Ardsley Drainage Project Plans

June 30, 2010

P.O.T. NO. 1

N 298,230.01
E 2,693,062.79
Sta. 1+00.00

CURVE NO. 1

P.I. No. 1 { N 298,310.86, E 2,692,951.11
Δ = 82°-51'-26"
D = 286°-28'-44"
R = 20.00'
T = 17.65'
L = 28.93'
P.C. Sta. 2+20.22
P.T. Sta. 2+49.15

CURVE NO. 1A

P.I. No. 1A { N 298,391.24, E 2,692,995.23
Δ = 06°-29'-13"
D = 57°-17'-45"
R = 100.00'
T = 5.67'
L = 11.32'
P.C. Sta. 3+17.52
P.T. Sta. 3+28.84

CURVE NO. 2

P.I. No. 2 { N 298,531.00, E 2,693,094.00
Δ = 52°-21'-08"
D = 57°-17'-45"
R = 100.00'
T = 49.15'
L = 91.37'
P.C. Sta. 4+45.15
P.T. Sta. 5+36.53

BENCH MARK DATA

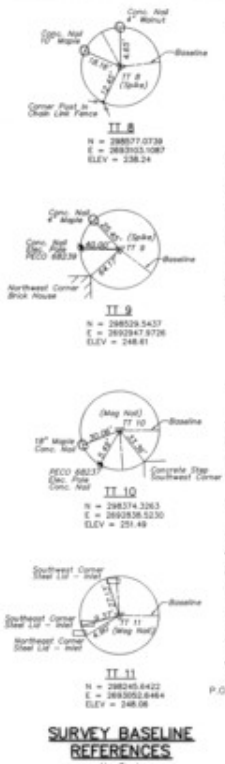
BM 4: Square Cut On Southeast Corner Of Steel Inlet Box Frame On East Side Of Penn Avenue Near House #743. Elevation = 248.60

SPONSOR ADJUSTMENTS TO BE PERFORMED BY CONTRACTOR (40)

No.	Description	Location ℄ Station	Location Offset	Adjustment Required
SA1-1	Chain Link Fence	2+50 to 2+95	Lt.	Remove within PE
SA1-2	Shed	2+50	——	Remove
SA1-3	Chain Link Fence	3+28 to 3+81	Rt.	Remove within PE and TE
SA1-4	Chain Link Fence	2+95 to 4+50	Lt.	Remove within PE
SA1-5	Wood Fence	4+30 to 4+80	Rt.	Remove within PE and TE
SA1-6	Chain Link Fence	4+80 to 5+00	Rt.	Remove within PE
SA1-7	Fireplace	2+30	Lt.	Remove
SA1-8	Chain Link Fence	1+69 to 2+35	Lt.	Remove
SA1-9	Shed	1+80	Lt.	Remove
SA1-10	Wood Fence	1+72	Lt.	Remove
SA1-11	Chain Link Fence	1+69	——	Remove
SA1-12	Chain Link Fence	2+53	——	Remove
SA1-13	Sidewalk and curb	1+40	——	Replace after construction

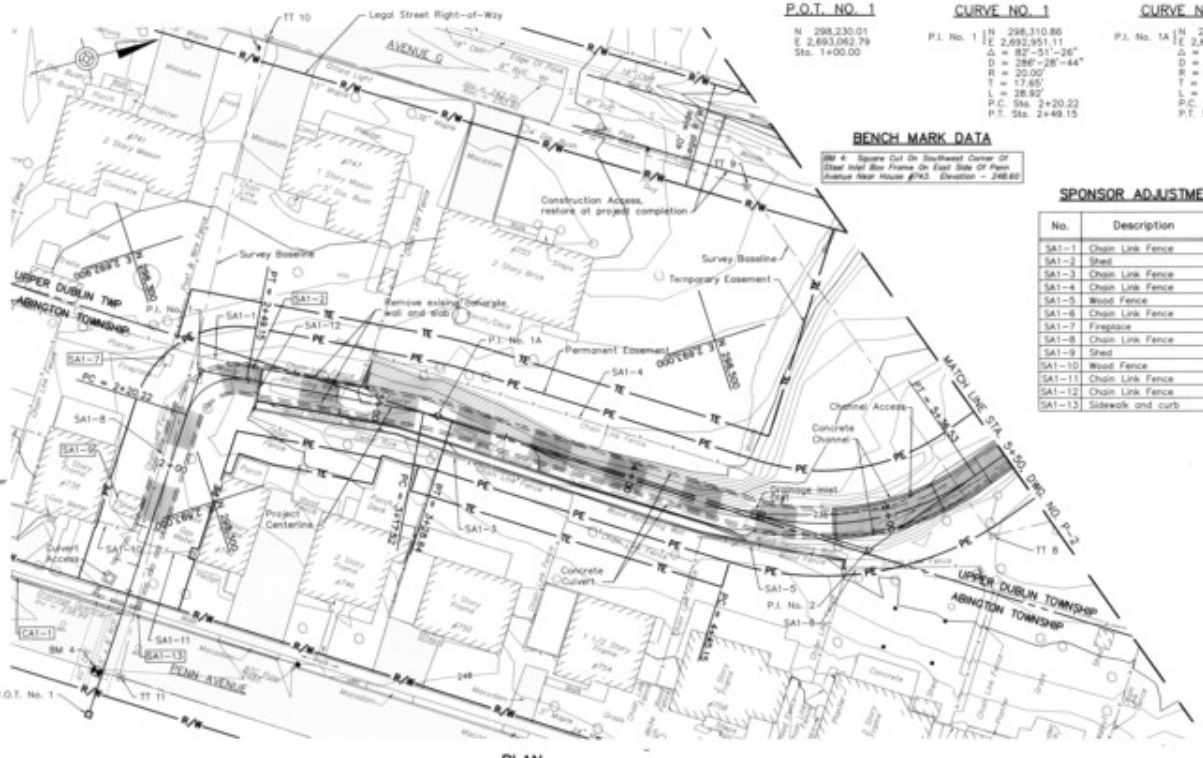
NOTES:

1. For General Notes and Legend, see Dwg. GP-1.
2. For Drainage Inlet Details, see Dwg. D-5.
3. For Concrete Notes, see Dwg. D-2.
4. Existing 5' x 8' RCP to be removed is not shown on plan.



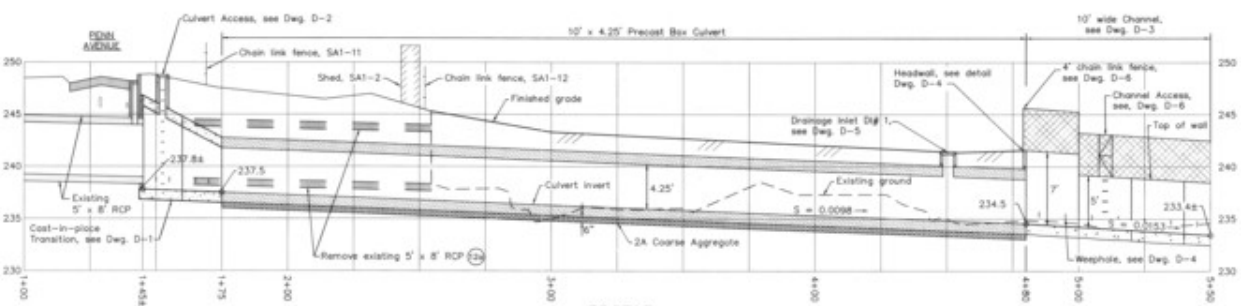
SURVEY BASELINE REFERENCES

No Scale



PLAN

Scale: 1 in. = 20 ft.



PROFILE

Scale: { Horiz. 1 in. = 20 ft. Vert. 1 in. = 5 ft.

CONTRACTOR ADJUSTMENTS (25)

No.	Description	Location ℄ Station	Location Offset	Adjustment Required
CA1-1	Overhead Wires	1+42	——	Protect

ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY CONTRACTOR AT THE SITE.

NO.	DATE	REVISION	APPR.

SUBMITTED: PROJECT MANAGER - L.E.P.
APPROVED: CHIEF - BUREAU OF PROJECT DEVELOPMENT - L.E.P.
APPROVED: DIRECTOR - BUREAU OF WATERWAYS ENGINEERING - L.E.P.

PROFESSIONAL ENGINEER — DOUGLAS R. HILL — CERTIFICATE NO. 32-44-E — COMMONWEALTH OF PENNSYLVANIA
PROFESSIONAL ENGINEER — JOSEPH L. CAPASSO — CERTIFICATE NO. 32-44-E — COMMONWEALTH OF PENNSYLVANIA

PROFESSIONAL ENGINEER'S SIGNATURE — DATE — PROFESSIONAL ENGINEER'S SIGNATURE — DATE

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF WATER MANAGEMENT

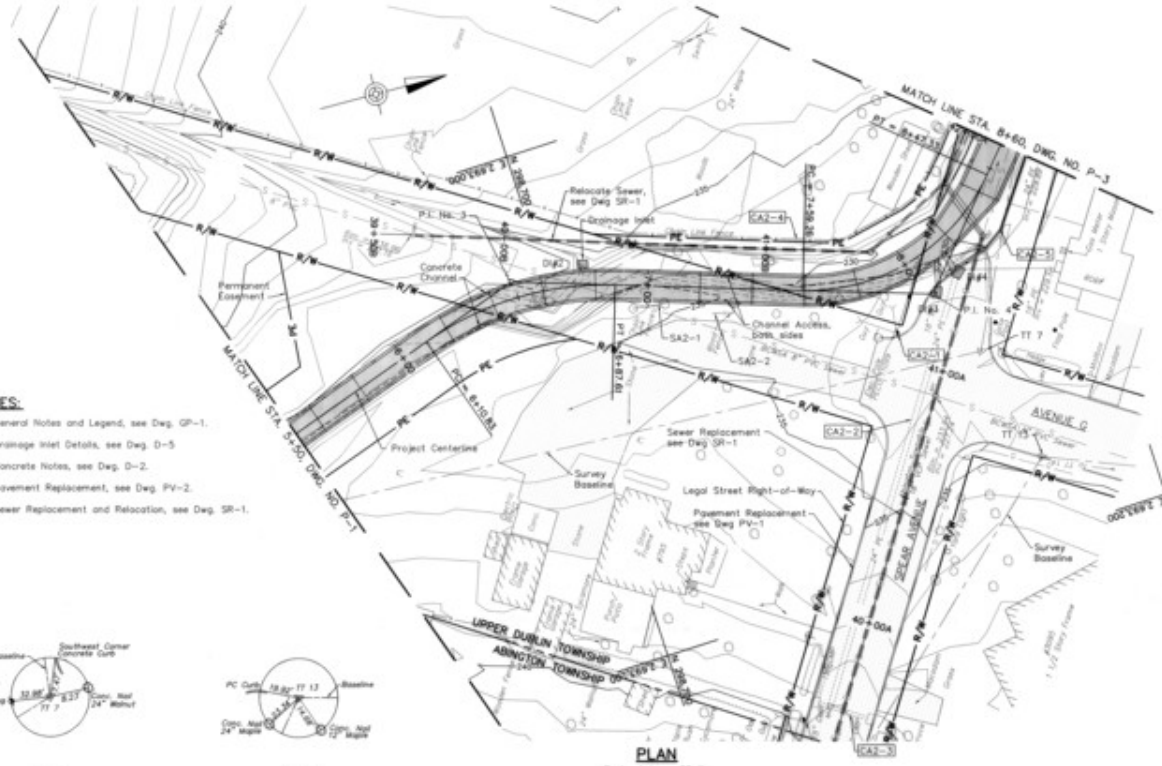
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

PROJECT NO. D.G.S. 181-15

ARDSLEY DRAINAGE CHANNEL
FLOOD CONTROL PROJECT
UPPER DUBLIN TOWNSHIP
MONTGOMERY COUNTY, PENNSYLVANIA

PLAN AND PROFILE
STA. 1+00 TO STA. 5+50

DRAWN BY: W.G.P. — DATE: 8/28/09 — DRAWING NO.
DESIGNED BY: D.R.H. — SCALE: As Shown — P-1



PLAN

Scale: 1 in. = 20 ft.

CURVE NO. 3

P.I. No. 3 { N 298,687.00
E 2,893,046.00
Δ = 36°-39'-40"
D = 47°-44'-47"
R = 120.00'
T = 38.76'
L = 76.78'
P.C. Sta. 6+10.83
P.T. Sta. 6+87.61

CURVE NO. 4

P.I. No. 4 { N 298,839.00
E 2,893,100.00
Δ = 67°-17'-04"
D = 76°-23'-40"
R = 75.00'
T = 49.91'
L = 88.08'
P.C. Sta. 7+59.26
P.T. Sta. 8+47.33

SPONSOR ADJUSTMENTS TO BE PERFORMED BY CONTRACTOR (41)

No.	Description	Location		Adjustment Required
		℄ Station	Offset	
SA2-1	Chain Link Fence	7+00	Rt.	Remove
SA2-2	Wood Fence	7+30	Rt.	Remove

CONTRACTOR ADJUSTMENTS (25)

No.	Description	Location		Adjustment Required
		℄ Station	Offset	
CA2-1	Utility Pole and Overhead Wires	7+78 to 8+60	———	Protect
CA2-2	24" PE Stormdrain	39+65A to 41+54A	Lt.	Protect
CA2-3	Manhole and Cross-drain	39+65A	———	Protect
CA2-4	Chain Link Fence	39+65B to 42+00B	Lt.	Protect
CA2-5	Existing Wall	8+10 to 8+60	Rt.	Extend Weepholes to gravel drain

NOTES:

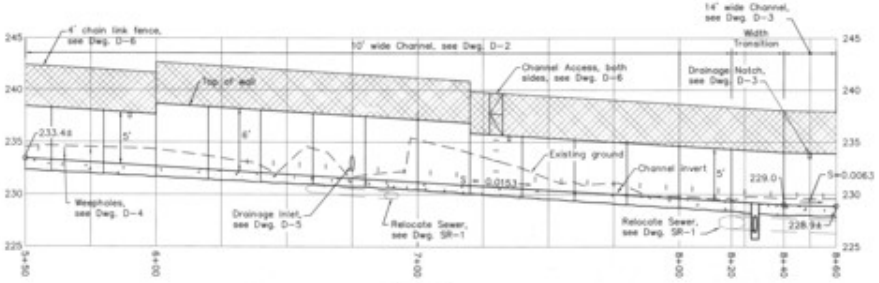
1. For General Notes and Legend, see Dwg. GP-1.
2. For Drainage Inlet Details, see Dwg. D-5
3. For Concrete Notes, see Dwg. D-2.
4. For Pavement Replacement, see Dwg. PV-2.
5. For Sewer Replacement and Relocation, see Dwg. SR-1.

TT 7
(Mag Nail)
N = 298848.6808
E = 2893126.3227
ELEV = 233.49

TT 13
(Mag Nail)
N = 298858.4291
E = 2893171.7789
ELEV = 234.28

SURVEY BASELINE REFERENCES

No Scale



PROFILE

Scale: { Horiz. 1 in. = 20 ft.
Vert. 1 in. = 5 ft.

ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY CONTRACTOR AT THE SITE.

NO.	DATE	REVISION	APPR.

SUBMITTED: PROJECT CONSULTANT - U.S.F.
APPROVED: CHIEF DIVISION OF PROJECT DEVELOPMENT - U.S.F.
APPROVED: DIRECTOR - BUREAU OF WATERWAY ENGINEERING - U.S.F.

PROFESSIONAL ENGINEER DOUGLAS R. HILL
PROFESSIONAL ENGINEER JOSEPH S. CAPWELL

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF WATER MANAGEMENT

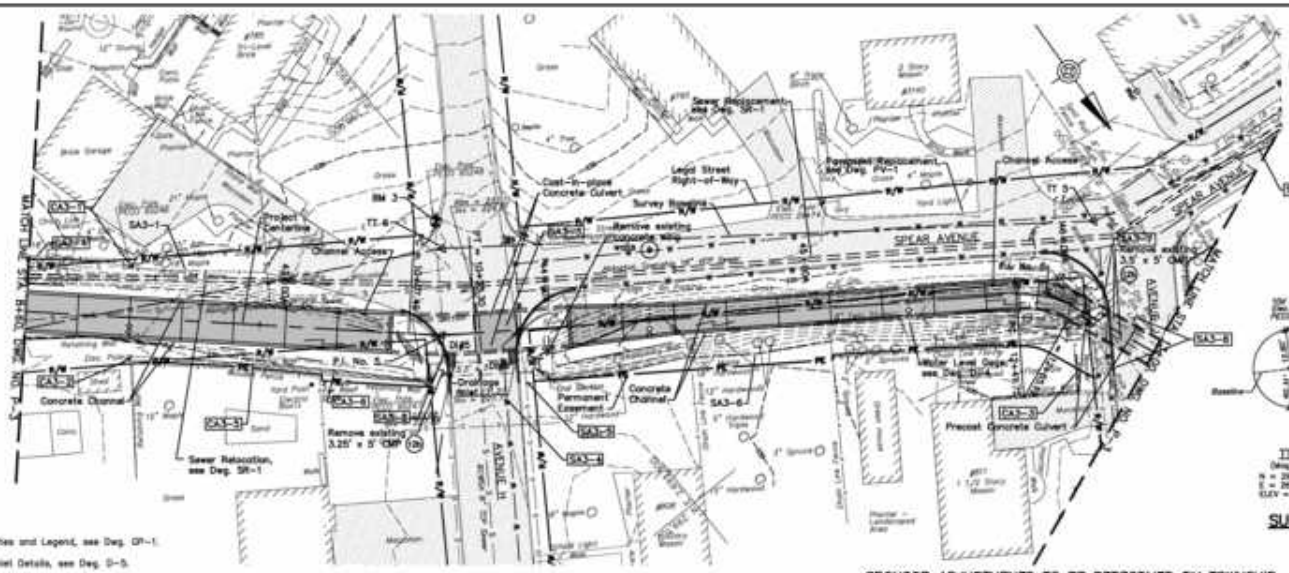
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

PROJECT NO. D.G.S. 181-15

ARDSLEY DRAINAGE CHANNEL
FLOOD CONTROL PROJECT
UPPER DUBLIN TOWNSHIP
MONTGOMERY COUNTY, PENNSYLVANIA

PLAN AND PROFILE
STA. 5+50 TO STA. 8+60

DRAWN BY: W.G.F. DATE: 8/28/09
DESIGNED BY: DRJ
SCALE: As Shown
DRAWING NO.: P-2



CURVE NO. 5

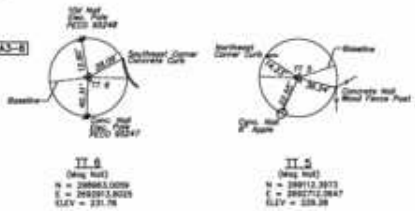
P.I. No. 5 { N 298,989.00, E 2,692,935.00
Δ = 07°-23'-32"
D = 28°-39'-52"
R = 200.00'
T = 12.92'
L = 25.80'
P.C. Sta. 10+27.49
P.T. Sta. 10+53.30

CURVE NO. 6

P.I. No. 6 { N 299,132.50, E 2,692,743.50
Δ = 33°-34'-39"
D = 143°-14'-22"
R = 40.00'
T = 12.07'
L = 23.44'
P.C. Sta. 12+41.75
P.T. Sta. 12+65.19

BENCH MARK DATA

BM 3: Square Cut On Northwest Corner Top Of Curb In Southwest Corner Of Intersection Of Spear Avenue And Avenue H (On Avenue H). Elevation = 232.24



SURVEY BASELINE REFERENCES

No Scale

NOTES:

1. For General Notes and Legend, see Deg. GR-1.
2. For Drainage Inlet Details, see Deg. D-5.
3. For Concrete Notes, see Deg. D-2.
4. Existing CMPs to be removed are not shown on profile.
5. For Pavement Replacement, see Deg. PV-2.
6. For Sewer Replacement, see Deg. SR-1.

CONTRACTOR ADJUSTMENTS (25)

No.	Description	Location ℄ Station	Offset	Adjustment Required
CA3-1	Utility Pole and Overhead Wires	8+60 to 9+00	Lt.	Protect
CA3-2	Utility Pole and Overhead Wires	9+00	Rt.	Protect
CA3-3	Stone Wall and Planter	12+75	Rt.	Protect
CA3-4	Chain Link Fence	8+60 to 9+00	Lt.	Protect
CA3-5	Existing Wall	8+60 to 10+15	Rt.	*Extend Weepholes to gravel drain*
CA3-6	Existing Roof Drains	8+60 to 10+00	Rt.	*Extend to channel wall*

PLAN

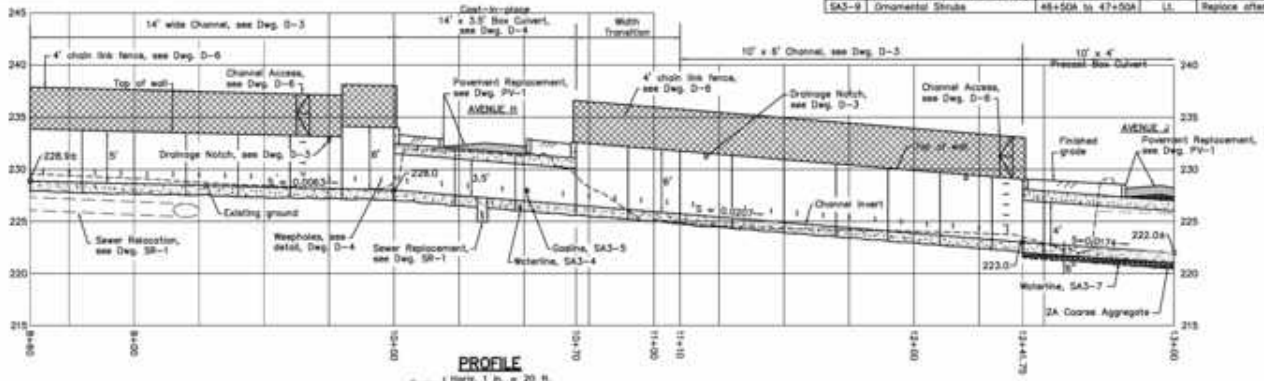
Scale: 1 in. = 20 ft.

SPONSOR ADJUSTMENTS TO BE PERFORMED BY TOWNSHIP

No.	Description	Location ℄ Station	Offset	Adjustment Required
SA3-2	Utility Pole	10+25	Rt.	Relocate
SA3-4	Water Line	10+50	——	Relocate, if necessary
SA3-5	Gas Line	10+50	——	Relocate, if necessary
SA3-7	Water Line	12+80	——	Relocate, if necessary

SPONSOR ADJUSTMENTS TO BE PERFORMED BY CONTRACTOR (42)

No.	Description	Location ℄ Station	Offset	Adjustment Required
SA3-1	Chain Link Fence	9+00 to 9+50	Lt.	Relocate outside Street R/W
SA3-3	Avenue H (Pavement and Curb)	10+00 to 10+70	——	Replace after construction
SA3-6	Chain Link Fence	11+15 to 11+70	Rt.	Relocate outside PE
SA3-8	Avenue J (Pavement and Curb)	12+80 to 13+00	——	Replace after construction
SA3-9	Ornamental Shrubs	46+50A to 47+50A	Lt.	Replace after construction



PROFILE

Scale: { Horiz. 1 in. = 20 ft. Vert. 1 in. = 5 ft.

ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY CONTRACTOR AT THE SITE.

NO.	DATE	REVISION	APPR.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF WATER MANAGEMENT

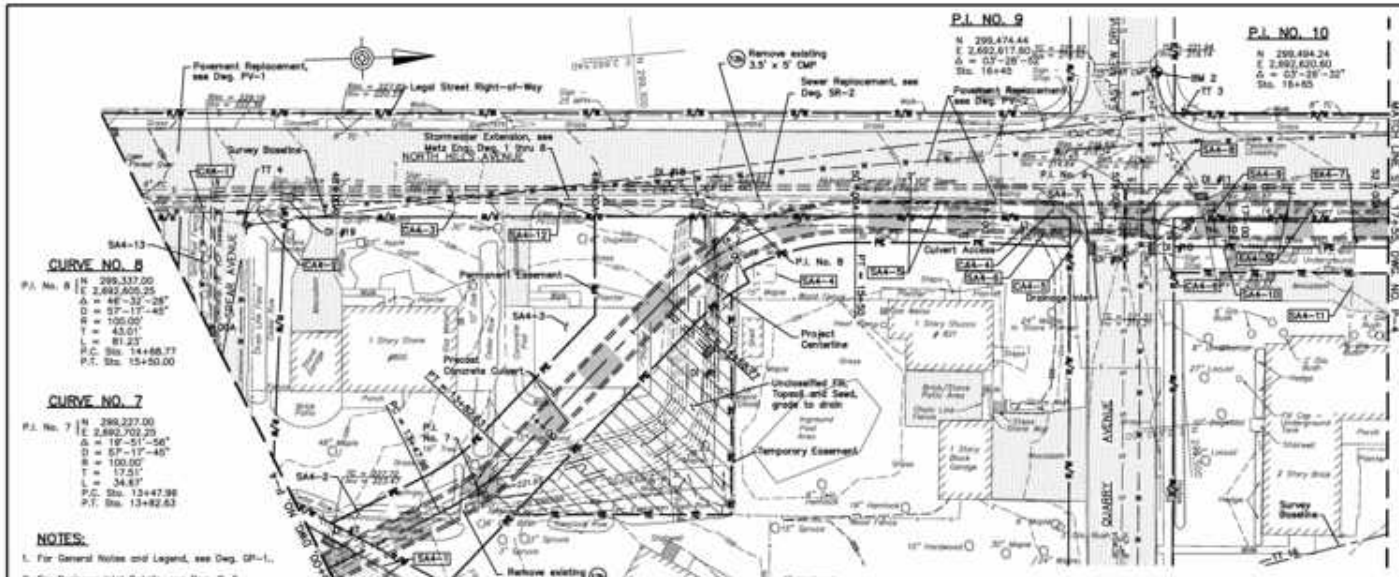
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

PROJECT NO. D.G.S. 181-15

ARDSLEY DRAINAGE CHANNEL FLOOD CONTROL PROJECT
UPPER DUBLIN TOWNSHIP
MONTGOMERY COUNTY, PENNSYLVANIA

PLAN AND PROFILE
STA. 8+60 TO STA. 13+00

DRAWN BY: B.G.F.
DATE:
DRAWING NO.: P-3
DESIGNED BY:
SCALE: As Shown



CURVE NO. 8

P.I. No. 8
N 299,337.00
E 2,692,805.25
Δ = 46°-32'-28"
D = 57°-17'-45"
R = 100.00'
T = 43.01'
L = 81.23'
P.C. Sta. 14+68.77
P.T. Sta. 15+50.00

CURVE NO. 7

P.I. No. 7
N 299,227.00
E 2,692,702.20
Δ = 19°-51'-56"
D = 57°-17'-45"
R = 100.00'
T = 17.51'
L = 34.67'
P.C. Sta. 13+47.98
P.T. Sta. 13+82.63

NOTES:

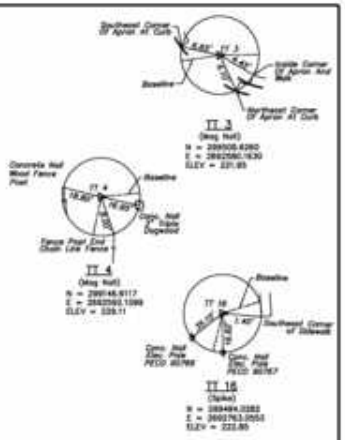
1. For General Notes and Legend, see Deg. GN-1.
2. For Drainage Inlet Details, see Deg. D-5.
3. For Concrete Notes, see Deg. D-3.
4. Existing CMPs to be removed are not shown on profile.
5. Pavement and Sidewalk replacement limits not shown on plan. Refer to Deg. PV-2 and PV-3.
6. For Sewer Replacement, see Deg. SR-2.
7. For North Hills Avenue Stormwater Extension, see Metz Eng. Degs. 1-4.
8. Utilities poles along North Hills Avenue (SA4-7) may remain within the PE, but must be at least 2' from the culvert so as to not interfere with installation of the gravel drain.

PLAN

Scale: 1 in. = 20 ft.

SURVEY BASELINE REFERENCES

No Scale



BENCH MARK DATA

BM 2: Square Cut On Northeast Corner Top Of Inlet Curb Box At Northwest Corner Of Intersection Of North Hills Drive And East View Drive (On East View) Elevation = 222.48

SPONSOR ADJUSTMENTS TO BE PERFORMED BY TOWNSHIP

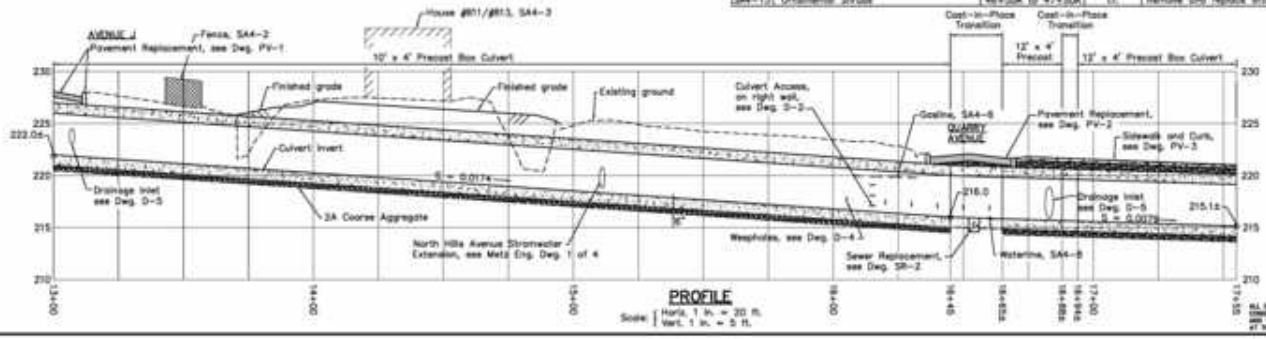
No.	Description	Location ℄ Station	Location Offset	Adjustment Required
SA4-3	1 Story Stone House #811/#813	14+10 to 14+60	——	House has been removed
SA4-6	Gas Line	16+00 to 16+40	——	Relocate, if necessary
SA4-7	Utility Poles	15+00 to 17+55	RL	Relocate
SA4-8	Water Line	16+60	——	Relocate, if necessary
SA4-11	Underground Electric	17+45	RL	Relocate
SA4-12	Utility Poles	14+65	LL	Relocate

SPONSOR ADJUSTMENTS TO BE PERFORMED BY CONTRACTOR (43)

No.	Description	Location ℄ Station	Location Offset	Adjustment Required
SA4-1	Avenue J (Pavement and Curb)	13+00 to 13+15	——	Replace after construction
SA4-2	Fence	13+13 to 13+90	——	Relocate outside PE
SA4-4	Soil Pile	15+10	RL	Relocate outside PE
SA4-5	Pavement, Sidewalks and Curbs	15+00 to 17+55	——	Replace after construction
SA4-9	Public Mailbox	16+85	——	Remove and replace after construction
SA4-10	Traffic Signal and Underground Electric	16+95	RL	Remove and replace after construction
SA4-13	Ornamental Shrubs	46+50A to 47+50A	LL	Remove and replace after construction

CONTRACTOR ADJUSTMENTS (20)

No.	Description	Location ℄ Station	Location Offset	Adjustment Required
CA4-1	Street Sign	13+15	LL	Relocate during/replace after construction
CA4-2	Street Sign	13+35	LL	Relocate during/replace after construction
CA4-3	Street Sign	14+35	LL	Relocate during/replace after construction
CA4-4	Street Sign	16+25	LL	Relocate during/replace after construction
CA4-5	Street Sign	16+35	RL	Relocate during/replace after construction
CA4-6	Stop Sign	16+70	RL	Relocate during/replace after construction



PROFILE

Scale: Horiz. 1 in. = 20 ft. Vert. 1 in. = 5 ft.

ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY CONTRACTOR AT THE SITE.

NO.	DATE	REVISION	APPR.

SUBMITTED: PROJECT ENGINEER - LLC

APPROVED: CHIEF - BUREAU OF PROJECT DEVELOPMENT - DCO

APPROVED: DIRECTOR - BUREAU OF WATERWAY ENGINEERING - LLC

PROFESSIONAL ENGINEER — DOUGLAS E. HILL — COMMONWEALTH OF PENNSYLVANIA

PROFESSIONAL ENGINEER — JOSEPH G. CAPASSO — COMMONWEALTH OF PENNSYLVANIA

PROFESSIONAL'S SIGNATURE DATE | PROFESSIONAL'S SIGNATURE DATE

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF WATER MANAGEMENT

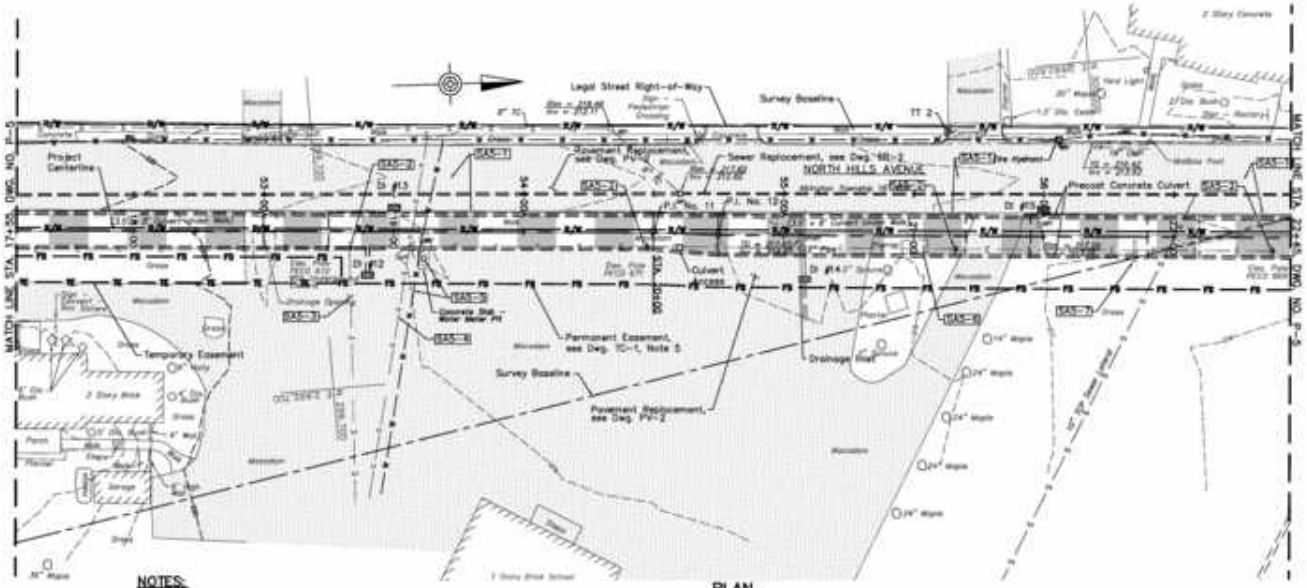
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

PROJECT NO. D.G.S. 181-15

ARDSLEY DRAINAGE CHANNEL
FLOOD CONTROL PROJECT
UPPER DUBLIN TOWNSHIP
MONTGOMERY COUNTY, PENNSYLVANIA

PLAN AND PROFILE
STA. 13+00 TO STA. 17+55

DRAWN BY: B.G.F. | DATE | DESIGNED BY: | DATE | As Shown | DRAWING NO. P-4



PLAN

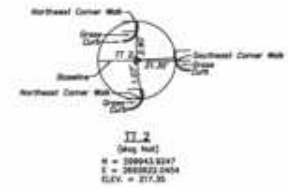
Scale: 1 in. = 20 ft.

P.I. NO. 11

N 299,827.87
E 2,692,650.81
Δ = 02°-16'-02"
Sta. 20+00

P.I. NO. 12

N 299,852.66
E 2,692,654.04
Δ = 02°-11'-49"
Sta. 20+25



TT 2
(Mag Nail)
N = 299943.9247
E = 2693822.0454
ELEV. = 217.35

SURVEY BASELINE REFERENCE

No Scale

NOTES:

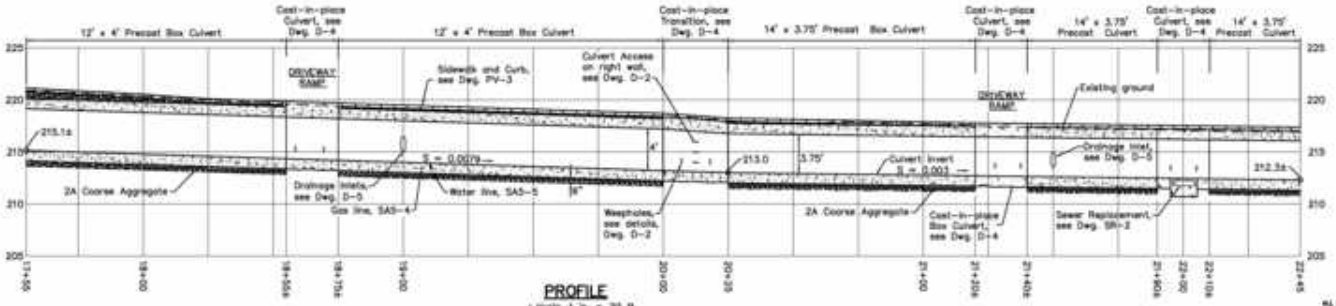
1. For General Notes and Legend, see Dwg. GP-1.
2. For Drainage Inlet Details, see Dwg. D-5.
3. For Concrete Notes, see Dwg. D-2.
4. Existing culvert to be replaced is not shown.
5. For Pavement and Sidewalk Replacement, see Dwg. PV-2 and PV-3.
6. For Sewer Replacement, see Dwg. SR-2.
7. In addition to orange construction fencing, the contractor must provide 6' high chain link fence along the PE line between Sta. 18+00 to Sta. 23+00 until the excavation within these limits is backfilled.
8. Utilities poles along North Hills Avenue (SAS-2) may remain within the PE, but must be at least 2' from the culvert so as to not interfere with installation of the gravel drain.

SPONSOR ADJUSTMENTS TO BE PERFORMED BY TOWNSHIP

No.	Description	Location ℄ Station	Location Offset	
SAS-2	Utility Poles	17+55 to 22+45	Rt.	Relocate
SAS-3	Underground Electric	18+85	Rt.	Relocate
SAS-4	Gas Line	19+08	——	Relocate, if necessary
SAS-5	Water Line and Meter	19+10	——	Relocate, if necessary

SPONSOR ADJUSTMENTS TO BE PERFORMED BY CONTRACTOR (44)

No.	Description	Location ℄ Station	Location Offset	Adjustment Required
SAS-1	Pavement, Sidewalk and Curbs	17+55 to 22+45	——	Replace after construction
SAS-6	Planters	21+00	Rt.	Relocate outside PE and TE
SAS-7	Queen of Peace Sign	21+80	Rt.	Relocate outside PE and TE



PROFILE

Scale: Horiz. 1 in. = 20 ft. Vert. 1 in. = 5 ft.

ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY CONTRACTOR AT THE SITE.

NO.	DATE	REVISION	APPR.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF WATER MANAGEMENT

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

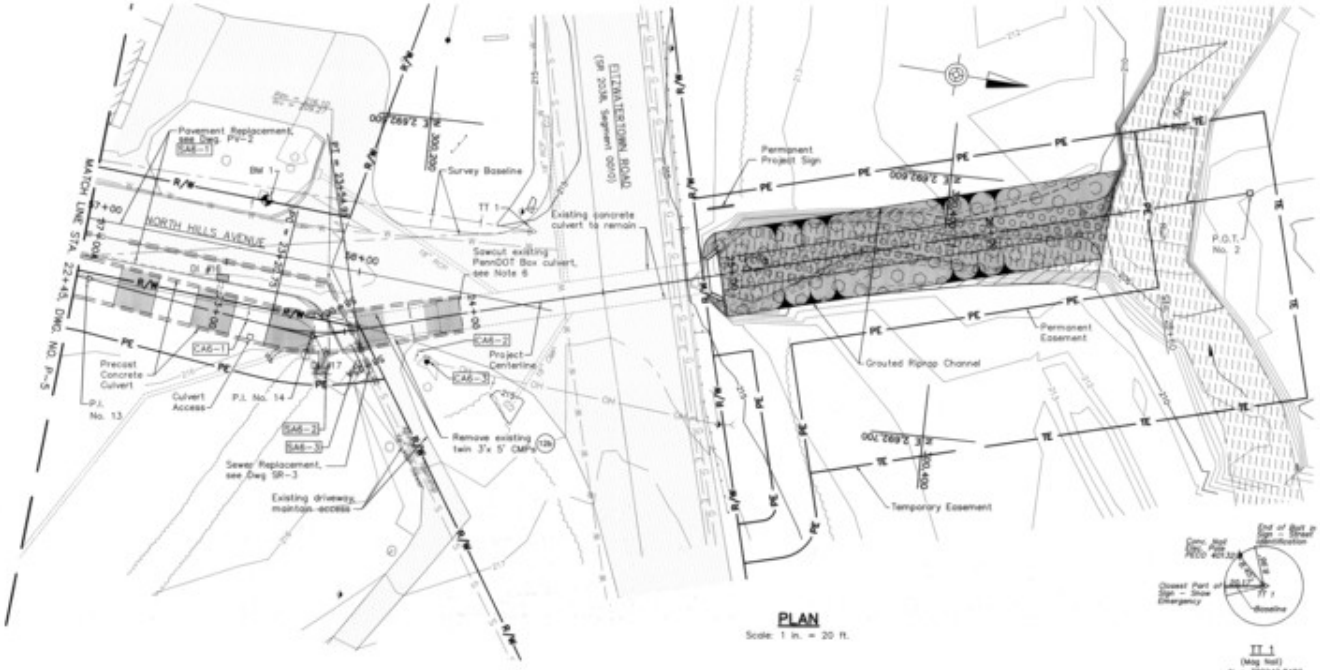
PROJECT NO. D.G.S. 181-15

ARDSLEY DRAINAGE CHANNEL
FLOOD CONTROL PROJECT
UPPER DUBLIN TOWNSHIP
MONTGOMERY COUNTY, PENNSYLVANIA

PLAN AND PROFILE
STA. 17+55 TO STA. 22+45

As Shown

P-5



PLAN

Scale: 1 in. = 20 ft.

BENCH MARK DATA

BM 1: Square Cut On The Northeast Corner Of Concrete Pad For School Zone Flashing Light/Sign. Elevation = 216.70

P.I. NO. 13

N 300,076.72
E 2,692,674.61
Δ = 02°-59'-34"
Sta. 22+50

P.O.T. NO. 2

N 300,514.29
E 2,692,594.72
Sta. 27+00

CURVE NO. 14

P.I. No. 14
N 300,163.87
E 2,692,687.22
Δ = 23°-01'-28"
D = 67°-24'-24"
R = 85.00'
T = 17.31'
L = 34.16'
P.C. Sta. 23+20.75
P.T. Sta. 23+54.91

NOTES:

1. For General Notes and Legend, see Dwg. GP-1.
2. For Drainage Inlet Details, see Dwg. D-5.
3. For Concrete Notes, see Dwg. D-2.
4. Existing CMPs to be removed are not shown on profile. Existing box culvert under sidewalk, not shown.
5. For Pavement and Sidewalk Replacement, see Dwg. PV-2 and PV-3.
6. Sawcut existing PennDOT box culvert at Sta. 23+95. Drill and grout dowels in conformance with TS-20.
7. For Sewer Replacement, see Dwg. SR-3.

CONTRACTOR ADJUSTMENTS (25)

No.	Description	Location ℄ Station	Location Offset	Adjustment Required
CA6-1	Street Sign	23+12	Lt.	Relocate during / replace after construction
CA6-2	Street Sign	23+75	Rt.	Relocate during / replace after construction
CA6-3	Utility Pole	23+80	Rt.	Protect

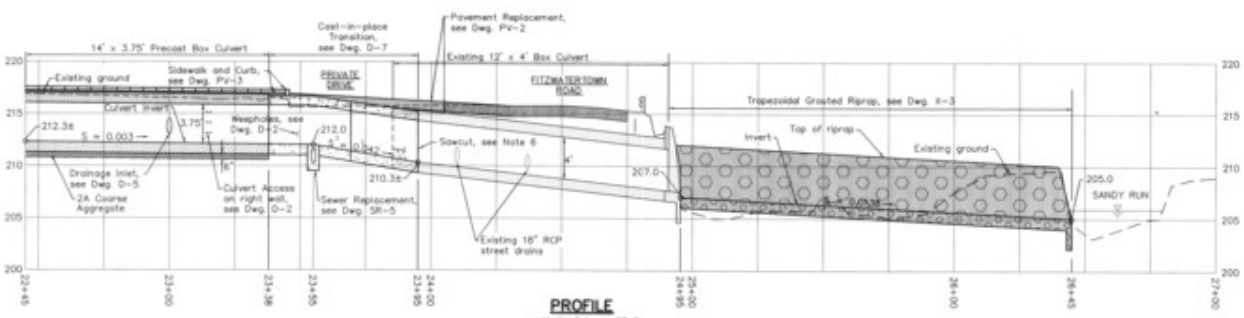
SPONSOR ADJUSTMENTS TO BE PERFORMED BY CONTRACTOR (45)

No.	Description	Location ℄ Station	Location Offset	Adjustment Required
SA6-1	Pavement, Sidewalk and Curb	22+45 to 24+00	—	Replace after construction
SA6-2	Planter	23+40	Rt.	Relocate outside PE and TE
SA6-3	Mailbox	23+50	Rt.	Remove and replace after construction

SURVEY BASELINE REFERENCE

No Scale

TT 1
(Mag Nail)
N = 300242.8482
E = 2692638.5728
ELEV. = 215.14



PROFILE

Scale: Horiz. 1 in. = 20 ft.
Vert. 1 in. = 5 ft.

ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY CONTRACTOR AT THE SITE.

NO.	DATE	REVISION	APPR.

SUBMITTED: PROJECT ENGINEER - D.E.P.
APPROVED: CHIEF ENGINEER, PROJECT DEVELOPMENT - D.E.P.
APPROVED: CHIEF ENGINEER, WATER MANAGEMENT - D.E.P.

PROFESSIONAL ENGINEER DOUGLAS R. HILL
PROFESSIONAL ENGINEER JOSEPH G. DAPKOSH

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF WATER MANAGEMENT

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES
HARRISBURG, PENNSYLVANIA

PROJECT NO. D.G.S. 181-15

ARDSLEY DRAINAGE CHANNEL
FLOOD CONTROL PROJECT
UPPER DUBLIN TOWNSHIP
MONTGOMERY COUNTY, PENNSYLVANIA

PLAN AND PROFILE
STA. 22+45 TO STA 26+50

DRAWN BY: M.G.F. DATE: 8/28/09
DESIGNED BY: D.R.H. SCALE: As Shown
DRAWING NO. P-6