CHICAGO EXECUTIVE AIRPORT
WHEELING/PROSPECT HEIGHTS, ILLINOIS
CONSTRUCT PARTIAL PARALLEL TAXIWAY ECHO AND PARTIAL OVERLAY OF TAXIWAY ECHO

DRAINAGE/UTILITY SCHEDULE AND DRAINAGE DETAILS

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

CHICAGO EXECUTIVE AIRPORT

DESIGN BY:	MLK
DRAWN BY:	MJW
CHECKED BY:	MLK
APPROVED BY:	DLP
DATE:	04/22/11
JOB No:	08290-08

ILLINOIS PROJECT: PWK-3244
A.I.P. PROJECT: 3-17-0018-B32

SHEET 25 OF 49 SHEETS

REVISIONS

NUMBER	BY	DATE
1	MLK	03/31/10

THIS BAR IS EQUAL TO 2"
AT FULL SCALE (34X22).
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FILE: txy-utility-schedule.dwg
UPDATE BY: johse
SURVEY BOOK #
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DATE: Sun 3/28/04 9:02am

PROPOSED DRAINAGE/UTILITY SCHEDULE

STRUCTURE NUMBER	LOCATION	DESCRIPTION	* RIM ELEVATION	INVERT (NORTH)	INVERT (SOUTH)	INVERT (EAST)	INVERT (WEST)
FA1	1+50.0, 39.5'RT, ℄ ACCESS ROAD	SLOPE BOX INLET 12"	636.92				
IA1	3+53.0, 13.0'RT, ℄ ACCESS ROAD	INLETS, TYPE B, TYPE 11 FRAME AND GRATE	640.75			636.46	636.46
IA2	1+50.0, 13.0'RT, ℄ ACCESS ROAD	INLETS, TYPE B, TYPE 11 FRAME AND GRATE	639.78			636.88	636.88
IA3	1+50.0, 13.0'LT, ℄ ACCESS ROAD	INLETS, TYPE B, TYPE 11 FRAME AND GRATE	639.78			636.85	636.85
IA4	3+53.0, 13.0'LT, ℄ ACCESS ROAD	INLETS, TYPE B, TYPE 11 FRAME AND GRATE	640.75			636.29	636.29
FA2	1+50.0, 69.7'LT, ℄ ACCESS ROAD	SLOPE BOX INLET 12"	636.50				
MA1	1+50.0, 37.0'LT, ℄ ACCESS ROAD	MANHOLE 4', W/TYPE 1 FRAME AND OPEN LID	638.89	636.27		636.83	636.35
MA2	3+53.0, 76.7'LT, ℄ ACCESS ROAD	MANHOLE 4', W/TYPE 1 FRAME AND OPEN LID	639.30	636.02	636.02	636.02	636.02
FA3	3+53.0, 45.6'RT, ℄ ACCESS ROAD	SLOPE BOX INLET 12"	636.65				
FA4	1+74.5, 170.7'RT, ℄ ECHO 1	SLOPE BOX INLET 12"	636.69				
MA3	3+53.0, 37.0'LT, ℄ ACCESS ROAD	MANHOLE 4', W/TYPE 1 FRAME AND OPEN LID	640.35	636.10	636.10 (SW)	636.10	
MA4	176+82.3, 41.5'RT, ℄ ECHO	MANHOLE 4', W/TYPE 1 FRAME AND OPEN LID	639.14	635.71		635.71	635.71
MA5	178+55.5, 40.0'LT, ℄ ECHO	EXISTING MANHOLE	639.21		635.46 (SW) EXISTING	635.42	635.42 EXISTING
MA6	177+51.0, 93.1'RT, ℄ ECHO	MANHOLE 4', W/TYPE 1 FRAME AND OPEN LID	640.51	635.77	635.77		635.42
MB1	182+14.7, 123.2'RT, ℄ ECHO	MANHOLE 4', W/TYPE 8 GRATE	637.50		635.21		
MB2	181+70.0, 40.0'RT, ℄ ECHO	MANHOLE 4', W/TYPE 1 FRAME AND OPEN LID	639.38	635.07	635.07		
MB3	181+70.0, 40.0'LT, ℄ ECHO	EXISTING MANHOLE	639.56	634.96	634.96 EXISTING	634.96 EXISTING	634.93 EXISTING

NOTE: THE STATION AND OFFSET IS MEASURED TO THE CENTER OF THE STRUCTURE △1 * ALL ELEVATIONS IN 1929 DATUM.

STORM SEWER/UNDERDRAIN NOTES

1. CONTRACTOR SHALL FIELD VERIFY EXISTING STORM SEWER/UNDERDRAIN INVERTS BEFORE INSTALLING PROPOSED PIPE. CONNECTIONS AND ORDERING MATERIALS.
2. ALL UNDERDRAIN CONNECTIONS, CORING INTO STRUCTURES, TEES, BENDS, STORM SEWER ETC. SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE UNDERDRAIN.
3. UNDERDRAIN SLOPES FOLLOW EDGE OF PAVEMENT SLOPE UNLESS OTHERWISE NOTED.
4. INSTALL PROPOSED ELECTRICAL DUCTS/CONDUITS TO BE CLEAR OF UNDERDRAIN, COST INCIDENTAL.
5. UNDERDRAIN CONFLICTS WITH EXISTING CONDITIONS SHALL BE RESOLVED AND COST SHALL BE INCIDENTAL TO UNDERDRAIN.
6. PRIOR TO ORDERING AND INSTALLING ALL FIELD TILE REPLACEMENT PIPE, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND INVERTS OF EXISTING FIELD TILE CONNECTIONS. ADJUSTMENTS SHALL BE MADE AS NECESSARY AT NO ADDITIONAL COST TO THE CONTRACT.
7. CORING OF DRAINAGE STRUCTURE AND REMOVAL OF EXISTING STORM SEWER MANHOLE/INLET CONCRETE BENCHES TO FACILITATE CONNECTIONS OF PROPOSED STORM SEWER PIPE SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE PIPE.
8. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH CITY CODES, ORDINANCES AND PRACTICES.
9. ALL CONTRACTORS AND SUBCONTRACTORS TO BE REGISTERED WITH THE CITY OF PROSPECT HEIGHTS.
10. ANY EXISTING FIELD TILE HIT DURING CONSTRUCTION SHALL BE RECONNECTED AT NO ADDITIONAL COST TO THE CONTRACT. IN THE EVENT THAT FIELD TILES ARE ENCOUNTERED DURING CONSTRUCTION, THEY SHALL BE SHOWN ON AS-BUILT PLANS.
11. SUBTRACT 0.24 FEET FROM ELEVATIONS SHOWN ON PLANS (1929 DATUM) TO OBTAIN 1988 NAVD.
12. THE CONTRACTOR SHALL NOTIFY THE CITY OF PROSPECT HEIGHTS (847.398.6700) A MINIMUM OF 48 HOURS PRIOR TO ANY STORM SEWER INSTALLATION.
13. ALL STORM SEWERS ON THE AIRPORT SITE ARE OWNED, OPERATED AND MAINTAINED BY THE CHICAGO EXECUTIVE AIRPORT.

TRENCH DETAILS

NOT TO SCALE

NON-PAVED AREAS

GRANULAR CRADLE (IDOT CA-6)
9"
STORM SEWER PIPE (CONCRETE, CMP OR PVC)
1'
GRANULAR BACKFILL 1' ABOVE PIPE FOR CMP AND PVC
TRENCH WIDTH (SEE TABLE)
VARIABLE
BACKFILL WITH ORIGINALLY EXCAVATED MATERIAL
MOUND SLIGHTLY (TO BE FERTILIZED AND SEEDED)

ALL PAVED AREAS

GRANULAR CRADLE (IDOT CA-6)
9"
STORM SEWER PIPE (CONCRETE, CMP OR PVC)
TRENCH WIDTH (SEE TABLE)
VARIABLE
GRANULAR BACKFILL UNDER THE PAVEMENT AND 3' MIN. OUTSIDE EDGE OF PAVEMENT, COMPACTED TO MODIFIED PROCTOR DENSITY (ASTM 1557)
EXISTING, PROPOSED OR FUTURE PAVEMENT AS SHOWN ON THE PLANS

INSIDE DIAMETER OF STORM SEWER (INCHES)	MAXIMUM TRENCH WIDTH	MAXIMUM PAVEMENT REMOVAL WIDTH
6	3'-7"	5'-7"
8	3'-9"	5'-9"
12	4'-2"	6'-2"
15	4'-6"	6'-6"
18	4'-9"	6'-9"
21	5'-0"	7'-0"
24	5'-4"	7'-4"
27	5'-7"	7'-7"
30	5'-11"	7'-11"
36	6'-6"	8'-6"
42	7'-1"	9'-1"
48	7'-8"	9'-8"
54	8'-3"	10'-3"
60	8'-10"	10'-10"
66	9'-5"	11'-5"
72	10'-0"	12'-0"
78	10'-7"	12'-7"
84	11'-2"	13'-2"
90	11'-9"	13'-9"
96	12'-4"	14'-4"
102	12'-11"	14'-11"
108	13'-6"	15'-6"

UNDERDRAIN CONNECTION DETAILS

NOT TO SCALE

UNDERDRAIN CONNECTIONS AND FITTINGS, TEES AND ELBOWS USED FOR CONNECTIONS TO PROPOSED STRUCTURES AND STORM SEWERS / EXISTING STRUCTURES AND STORM SEWERS, SHALL BE CONSIDERED INCIDENTAL TO THE PROPOSED UNDERDRAIN.

EXISTING STORM SEWER
6" UD
PROVIDE WATERTIGHT SEAL AT PIPE CONNECTIONS USING WATER SEALING GROUT.
CORE EXISTING STRUCTURE/STORM SEWER TO CONNECT PROPOSED UNDERDRAIN
(COST INCIDENTAL TO UNDERDRAIN)

EXISTING STORM SEWER
PROVIDE WATERTIGHT SEAL AT PIPE CONNECTIONS USING WATER SEALING GROUT.
6" PVC
CORE EXISTING STRUCTURE TO CONNECT PVC TO STORM SEWER
6" UD
6" UD
PROP. TEE

MANHOLE - TYPE "A"

SECTION A-A

N.T.S.

GRANULAR BEDDING FROM 6" BELOW BOTTOM TO SPRINGLINE OF HIGHEST CONNECTING SEWER
UNDISTURBED EARTH
CONCRETE OR GROUT FILLET
PROPOSED SEWER PIPE
CONC. FILLET 1/2 X PIPE I.D.
3" MIN.
RESILIENT SEAL BETWEEN MANHOLE WALL AND EACH CONNECTING PIPE
BOTTOM SECTION & FLOOR SHALL BE ONE PRECAST CONCRETE PIECE
STEEL REINFORCING PER ASTM C478
PIPE I.D.
M.H. STEPS ON 1'-4" SPACING
PRECAST CONCRETE BARREL SECTIONS
INSIDE DIAMETER
SEE TABLE
WALL THICKNESS
BUTYL ROPE CAULK OR O-RING GASKET AT JOINTS (TYP.)
2'-6" MIN.
CRETEX GASKET EXTERNAL RUBBER SLEEVE
6" MAX.
PRECAST CONCRETE CONE
MANHOLE STEPS - PLASTIC REINFORCED WITH STEEL ROD
FRAME AND LID CASTING SHALL BE AS SPECIFIED IN THE DRAINAGE SCHEDULE

NOTE:
INVERT FLOWLINE AT BENDS SHALL HAVE A RADIUS EQUAL TO OR LARGER THAN THE PIPE DIAMETER.

PLAN

N.T.S.

PRECAST CONC. BOTTOM SECTION
SEE ASTM FOR MANHOLE REINFORCING
MANHOLE STEP - PLASTIC WITH STEEL CORE ROD. SEE SPECS.
A
A
PROPOSED SEWER PIPE
CONC. OR GROUT FILLET

NOTE:
CONC. SUPPORT FOR AN UNDERCUT SEWER TO BE USED ONLY WHERE REQ'D. BY THE ENG. AND SHALL BE PAID FOR PER CU.YD. UNDER "CONC. CRADLE OR ENCASEMENT" BID ITEM. IF CONC. SUPPORT IS NOT REQ'D. SELECTED GRANULAR BACKFILL SHALL EXTEND TO TOP OF EXIST. SEWER.

MANHOLE TYPE	INSIDE DIA.	MIN. WALL THICKNESS
A-4	4'-0"	5"
A-5	5'-0"	6"
A-6	6'-0"	7"

NOTE:
ADDITIONAL REQUIREMENTS FOR CONCRETE MANHOLE CASTINGS, AND RESILIENT SEAL AROUND PIPE ARE IN THE SPECIFICATIONS. FOR CONNECTING EXISTING SEWERS TO PROPOSED MANHOLES, SEE SPECIFICATIONS.

TYP. MANHOLE WALL JOINT

N.T.S.

BUTYL ROPE CAULK
MANHOLE WALL
BUTYL ROPE CAULK OR O-RING GASKET (TYP. ALL JOINTS)