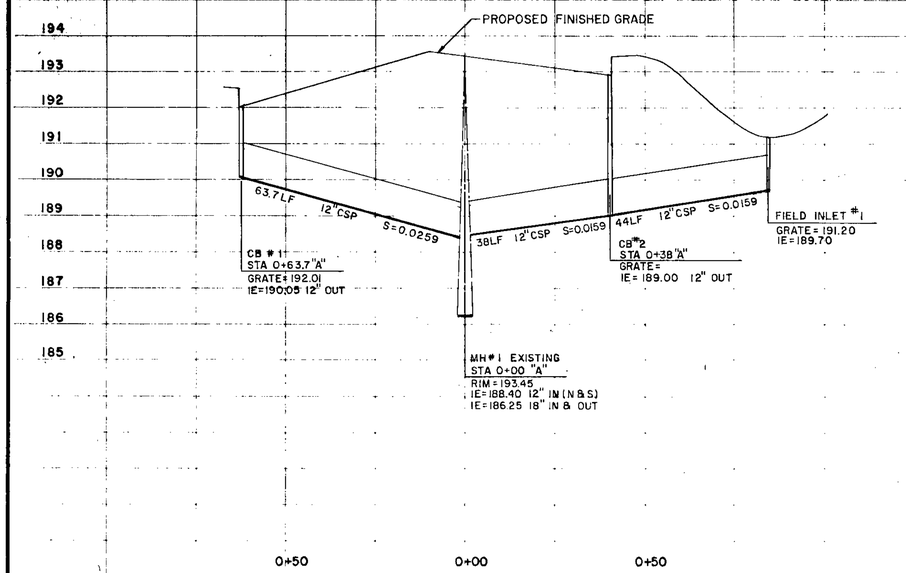
City of West Linn
Clackamas County, Oregon

otak
othman tahran kurshashi incorporated
planners engineers surveyors
17355 sw boones ferry road, tele. oswego, oregon 97034
telephone: (503) 635-3618

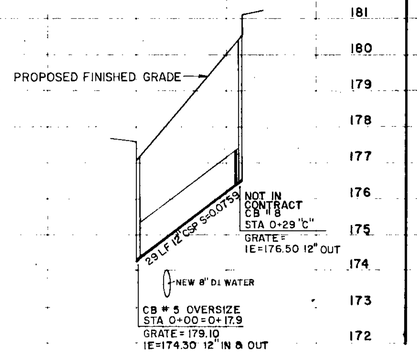
Sheet No. 1 / 10

Project No. 1412

FORD GRAPHICS 090155



STORM LINE 'A'



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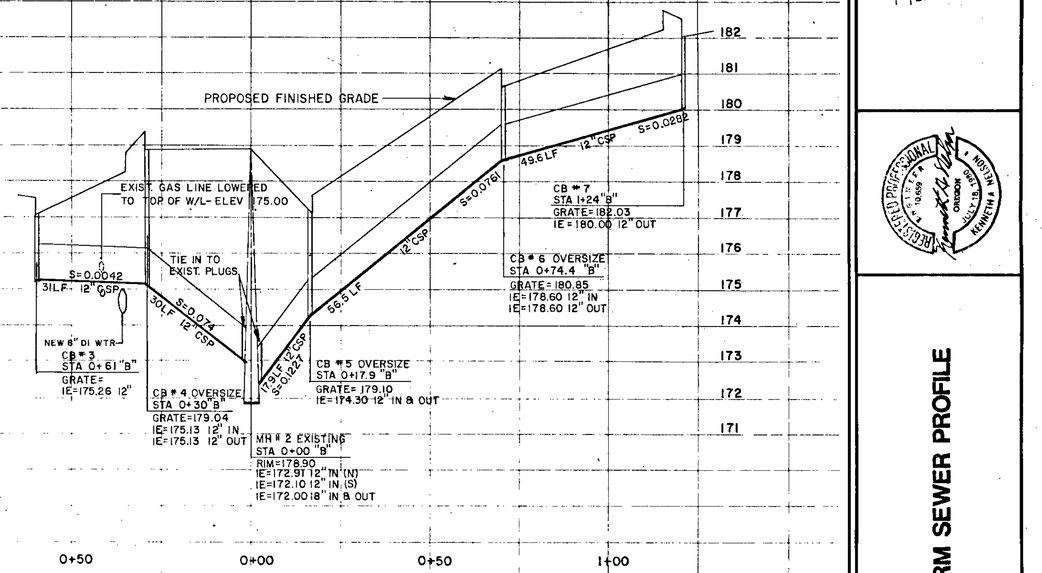

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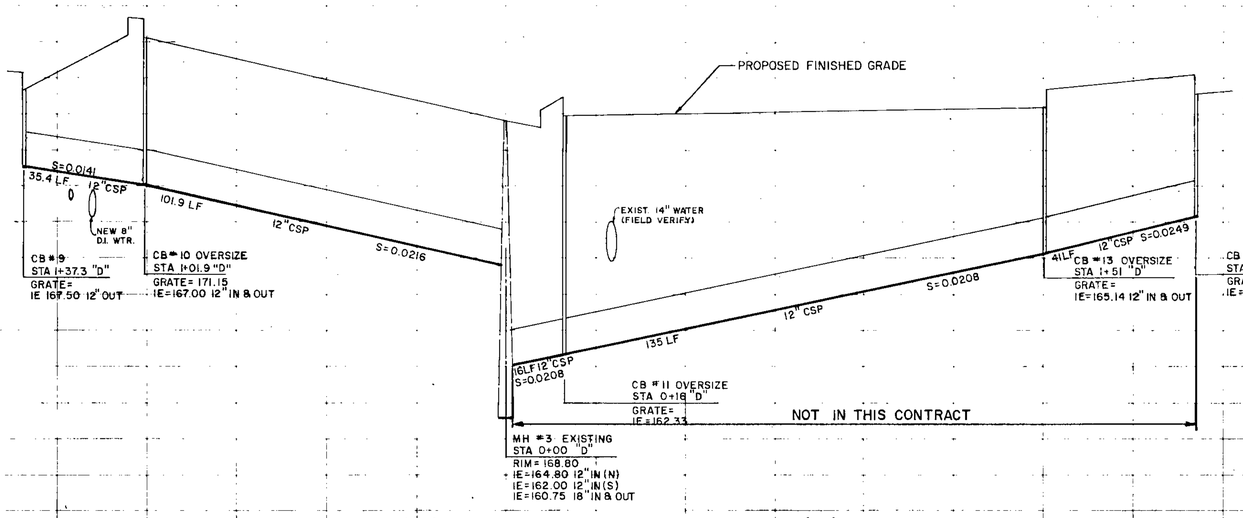

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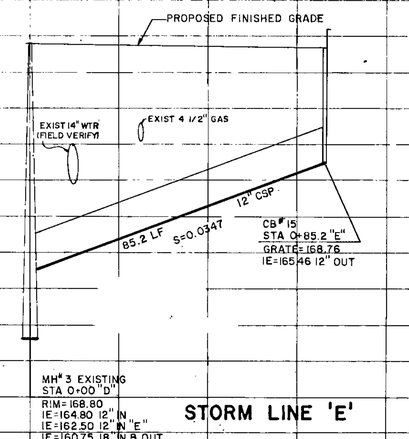


STORM LINE 'E'

AS BUILT

BY: DES DATE: SEPT 1, 1987

BB Designed	3/86 Date
BB Drawn	3/86 Date
KD Checked	3/86 Date

Revisions

6/3/86 RWB
REVISED CONTRACT LIMIT
11/7/86

REGISTERED PROFESSIONAL ENGINEER OREGON JULY 15, 1975 KENNETH A. AUSTIN

STORM SEWER PROFILE

7th AVENUE, 10th TO 12th STREETS

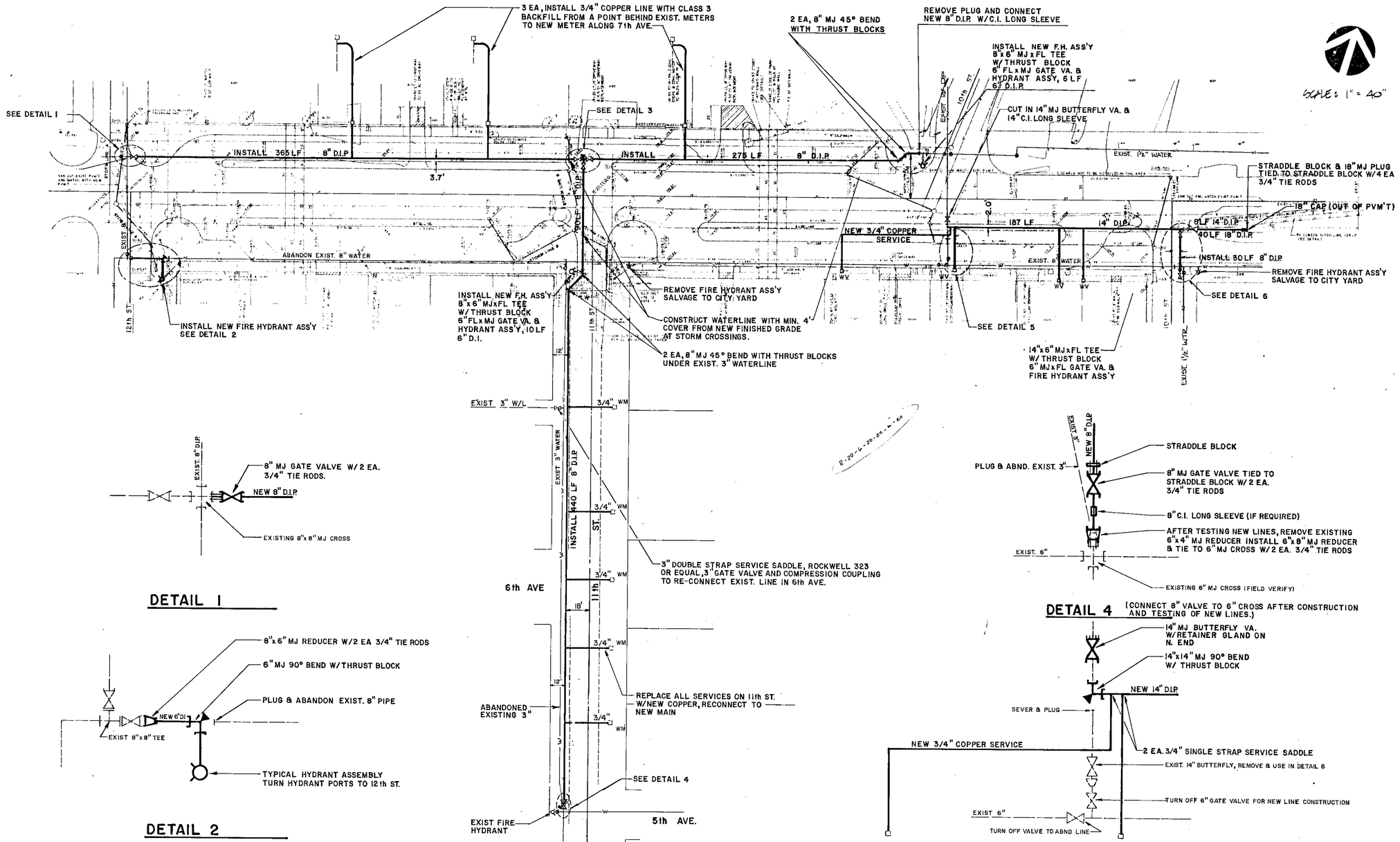
STREET & STORM SEWER IMPROVEMENTS

City of West Linn
Clackamas County, Oregon

otak inc. engineers surveyors
17355 sw boones ferry road, lake oswego, oregon 97034 telephone: (503) 635-3618

Sheet No. 4 / 10

Project No. 1412



Designed BJB Date
Drawn April 86 Date
Checked Date

Revisions
6/3/86 BJG

WATER

PLAN AND DETAILS

7th AVENUE, 10th TO 12th STREETS

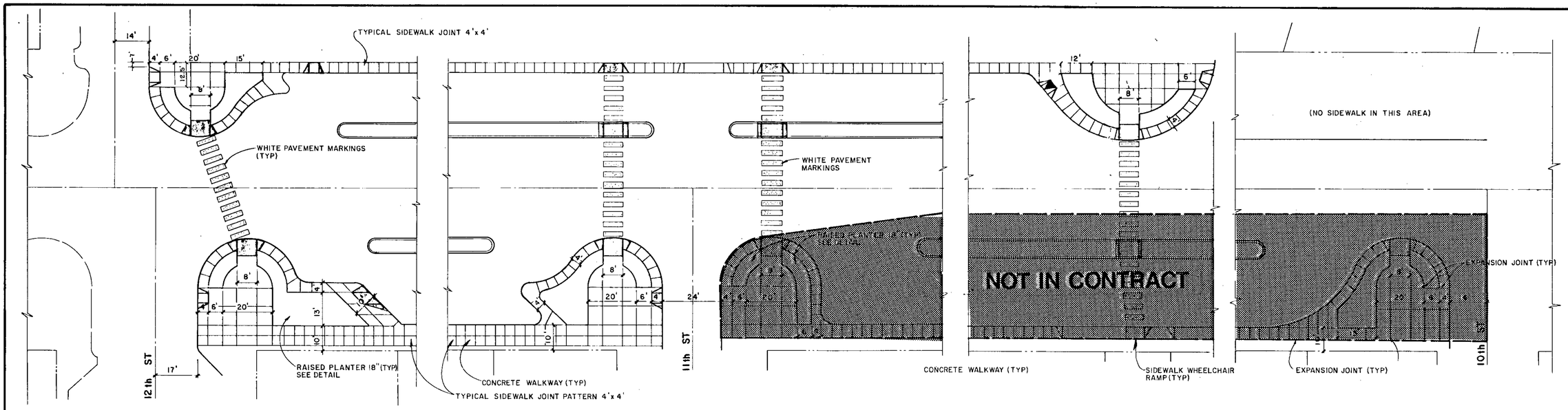
STREET & STORM SEWER IMPROVEMENTS

City of West Linn
Clackamas County, Oregon

otak inc. urban human kind incorporated
17360 sw boones ferry road, lake oswego, oregon 97034
telephone: (503) 635-3618

Sheet No. 5 / 10

Project No. 1412

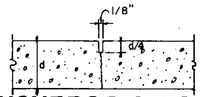


SIDEWALK AND PLANTER PLAN

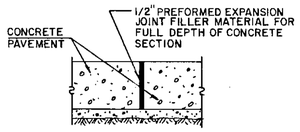
NTS

LEGEND:

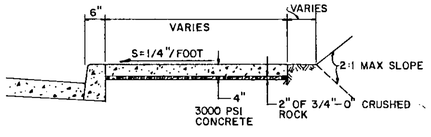
WHEELCHAIR RAMP BROOM FINISH IN OPPOSITE DIRECTION TO DESIGNATE TACTICAL WARNING AROUND WHEELCHAIR RAMP



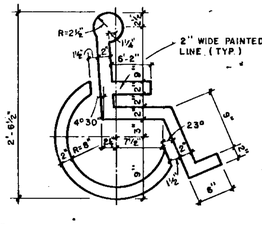
TRANSVERSE & LONGITUDINAL CONTRACTION JOINT DETAIL



ISOLATION JOINT

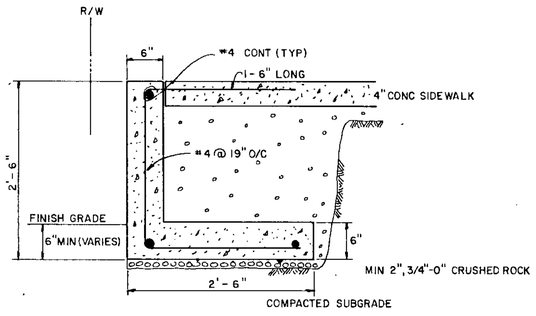


SIDEWALK DETAIL



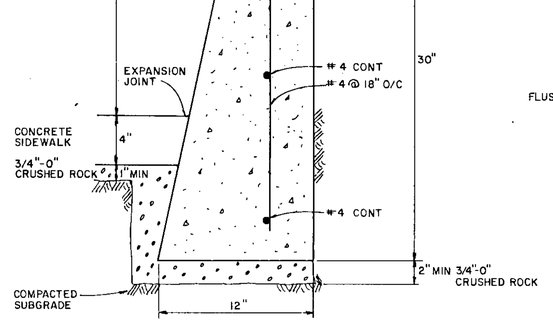
NOTE:
STENCIL AVAILABLE FOR LOAN FROM OREGON ARCHITECTURAL BARRIERS COUNCIL. CONTRACTOR TO VERIFY AVAILABILITY.

HANDICAP ACCESS SYMBOL



RETAINING WALL DETAIL

STA 19+43 – STA 19+93

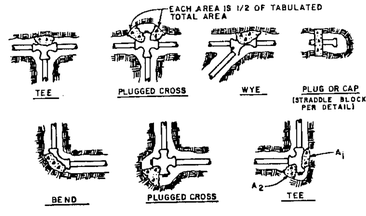


RAISED PLANTER RETAINING WALL DETAIL

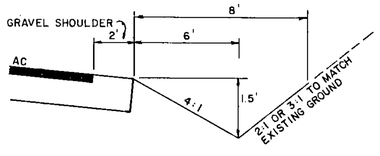
NOTES:

1. CONCRETE THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
2. KEEP CONCRETE CLEAR OF JOINT AND ACCESSORIES.
3. IF NOT SHOWN ON PLANS, REQUIRED BEARING AREAS AT FITTING SHALL BE AS INDICATED BELOW, ADJUSTED IF NECESSARY, TO CONFORM TO THE TEST PROCEDURE (S) AND ALLOWABLE SOIL BEARING STRESS (ES) STATED THE SPECIAL SPECIFICATIONS.
4. BEARING AREAS AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE OVER BEARING AREAS AND BLOCKING DETAILS SHOWN ON THIS STANDARD DETAIL.
5. BUILDING PAPER OR VISQUINE SHALL BE PLACED BETWEEN CONCRETE AND FITTINGS.
6. ALL POURED IN PLACE CONCRETE SHALL HAVE A (28) DAY STRENGTH OF 3,000 P.S.I. AND 2" TO 4" SLUMP.
7. BELOW BEARING AREAS BASED ON TEST PRESSURE OF 150 P.S.I. AND AN ALLOWABLE SOIL BEARING STRESS OF 2,000 POUNDS PER SQUARE FOOT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES AND SOIL BEARING STRESSES, USE THE FOLLOWING EQUATION: BEARING AREA = (TEST PRESSURE / 150) X (2,000/SOIL BEARING STRESS) X (TABLE VALUE). BEARING AREAS IN SQUARE FEET.

FITTING SIZE - (IN.)	TEE, WYE, PLUG OR CAP	90° BEND PLUGGED CROSS	TEE PLUGGED OR RUN A_1	TEE PLUGGED OR RUN A_2	45° BEND	22 1/2° BEND	11 1/4° BEND
4	1.0	1.4	1.9	1.4	1.0	—	—
6	2.0	3.0	4.3	3.0	1.8	1.0	—
8	3.8	5.3	7.6	5.4	2.9	1.5	1.0
10	5.9	8.4	11.8	8.4	4.6	2.4	1.2
12	8.5	12.0	17.0	12.0	6.6	3.4	1.7
14	11.5	16.3	23.0	16.3	8.9	4.6	2.3
16	15.0	21.3	30.0	21.3	11.6	6.0	3.0
18	19.0	27.0	38.0	27.0	14.6	7.6	3.8
20	23.5	33.3	47.0	33.3	18.1	9.4	4.7
24	34.0	48.0	68.0	48.0	26.2	13.6	6.8

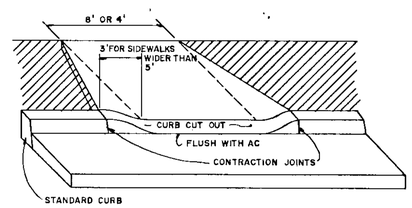


WATER LINE DETAILS & NOTES

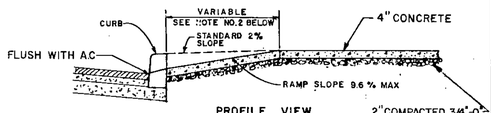


DITCH DETAIL

AS BUILT
BY: D.E.S. DATE: SEPT. 1, 1987



FRONT VIEW



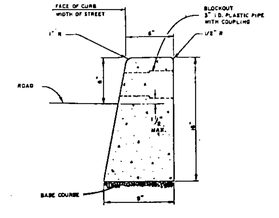
PROFILE VIEW

2" COMPACTED 3/4"-0" CRUSHED ROCK LEVELING COURSE

NOTES:

1. ALL RAMPS TO BE 4" THICK CONCRETE AND SHALL MEET A 3,000 P.S.I. COMPRESSION STRENGTH IN 28 DAYS.
2. RAMP LENGTH: IS TO MATCH BACK OF WALK FOR 5' WALKS AND 6 1/2 LONG FOR ALL OTHER WALK WIDTHS
3. WHEELCHAIR RAMPS SHALL HAVE A HEAVY BROOM FINISH BRUSHED PERPENDICULAR TO THE STREET

WHEELCHAIR RAMP DETAIL



1. CONCRETE TO HAVE A BREAKING STRENGTH OF 3000 PSI AFTER 28 DAYS.
2. EXPANSION JOINTS:
   A. TO BE PROVIDED:
      I) AT EACH POINT OF TANGENCY OF THE CURB.
      II) AT EACH COLD JOINT.
      III) AT EACH SIDE OF INLETS.
      IV) AT EACH END OF DRIVEWAYS.
      V) AT LOCATIONS NECESSARY TO LIMIT SPACING TO 48 FEET.
   B. MATERIAL TO BE PRE-MOLDED NON-EXTRUDING MATERIAL WITH A MINIMUM THICKNESS OF ½ INCH.
3. CONTRACTION JOINTS:
   A. SPACING TO BE NOT MORE THAN 15 FEET.
   B. THE DEPTH OF THE JOINT SHALL BE AT LEAST 1¼" INCHES.
4. BASE ROCK - 1 ½" MINUS, 96% COMPACTION. BASE ROCK SHALL BE TO SUBGRADE OF STREET STRUCTURE OR 4" IN DEPTH, WHICHEVER IS GREATER.
5. DRAINAGE: BLOCKOUT - 3" DIA. PLASTIC PIPE.
   A. I.D. PLASTIC PIPE WITH COUPLING.
   B. DRAINAGE OUTLETS THROUGH EXISTING CURBS SHALL BE CORE DRILLED OR CURB SAW CUT-LATERALLY 12" EACH SIDE OF ACCESS & REMOVED TO FULL DEPTH OF CURB.
   C. DRAINAGE BLOCKOUTS SHALL NOT BE PROVIDED UNLESS NEEDED.

STANDARD CURB

Designed EPD 3/86 Date
Drawn EPD 3/86 Date
Checked KLD 3/26 Date

Revisions
6/3/86 RWB Revised Contract Limit
11/7/86

REGISTERED PROFESSIONAL ENGINEER OREGON 10,559 KENNETH L. DAHLIN

DETAILS

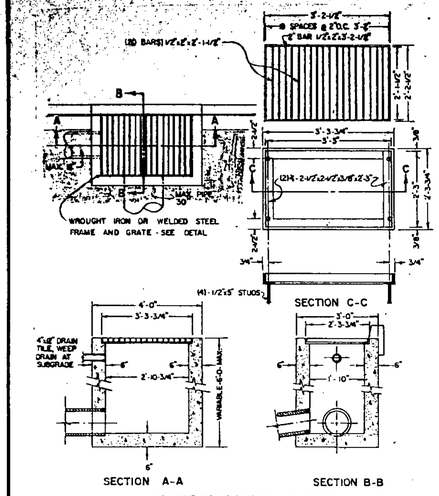
7th AVENUE, 10th TO 12th STREETS
STREET & STORM SEWER IMPROVEMENTS
City of West Linn
Clackamas County, Oregon

otak inc. consulting engineers and planners
17355 sw boones ferry road, lake oswego, oregon 97034 telephone: (503) 635-3618

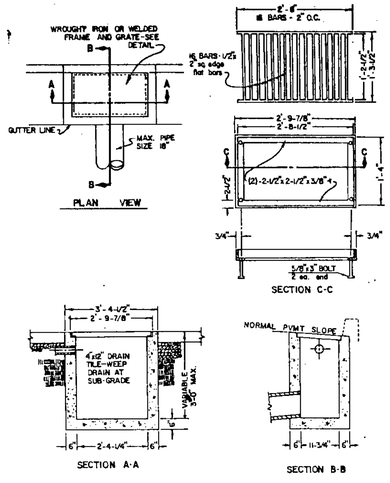
Sheet No. 6 / 10

Project No. 412

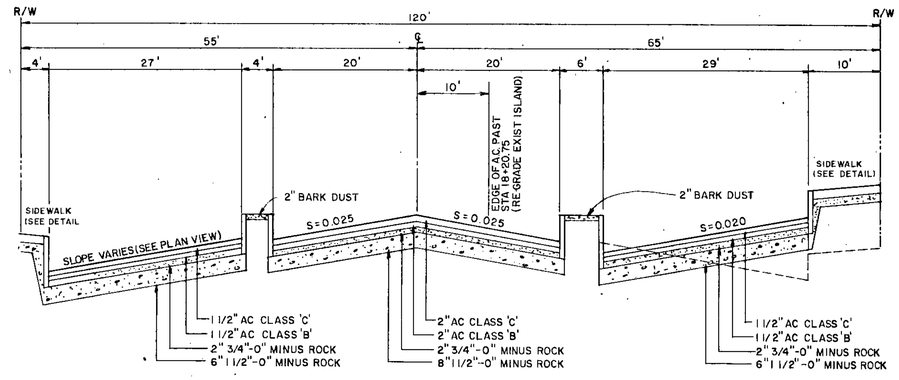
FORD GRAPHICS 08/86



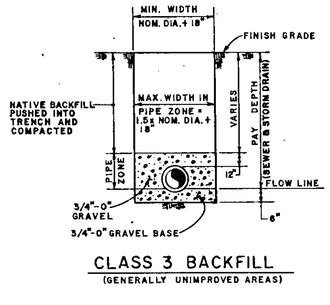
OVERSIZE CATCH BASIN



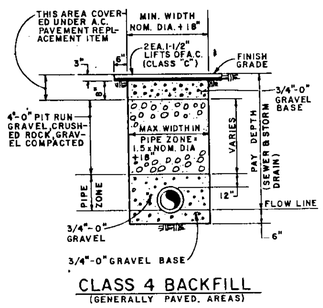
STANDARD CATCH BASIN



TYPICAL STREET SECTION

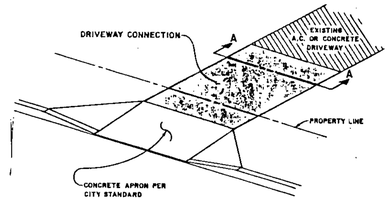


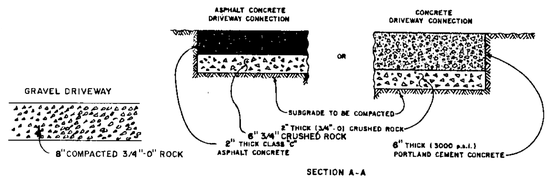
CLASS 3 BACKFILL
(GENERALLY UNIMPROVED AREAS)



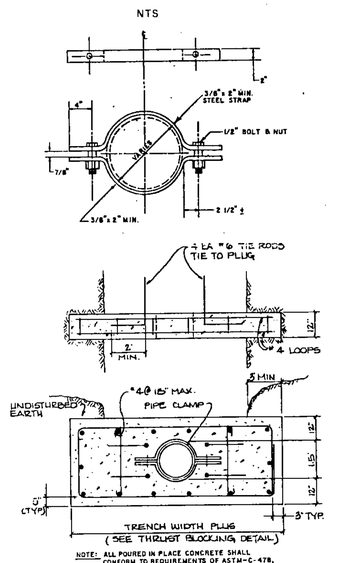
CLASS 4 BACKFILL
(GENERALLY PAVED. AREAS)

TRENCHING DETAIL





TYPICAL DRIVEWAY REPLACEMENT



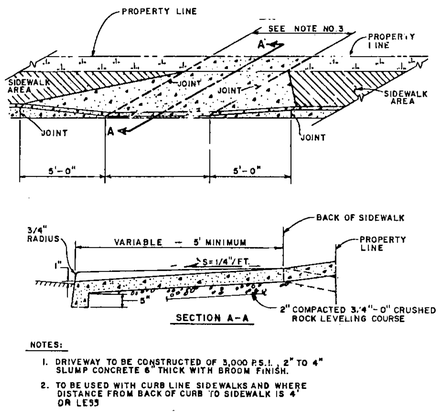
NOTE: ALL POURED IN PLACE CONCRETE SHALL CONFORM TO REQUIREMENTS OF ASTM-C-478, HAVE A 28 DAY STRENGTH OF 3,000 P.S.I AND 5" TO 6" SLUMP.

STRADDLE BLOCK & PIPE CLAMP DETAIL

NOTES:
1. ALLOWABLE BRANDS INCLUDE MUELLER, CLOW & WATEROUS.
2. ALL OPERATOR & NOZZLE NUTS SHALL BE 1 1/8" & PENTAGONAL.
3. OPERATOR NUT TO OPEN COUNTER CLOCKWISE.

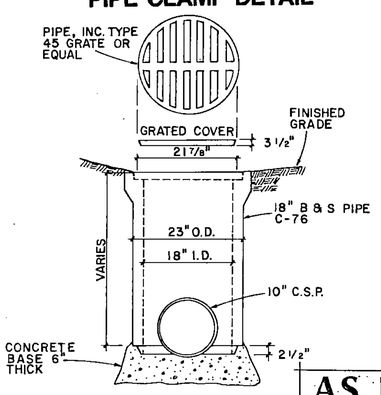
NOTES:
1. HYDRANT ASSEMBLY TO BE RODDED WITH TWO 5/8 RODS WHEN INSTALLED WITHIN FILL AREAS.
2. JOINT RESTRAINT TO BE WITH FLANGED CONNECTION, A PROVED JOINT RESTRAINT BLAND OR 3/4" DIAMETER GALVANIZED RODS.

FIRE HYDRANT ASSEMBLY



NOTES:
1. DRIVEWAY TO BE CONSTRUCTED OF 3,000 P.S.I., 2" TO 4" SLUMP CONCRETE 6" THICK WITH BROOM FINISH.
2. TO BE USED WITH CURB LINE SIDEWALKS AND WHERE DISTANCE FROM BACK OF CURB TO SIDEWALK IS 4" OR LESS

TYPICAL DRIVEWAY APPROACH



AS BUILT
BY: DES DATE: SEPT. 1, 1987

FIELD INLET DETAIL

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIAL INCLUDED IN THIS CONTRACT SHALL COMPLY WITH THE CURRENT A.P.W.A. STANDARDS AND SPECIFICATIONS, UNLESS OTHERWISE DETAILED OR SPECIFIED.
2. PRIOR TO ANY CONSTRUCTION, LOCATIONS OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR. WHEN ACTUAL CONDITIONS DIFFER FROM THOSE NOW ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENG NEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
3. EXCAVATION OF THE ROADWAY AREA SHALL BE TO THE LINE AND GRADE AS SHOWN ON THE PLANS AND WILL BE UNCLASSIFIED.
4. TOPSOIL AND CLEAN EXCAVATED MATERIAL CONTAINING NO ROCK LARGER THAN TWO INCHES IN DIAMETER SHALL BE USED AS BACKFILL IN THE RAISED ISLANDS AS APPROVED BY THE ENGINEER.
5. ROCKS LARGER THAN SIX INCHES IN DIAMETER, ROOTS, BRUSH AND REFUSE OF ANY KIND SHALL BE EXPORTED AND DISPOSED BY THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.
6. DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL USE SUCH EROSION CONTROL MEASURES AS NECESSARY TO PREVENT SILTING EXISTING PUBLIC STREETS OR STORM DRAINS. THESE MEASURES MAY INCLUDE PLACEMENT OF STRAW BAILS OR OTHER MEANS APPROVED BY THE ENGINEER. THE COST OF SUCH MEASURES SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION OF STREETS AND SHALL NOT REQUIRE DIRECT PAYMENT.
7. CONTRACTOR SHALL NO CUT ANY TREES LARGER THAN SIX INCHES IN DIAMETER WITHOUT APPROVAL OF ENGINEER.
8. SUBGRADE, GRANULAR TRENCH BACKFILL BASE ROCK AND TOP COURSE WITHIN RIGHT-OF-WAY AREA SHALL BE COMPACTED TO NOT LESS THAN 100 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY A.A.S.H.O. T-99.
9. ALL DUCTILE IRON PIPE IS TO BE TYTON JOINT CLASS 52.
10. ANY AREAS ACCEPTING FILL SHALL BE STRIPPED OF ORGANIC MATERIAL. FILL SHALL BE PLACED IN NINE INCH LAYERS AND COMPACTED TO 95 PERCENT RELATIVE MAXIMUM DENSITY A.A.S.H.T.O. T99. NATIVE FILL SHALL BE FREE FROM ORGANIC MATERIAL AND ROCKS OVER SIX INCHES IN DIAMETER.
11. AREAS TO BE LANDSCAPED SHALL BE SMOOTHED AND LEFT TO TWO INCHES BELOW GRADES AS INDICATED ON THE GRADING PLAN, PLUS OR MINUS 0.1 FEET AND FILLED WITH BARKDUST IN THE TOP TWO INCHES.
12. ALL CONCRETE IS TO HAVE MINIMUM 3,000 PSI COMPRESSION STRENGTH AT 28 DAYS.
13. STANDARD, WHEELCHAIR/BICYCLE RAMPS SHALL BE CONSTRUCTED AS INDICATED AT ALL CURB RETURNS AND INTERMEDIATE POINTS NOTED ON THE PLANS.
14. CONTRACTOR SHALL EXCAVATE AND BACKFILL TRENCHES FOR PRIVATE UTILITIES AND TO COORDINATE THE WORK WITH THE UTILITY COMPANIES. THE COSTS OF COORDINATION WITH CABLE UTILITY COMPANIES IS CONSIDERED TO BE INCIDENTAL TO THE COST OF TRENCHING.
15. ALL TRENCHING AND PIPE PLACEMENT SHALL BE PER DETAIL ON THE DETAIL SHEET.
16. ALL CONCRETE SEWER PIPE SHALL BE A.S.T.M. C-14 CLASS 2 UNLESS OTHERWISE NOTED.
17. STORM DRAIN PIPE IS TO BE TONGUE AND GROOVE
18. ALL POWER POLES SHALL BE MOVED BY UTILITY COMPANIES. THE CONTRACTOR SHALL COORDINATE THIS EFFORT AT NO ADDITIONAL COST TO THE CITY.
19. SIX INCH WATERLINES TO NEW FIRE HYDRANTS SHALL BE THOROUGHLY FLUSHED FROM THE MAIN LINE TO THE CITY'S SATISFACTION BEFORE PLACING IN SERVICE.
20. CONCRETE THRUST BLOCKING SHALL BE PROVIDED AT ALL WATERLINE FITTINGS. BLOCKING SHALL BE POURED AGAINST UNDISTURBED EARTH AND CLEAR OF JOINT ACCESSORIES. BEARING AREA OF THRUST BLOCK SHALL BE COMPUTED ON THE BASIS OF SOIL BEARING PRESSURE.

RB Designed 3/86 Date
RB Drawn 3/86 Date
EJJ Checked 3/86 Date

Revisions
6/3/86 RJB
Revised per contract limit 11/7/86

REGISTERED PROFESSIONAL ENGINEER OREGON 10,058 KENNETH L. NELSON

DETAILS

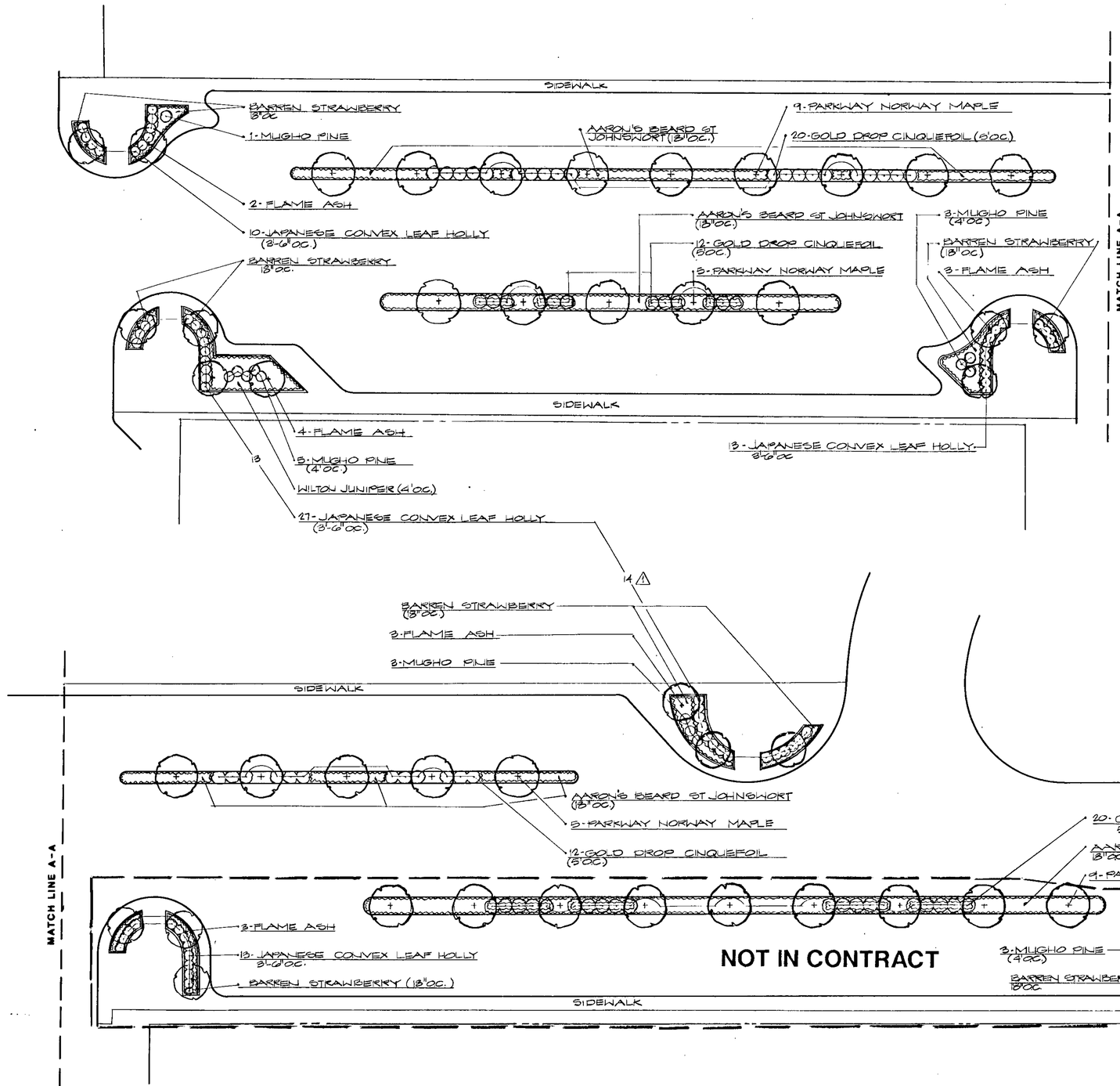
7th AVENUE, 10th TO 12th STREETS
STREET & STORM SEWER IMPROVEMENTS
City of West Linn
Clackamas County, Oregon

otak inc. land surveying incorporated
planners engineers surveyors
17355 boones ferry road, lake oswego, oregon 97034 (503) 635-3618 telephone

Sheet No. 7 / 10

Project No. 1412

FORD GRAPHICS 090155



PLANTING PLAN

PLANT . LIST

COMMON / BOTANICAL NAME	SIZE
TREES:	
FLAME ASH FRAXINUS OXYCARPA 'FLAME'	1 1/2" TO 2" CALIPER
PARKWAY NORWAY MAPLE ACER PLATINOIDES 'PARKWAY'	1 1/2" TO 2" CALIPER
SHRUBS:	
GOLD DROP CINQUEFOIL POTENTILLA GOLD DROP	12" TO 15"
JAPANESE CONVEX LEAF HOLLY ILEX CRENATA CONVEXA	15" TO 18"
MUGHO PINE PINUS MUGO MUGHUS	15" TO 18"
GROUND COVERS:	
AARON'S BEARD ST. JOHNSWORT HYPERICUM CALYCINUM (18" O.C.)	2" POTS
BARREN STRAWBERRY (18" O.C.) WALDSTEINIA FRAGARIOIDES	4" POTS
WILTON JUNIPER JUNIPERUS HORIZ. WILTONI	1 GAL. CAN

JH Designed	3-29-96 Date
JH Drawn	3-29-96 Date
Checked	Date

Revisions

14 ⚠ LABLE PLANT (JAPHOLLY-15) 4-21-97
REVISED CONTRACT LIMIT 4-21-97

REGISTERED LANDSCAPE ARCHITECT JOHN F. KING OREGON

PLANTING PLAN

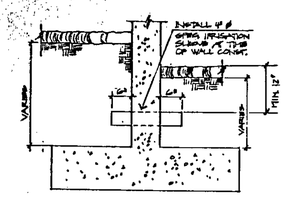
7th AVENUE, 10th TO 12th STREETS
STREET & STORM SEWER IMPROVEMENTS
City of West Linn
Clackamas County, Oregon

otak inc. engineering planning surveying
17355 sw boones ferry road, lake oswego, oregon 97034 (503) 635-3618

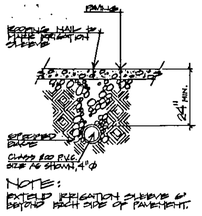
Sheet No. 8 OF 10

Project No. 1412

FORD GRAPHICS 09155



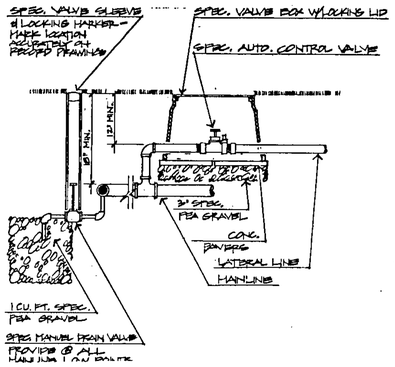
AT WALLS



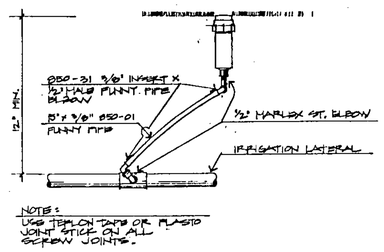
AT PAVING

NOTE:
INSTALL IRRIGATION SLEEVES @ BEFORE EACH SIDE OF PAVEMENT.

1 IRRIGATION SLEEVES

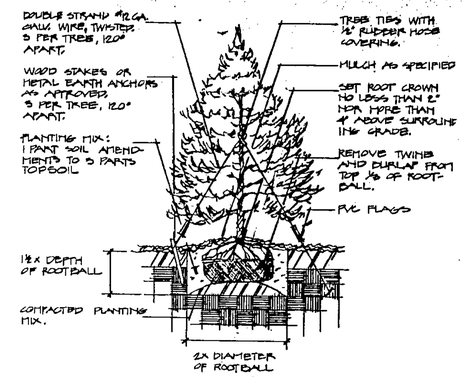


4 CONTROL VALVE AND MANUAL DRAIN VALVE ASSEMBLY



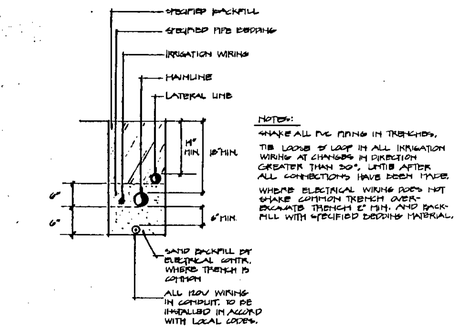
NOTE:
USE TEFLON TAPE OR PLASTIC JOINT STICK ON ALL SCREW JOINTS.

7 SMALL POP-UP ASSEMBLY



NOTE: MARK EACH GUY WIRE WITH A MINIMUM 6" LENGTH OF WHITE PVC AS A WARNING FLAG.

10 EVERGREEN TREE GUYING (NA.)

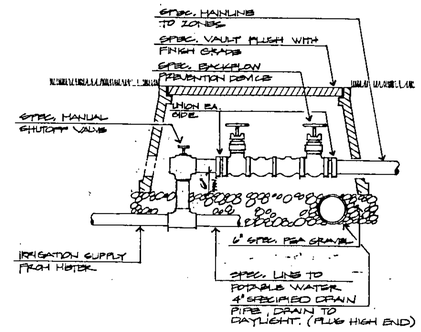


NOTES:
MAKE ALL PVC RUNS IN TRENCHES.

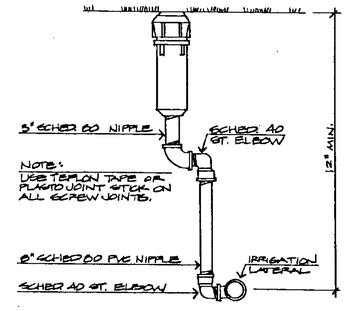
TIE LOOSE 3" LOOP IN ALL IRRIGATION WIRING AT CHANGES IN DIRECTION GREATER THAN 30°, UNTIL AFTER ALL CONNECTIONS HAVE BEEN MADE.

WHERE ELECTRICAL WIRING DOES NOT SHARE COMMON TRENCH OVER-EXCAVATE TRENCH 6" MIN. AND BACK-FILL WITH SPECIFIED BEDDING MATERIAL.

2 TYPICAL TRENCHING

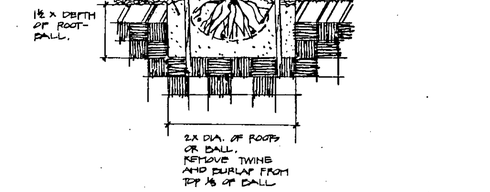


5 BACKFLOW PREVENTION ASSEMBLY



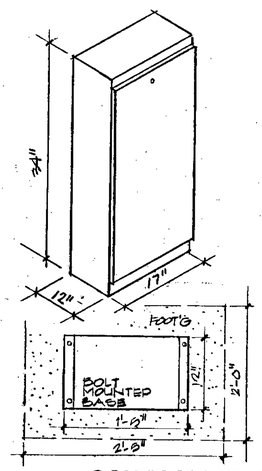
NOTE:
USE TEFLON TAPE OR PLASTIC JOINT STICK ON ALL SCREW JOINTS.

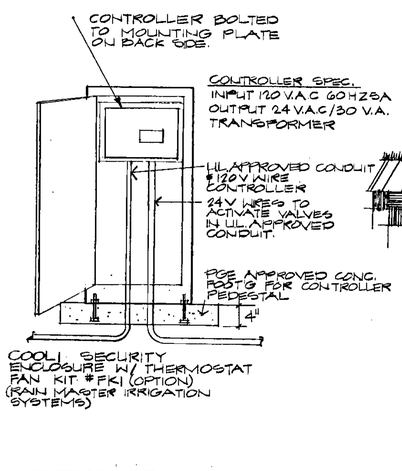
8 LARGE POP-UP ASSEMBLY



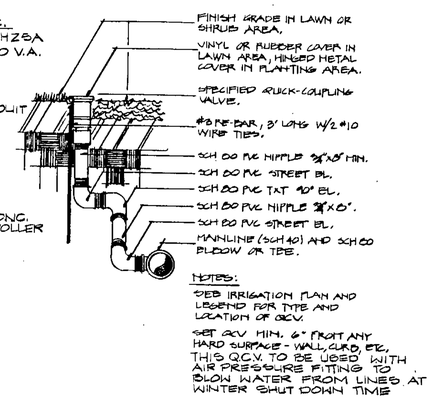
NOTE: TREES 6" CALIPER AND LARGER SHALL BE GUYED AS PER CONIFER DETAIL.

11 DECIDUOUS TREE PLANTING





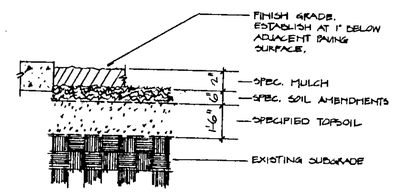
3 CONTROLLER MOUNTING PEDESTAL



NOTES:
SEE IRRIGATION PLAN AND LEGEND FOR TYPE AND LOCATION OF QCV.

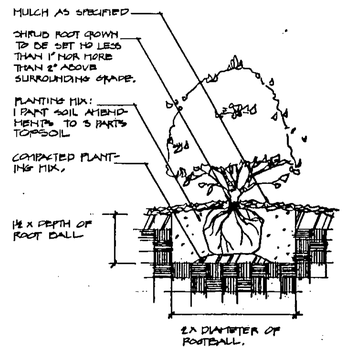
SET QCV MIN. 6" FROM ANY HARD SURFACE - WALL, CURB, ETC. THIS QCV TO BE USED WITH AIR PRESSURE FITTING TO BLOW WATER FROM LINES AT WINTER SHUT DOWN TIME

6 QUICK COUPLER VALVE ASSEMBLY



NOTES:
1) PROVIDE A MIN. 2" MULCH IN ALL PLANT BEDS. PROVIDE A MIN. NA MULCH AT ALL LAWN AREAS.
2) REMOVE ALL ROCK, DEBRIS AND OTHER FOREIGN MATTER OVER 2" IN DIAMETER FROM TOP 4" OF SOIL.
3) RIP SUBGRADE PRIOR TO INSTALLING TOPSOIL AND TILL INTERFACE OF SUBGRADE AND TOPSOIL.
4) TILL SOIL AMENDMENTS AND TOPSOIL TO MIN. 6" DEPTH.

9 SOIL PREPARATION



12 SHRUB PLANTING

Designed — Date
Drawn — Date
Checked — Date

Revisions

REGISTERED LANDSCAPE ARCHITECT
JOHN F. LEE
OREGON

DETAILS

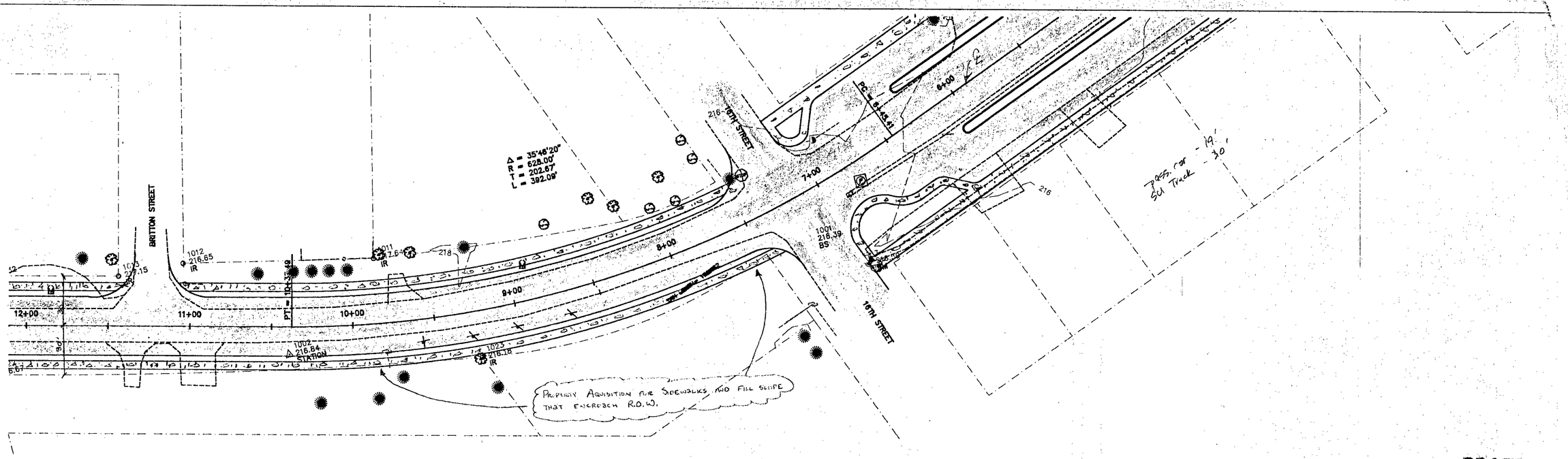
7th AVENUE, 10th TO 12th STREETS
STREET & STORM SEWER IMPROVEMENTS
City of West Linn
Clackamas County, Oregon

Otak inc. civil engineers surveyors planners landscape architects
17355 sw boones ferry road, lake oswego, oregon 97034 (503) 635-3618

10 OF 10
Sheet No.

Project No. 1412

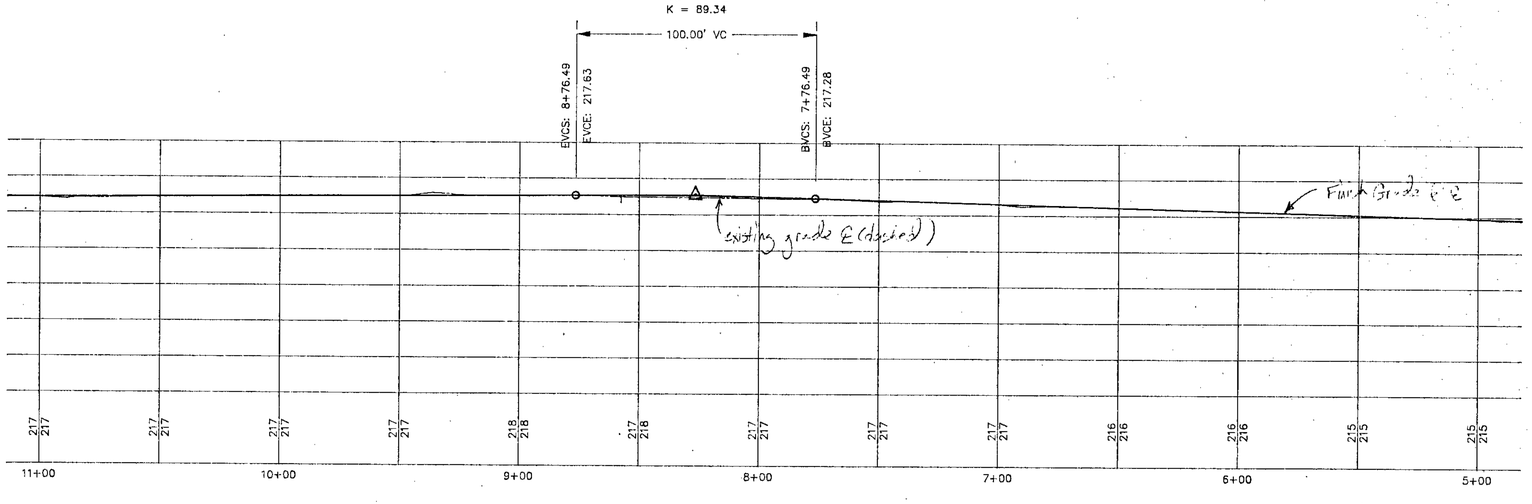
FORD GRAPHICS 080186



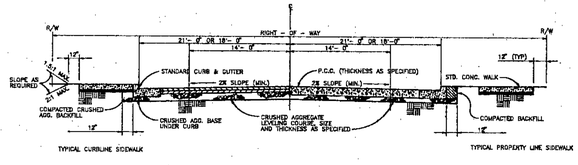
DRAFT

PLAN VIEW SCALE: HOR: 1"= 30'

HIGH POINT ELEV = 217.65
HIGH POINT STA = 8+57.61
PVI STA = 8+26.49
PVI ELEV = 217.73
A.D. = 1.12
K = 89.34



PROFILE VIEW SCALE: HOR: 1"= 30'; VERT: 1"= 10'



ASPHALT PAVING SECTION CONCRETE PAVING SECTION

TYPICAL CROSS-SECTION SCALE: 1"= 10'

DRAFT

DATE	NO.	REVISION	DRAWN BY: JS	SCALE: AS NOTED	DATE: 6-21-94	FILE: WILL. FALLS DR. STREET IMP.

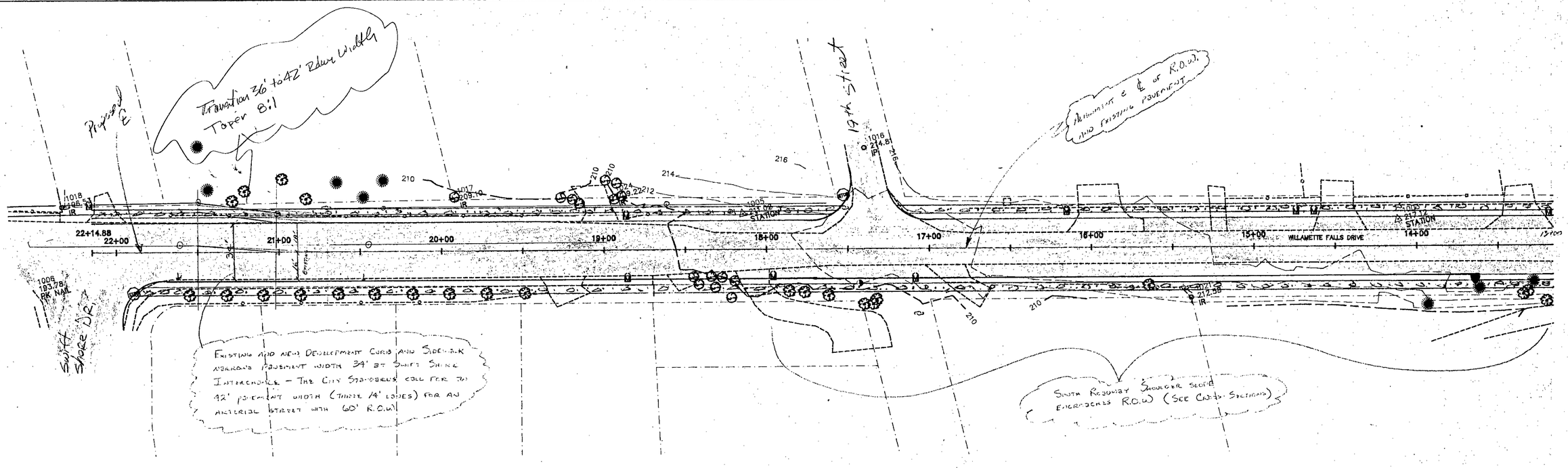
CITY OF WEST LINN
ENGINEERING DIVISION

WILLAMETTE FALLS DRIVE IMPROVEMENTS
PLAN & PROFILE FOR STA 5+00 TO 10+50

SURVEYED BY: J.REPPETO, PLS
CHECKED BY:
DESIGNED BY: KG, PE; JS, EIT

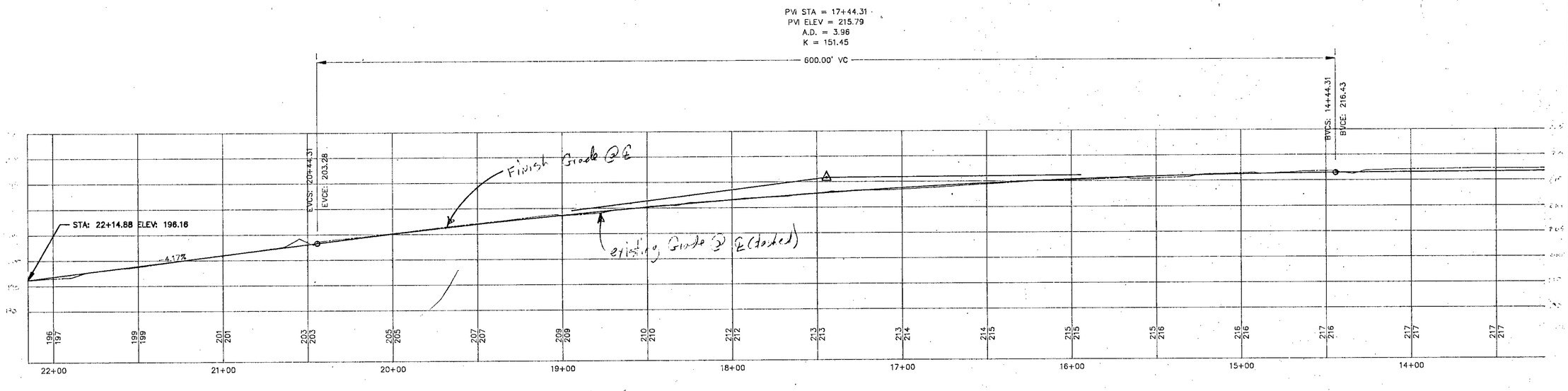
PROJECT NO.: CI9211
DRAWING FILE: 9211P01A

PS3



PLAN VIEW SCALE: HOR: 1"= 30'; VERT: 1"= 10'

DRAFT



PROFILE VIEW SCALE: HOR: 1"= 30'; VERT: 1"= 10'

DRAFT

T_ P C R VISION	DRAWN BY: JS SCALE: AS NOTED DATE: 6-21-94 FILE: WILL. FALLS DR. STREET IMP.	CITY OF WEST LINN ENGINEERING DIVISION	WILLAMETTE FALLS DRIVE IMPROVEMENTS PLAN & PROFILE FOR STA 10+50 TO 20+06	SURVEYED BY: J.REPPETO, PLS CHECKED BY: DESIGNED BY: KG, PE	PROJECT NO.: CI-92-11 DRAWING FILE: 9211P01F	PS4

1" = 1