

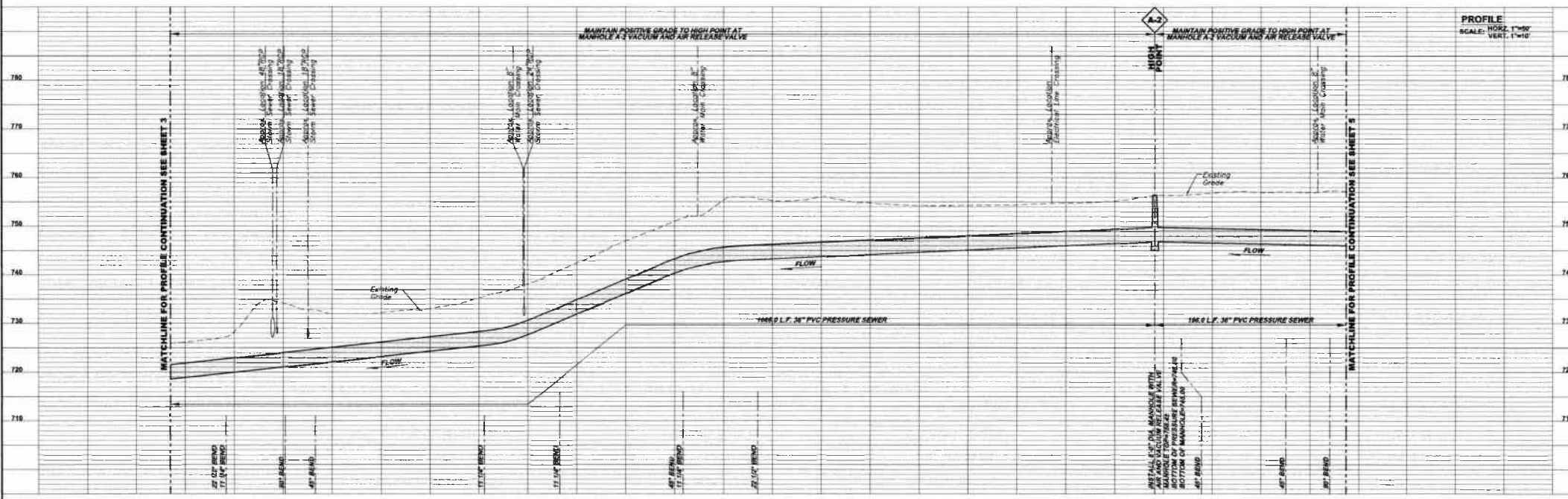
BURIED PIPELINE
 OWNER: MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT 160 ATLANTIC AVENUE MCKEESPORT, PA 15132
 CONTENTS: SANITARY SEWER PRESSURE SEWER PRESSURE: 0 PSI DEPTH: (DEPTH OF PIPE @ SIGN LOCATION) EMERGENCY PHONE: 911

PIPELINE LOCATION SIGNS
 PIPELINE LOCATION SIGNS ARE REQUIRED WHERE THE PROPOSED QUALITY SEWER AND FORCE MAIN (PRESSURE) SEWER CROSSES THE RAILROAD TRACKS. SIGNS SHALL BE FURNISHED AND INSTALLED OVER THE CENTERLINE OF THE PIPE ON RAILROAD PROPERTY AT THE RIGHT OF WAY LINE. SIGNS SHALL BE MADE OF DURABLE WEATHER PROOF MATERIAL AND SHOW THE FOLLOWING INFORMATION:

NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED. Items Identified with Mixed Case Text are Existing.

PRESSURE SEWER SIGN DETAIL

PLAN SCALE: 1"=50'



PROFILE SCALE: HORIZ. 1"=50' VERT. 1"=10'

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-13
WEST SHORE SANITARY SEWER CONSTRUCTION
PLAN AND PROFILE

Scale: As Shown
 Date: JUNE 2009
 Drawn By: YES
 Checked By: RDM
 Approved By: SHD

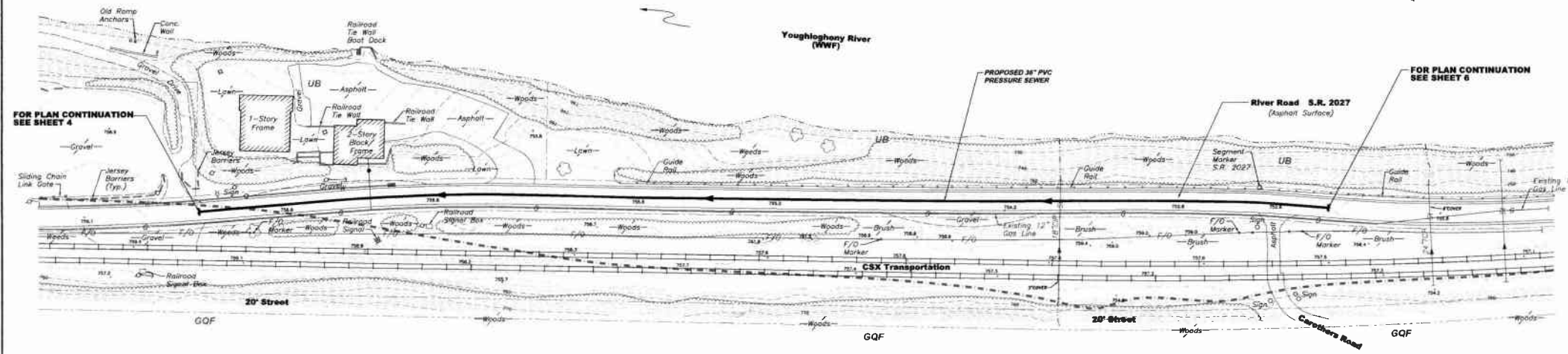
Sheet No.
4 of 29

Drawing No.
220-W8813



5175 CAMPBELL RUN ROAD
 PITTSBURGH, PA 15205
 PHONE: 412-944-0200
 FAX: 412-944-0200
 INFO@KLHENGINEERS.COM

Revision	Date	Description
1	7-31-08	DEF SUBMITTAL
2	10-09	REVISED
3	09-10	ALIGNMENT REVISED
4	12-01	RELEASE FOR BID



NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items Identified with Mixed Case Text are Existing.

Revisions	Date	Revised By
01	06-08	DESIGN
02	06-08	REVISED
03	06-08	RELEASE FOR BID

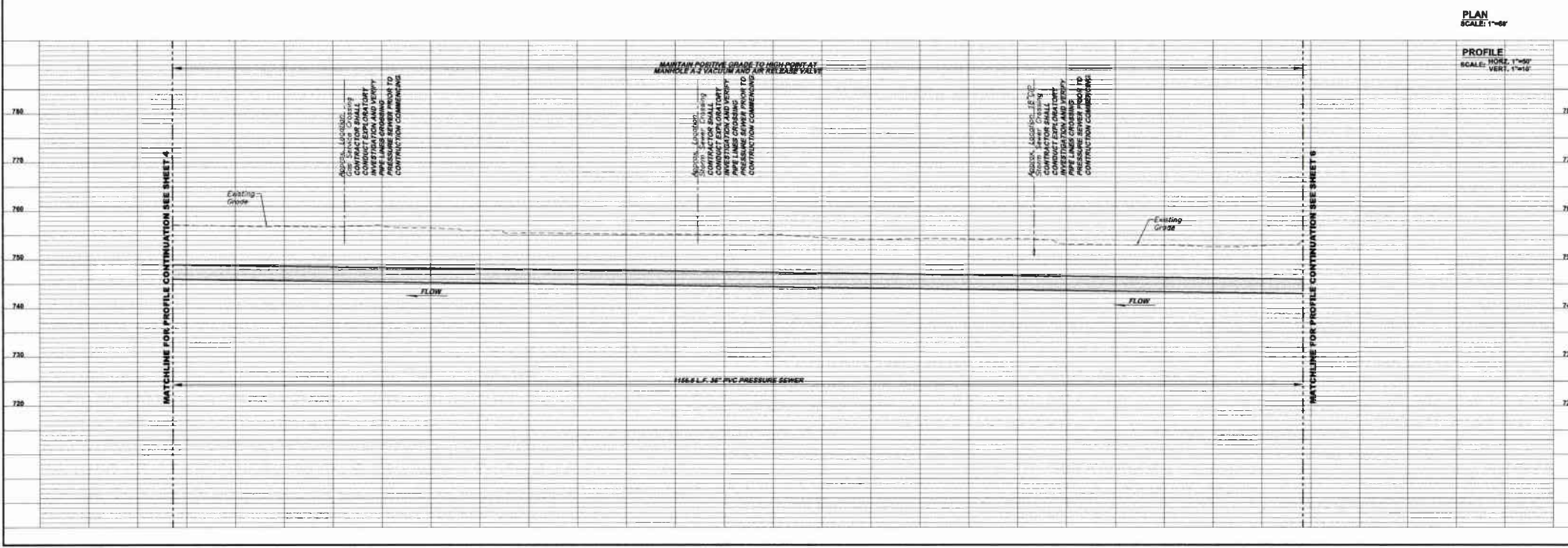
5172 DAVENPORT BLVD
 PITTSBURGH, PA 15203
 PHONE: 412-444-9242
 FAX: 412-444-9243
 INFO@KLHENGINEERS.COM



MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-13
WEST SHORE BANTARY SEWER CONSTRUCTION
 PLAN AND PROFILE

Scale:	As Shown
Date:	JUNE 2009
Drawn By:	TES
Checked By:	BDH
Approved By:	BHG

Sheet No.
5 of 23
 Drawing No.
220-WSS14



PLAN
 SCALE: 1"=40'

PROFILE
 SCALE: HORIZ. 1"=40'
 VERT. 1"=10'

MATCHLINE FOR PROFILE CONTINUATION SEE SHEET 4

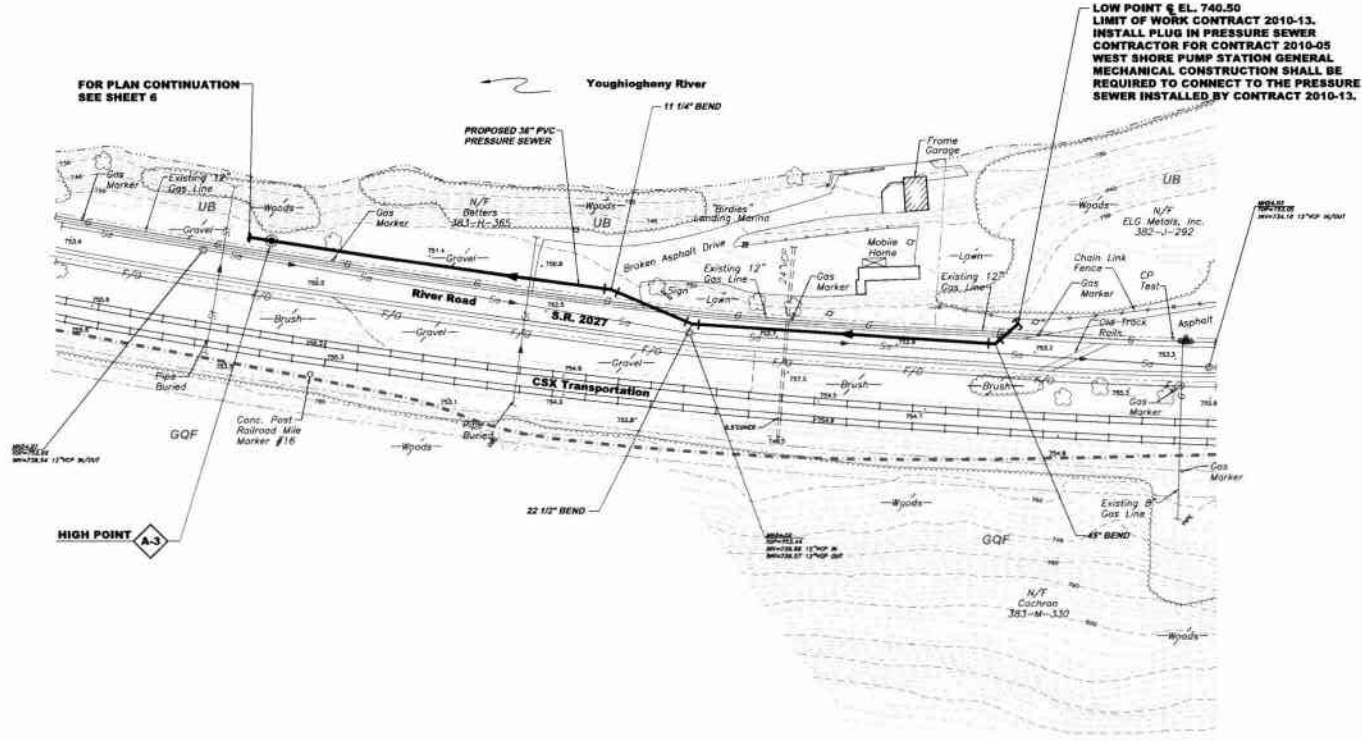
MATCHLINE FOR PROFILE CONTINUATION SEE SHEET 6

APPROX. LOCATION OF
 SEWER LINE
 CONTRACTOR SHALL
 CONDUCT EXPLORATORY
 INVESTIGATION AND VERIFY
 PIPE LINES CROSSING
 PRESSURE SEWER PRIOR TO
 CONSTRUCTION COMMENCING

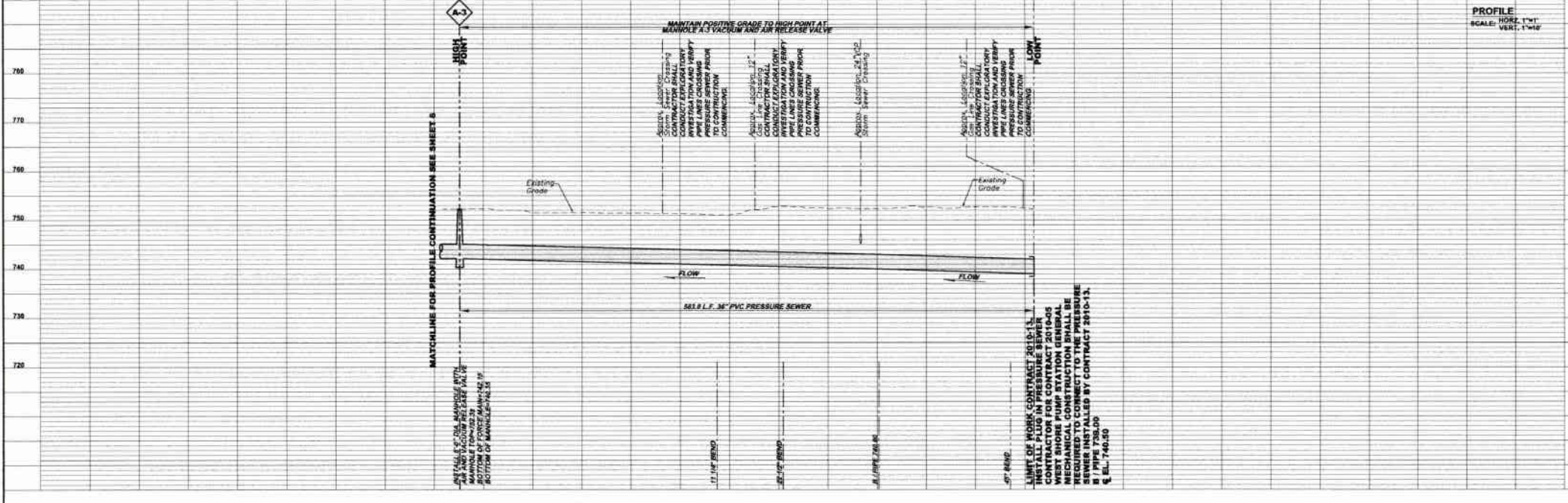
MAINTAIN POSITIVE GRADE TO HIGH POINT AT
 MANHOLE A-3 VALVE AND AIR RELEASE VALVE

APPROX. LOCATION OF
 SEWER LINE
 CONTRACTOR SHALL
 CONDUCT EXPLORATORY
 INVESTIGATION AND VERIFY
 PIPE LINES CROSSING
 PRESSURE SEWER PRIOR TO
 CONSTRUCTION COMMENCING

APPROX. LOCATION OF
 SEWER LINE
 CONTRACTOR SHALL
 CONDUCT EXPLORATORY
 INVESTIGATION AND VERIFY
 PIPE LINES CROSSING
 PRESSURE SEWER PRIOR TO
 CONSTRUCTION COMMENCING



NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items identified with Mixed Case Text are Existing.



PLAN
 SCALE: 1"=50'

PROFILE
 SCALE: HORIZ. 1"=10'
 VERT. 1"=10'



Date	Revisions	By	Check	Appr.
7-31-08	DEF SUBMITTAL			
8-09	REVISED			
8-10	NAME CHANGE			
1-28-11	RELEASE FOR BID			

8179 CLAYBORNE BLVD. ROOM 200
 PITTSBURGH, PA 15205
 PHONE: 412-488-0318
 FAX: 412-488-0319
 WWW.KLHENGINEERS.COM

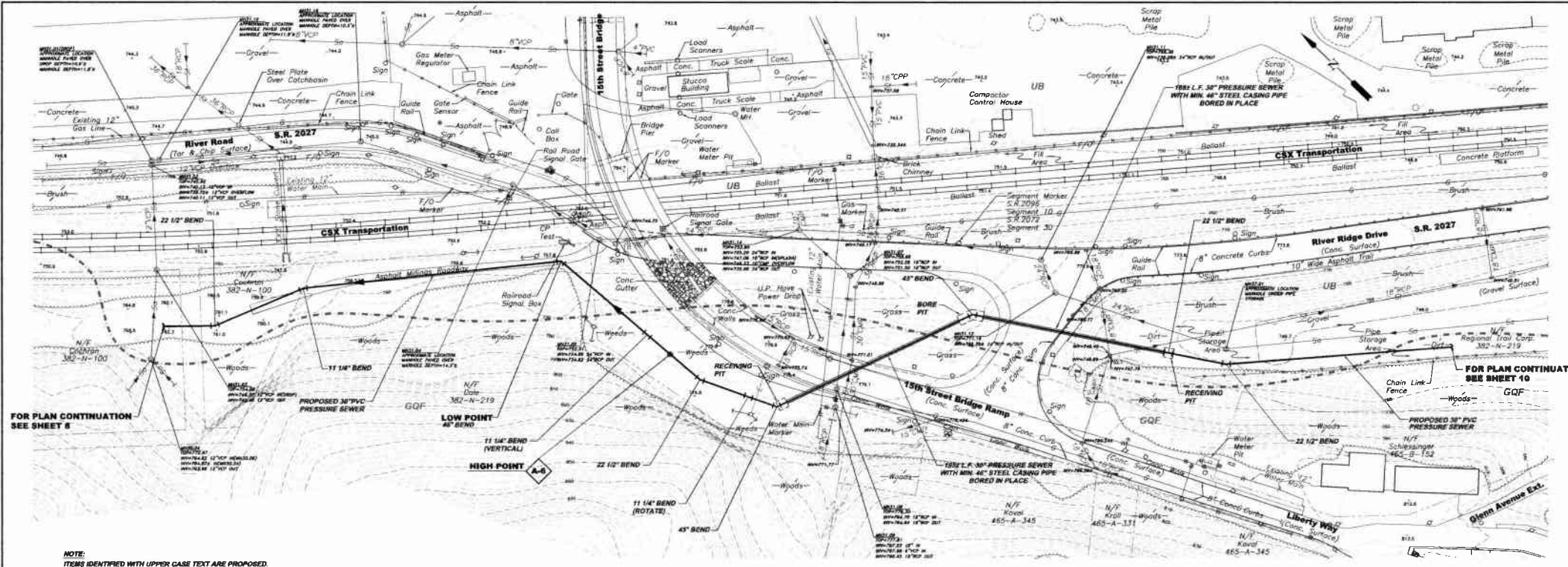


MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-13
 WEST SHORE SANITARY SEWER CONSTRUCTION
 PLAN AND PROFILE

Scale: As Shown
 Date: JUNE 2009
 Drawn By: TES
 Checked By: BDN
 Approved By: SHG

Sheet No.
 7 of 29

Drawing No.
 220-WSS16



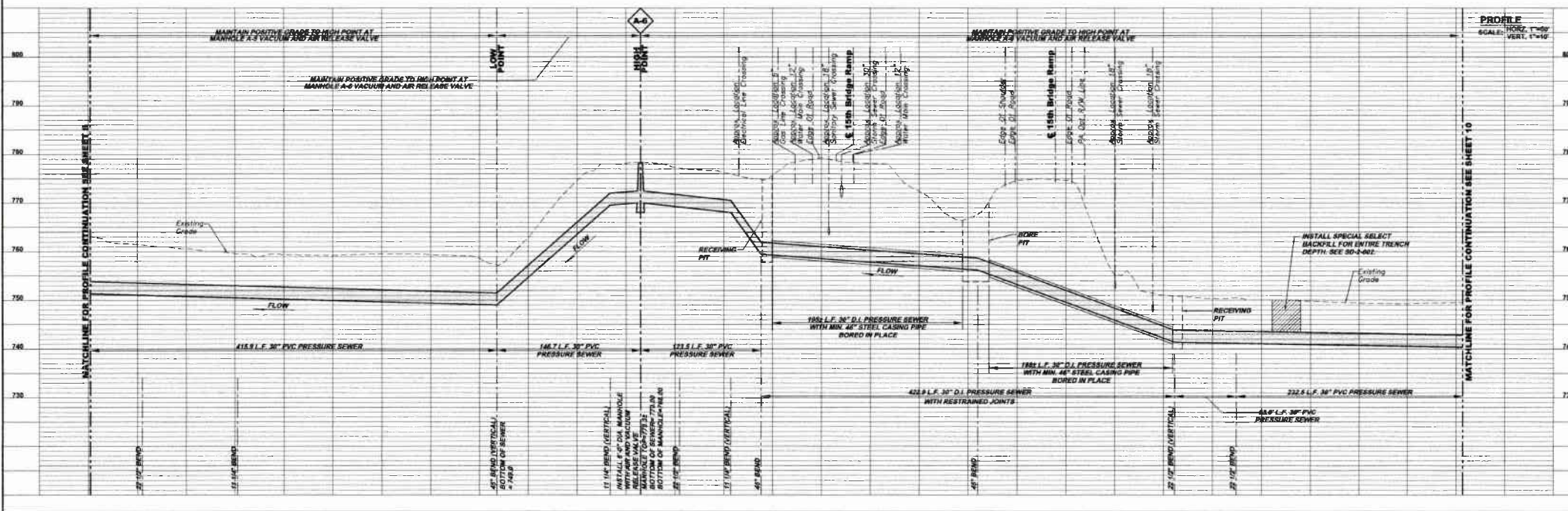
FOR PLAN CONTINUATION
SEE SHEET 8

FOR PLAN CONTINUATION
SEE SHEET 10

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Mixed Case Text are Existing.

NOTE:
RESTORATION SHALL BE COMPLETED AS NOTED IN SPECIFICATIONS
AND SHALL BE APPROVED BY THE PROPERTY OWNER OR THE PROPERTY
OWNER'S REPRESENTATIVE.

PLAN
SCALE: 1"=50'



MATCHLINE FOR PROFILE CONTINUATION SEE SHEET 8

MATCHLINE FOR PROFILE CONTINUATION SEE SHEET 10

PROFILE
SCALE: HORIZ. 1"=50'
VERT. 1"=10'

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-13
WEST SHORE SANITARY SEWER CONSTRUCTION
PLAN AND PROFILE

KLH
ENGINEERS, INC.

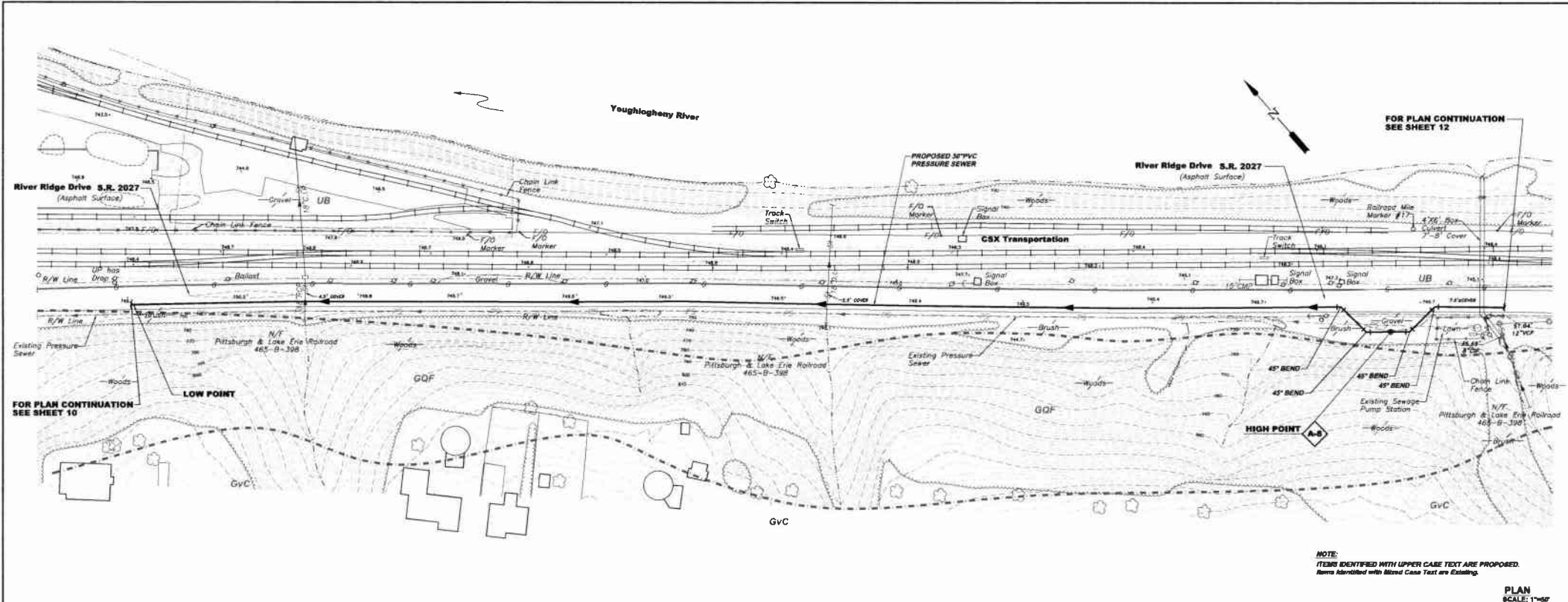
8173 CARROLLS RUN ROAD
PITTSBURGH, PA 15205
PHONE: 412-799-0222
FAX: 412-799-0222
INFO@KLENGINEERS.COM

Date	Revision	Description
10/08	001	ISSUED FOR PERMITS
10/08	002	REVISED
10/08	003	REVISED
10/08	004	REVISED
10/08	005	REVISED
10/08	006	REVISED
10/08	007	REVISED
10/08	008	REVISED
10/08	009	REVISED
10/08	010	REVISED
10/08	011	REVISED
10/08	012	REVISED
10/08	013	REVISED
10/08	014	REVISED
10/08	015	REVISED
10/08	016	REVISED
10/08	017	REVISED
10/08	018	REVISED
10/08	019	REVISED
10/08	020	REVISED
10/08	021	REVISED
10/08	022	REVISED
10/08	023	REVISED
10/08	024	REVISED
10/08	025	REVISED
10/08	026	REVISED
10/08	027	REVISED
10/08	028	REVISED
10/08	029	REVISED
10/08	030	REVISED
10/08	031	REVISED
10/08	032	REVISED
10/08	033	REVISED
10/08	034	REVISED
10/08	035	REVISED
10/08	036	REVISED
10/08	037	REVISED
10/08	038	REVISED
10/08	039	REVISED
10/08	040	REVISED
10/08	041	REVISED
10/08	042	REVISED
10/08	043	REVISED
10/08	044	REVISED
10/08	045	REVISED
10/08	046	REVISED
10/08	047	REVISED
10/08	048	REVISED
10/08	049	REVISED
10/08	050	REVISED
10/08	051	REVISED
10/08	052	REVISED
10/08	053	REVISED
10/08	054	REVISED
10/08	055	REVISED
10/08	056	REVISED
10/08	057	REVISED
10/08	058	REVISED
10/08	059	REVISED
10/08	060	REVISED
10/08	061	REVISED
10/08	062	REVISED
10/08	063	REVISED
10/08	064	REVISED
10/08	065	REVISED
10/08	066	REVISED
10/08	067	REVISED
10/08	068	REVISED
10/08	069	REVISED
10/08	070	REVISED
10/08	071	REVISED
10/08	072	REVISED
10/08	073	REVISED
10/08	074	REVISED
10/08	075	REVISED
10/08	076	REVISED
10/08	077	REVISED
10/08	078	REVISED
10/08	079	REVISED
10/08	080	REVISED
10/08	081	REVISED
10/08	082	REVISED
10/08	083	REVISED
10/08	084	REVISED
10/08	085	REVISED
10/08	086	REVISED
10/08	087	REVISED
10/08	088	REVISED
10/08	089	REVISED
10/08	090	REVISED
10/08	091	REVISED
10/08	092	REVISED
10/08	093	REVISED
10/08	094	REVISED
10/08	095	REVISED
10/08	096	REVISED
10/08	097	REVISED
10/08	098	REVISED
10/08	099	REVISED
10/08	100	REVISED

Scale: As Shown
Date: JUNE 2009
Drawn By: TES
Checked By: RCH
Approved By: SHG

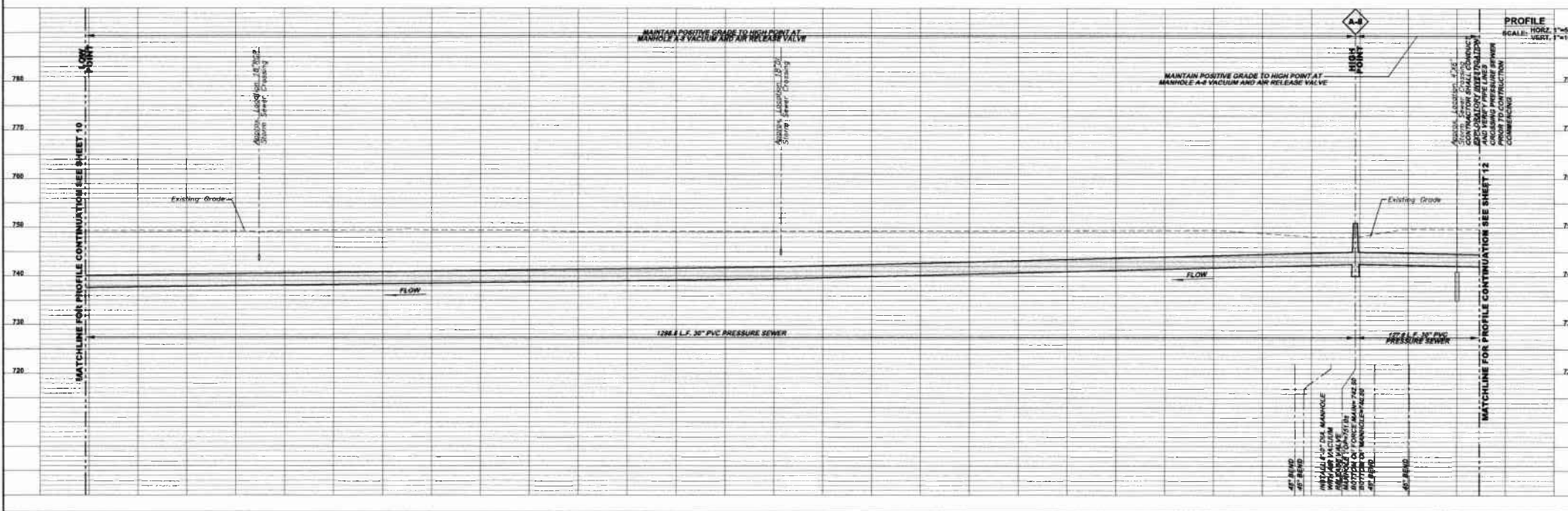
Sheet No.
9 of 29

Drawing No.
220-WSS18



NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items Identified with Mixed Case Text are Existing.

PLAN SCALE: 1"=50'



PROFILE SCALE: HORIZ. 1"=10' VERT. 1"=10'

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-13
 WEST SHORE SANITARY SEWER CONSTRUCTION
 PLAN AND PROFILE

Issue: As Shown
 Date: JUNE 2009
 Drawn By: TEB
 Checked By: BDN
 Approval By: BHS

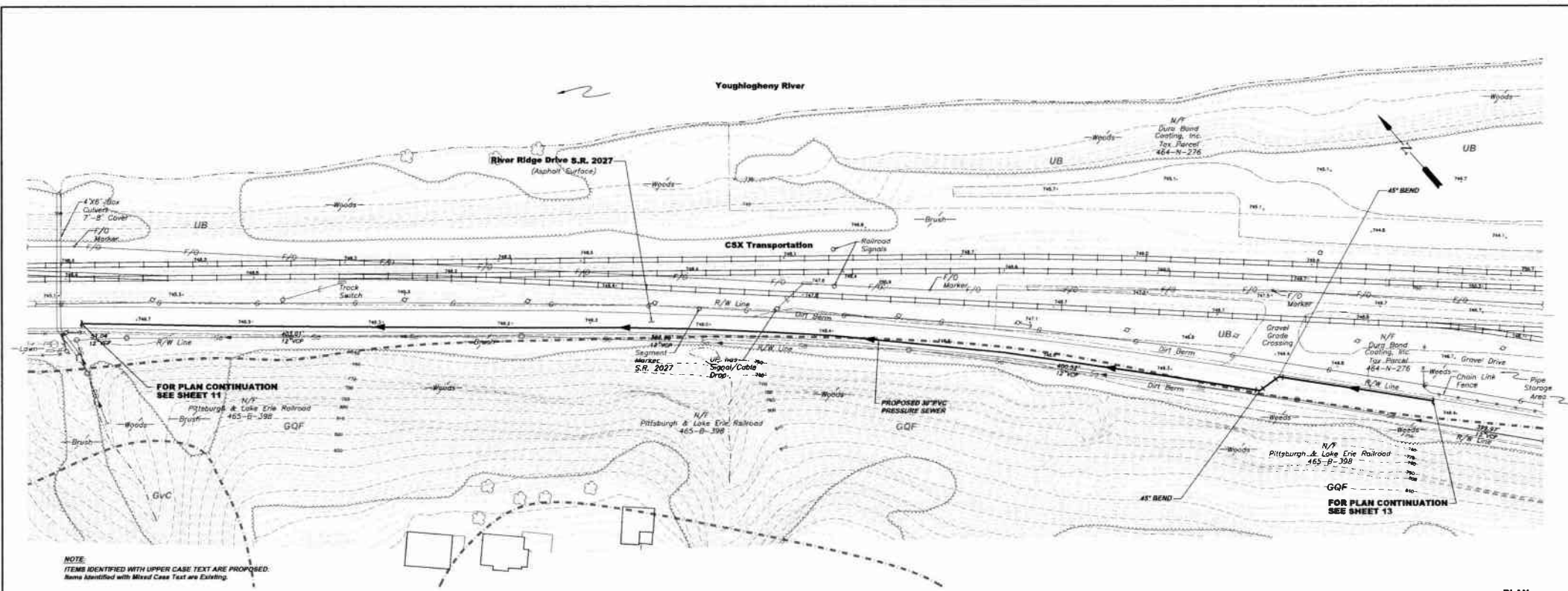
Sheet No.
 11 of 29

Drawing No.
 220-W3820

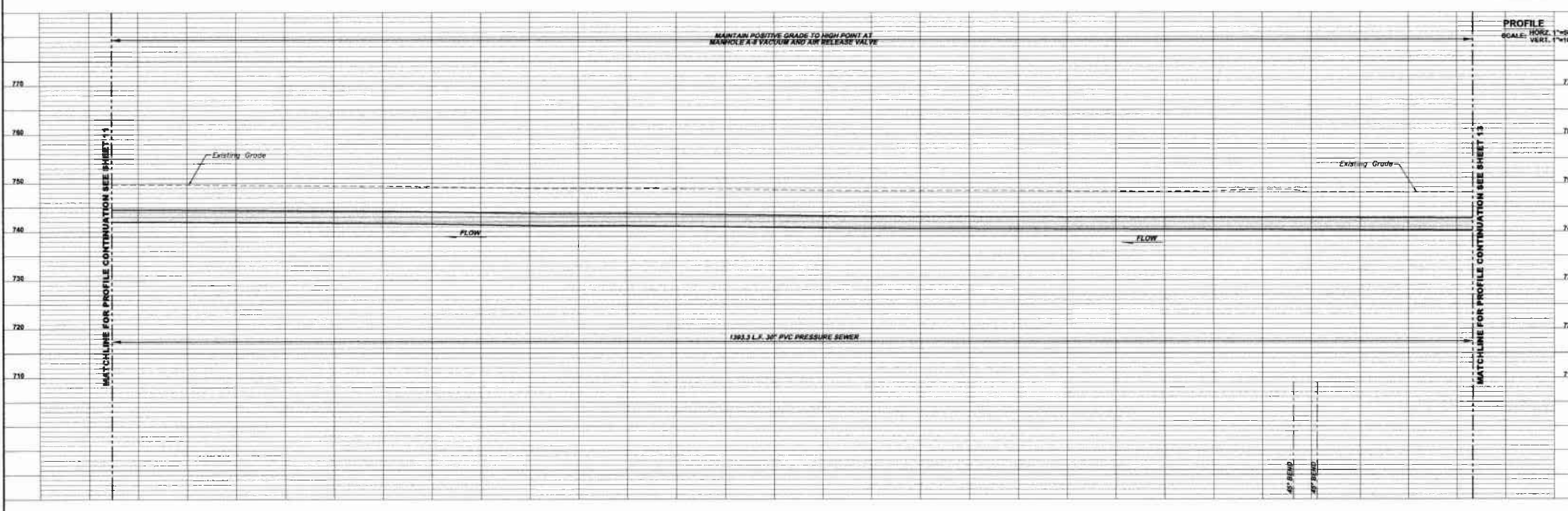
8173 CAMPBELL BLVD. #200
 PITTSBURGH, PA 15206
 PHONE: 412-244-9333
 FAX: 412-244-9333
 INFO@KLHENGINEERS.COM

KLH ENGINEERS, INC.

Revision	Date	By	Check	Appr.
01	12/08	TEB	BDN	BHS
02	01/09	TEB	BDN	BHS
03	02/09	TEB	BDN	BHS
04	03/09	TEB	BDN	BHS
05	04/09	TEB	BDN	BHS
06	05/09	TEB	BDN	BHS
07	06/09	TEB	BDN	BHS
08	07/09	TEB	BDN	BHS
09	08/09	TEB	BDN	BHS
10	09/09	TEB	BDN	BHS
11	10/09	TEB	BDN	BHS
12	11/09	TEB	BDN	BHS
13	12/09	TEB	BDN	BHS
14	01/10	TEB	BDN	BHS
15	02/10	TEB	BDN	BHS
16	03/10	TEB	BDN	BHS
17	04/10	TEB	BDN	BHS
18	05/10	TEB	BDN	BHS
19	06/10	TEB	BDN	BHS
20	07/10	TEB	BDN	BHS
21	08/10	TEB	BDN	BHS
22	09/10	TEB	BDN	BHS
23	10/10	TEB	BDN	BHS
24	11/10	TEB	BDN	BHS
25	12/10	TEB	BDN	BHS
26	01/11	TEB	BDN	BHS
27	02/11	TEB	BDN	BHS
28	03/11	TEB	BDN	BHS
29	04/11	TEB	BDN	BHS
30	05/11	TEB	BDN	BHS
31	06/11	TEB	BDN	BHS
32	07/11	TEB	BDN	BHS
33	08/11	TEB	BDN	BHS
34	09/11	TEB	BDN	BHS
35	10/11	TEB	BDN	BHS
36	11/11	TEB	BDN	BHS
37	12/11	TEB	BDN	BHS
38	01/12	TEB	BDN	BHS
39	02/12	TEB	BDN	BHS
40	03/12	TEB	BDN	BHS
41	04/12	TEB	BDN	BHS
42	05/12	TEB	BDN	BHS
43	06/12	TEB	BDN	BHS
44	07/12	TEB	BDN	BHS
45	08/12	TEB	BDN	BHS
46	09/12	TEB	BDN	BHS
47	10/12	TEB	BDN	BHS
48	11/12	TEB	BDN	BHS
49	12/12	TEB	BDN	BHS
50	01/13	TEB	BDN	BHS
51	02/13	TEB	BDN	BHS
52	03/13	TEB	BDN	BHS
53	04/13	TEB	BDN	BHS
54	05/13	TEB	BDN	BHS
55	06/13	TEB	BDN	BHS
56	07/13	TEB	BDN	BHS
57	08/13	TEB	BDN	BHS
58	09/13	TEB	BDN	BHS
59	10/13	TEB	BDN	BHS
60	11/13	TEB	BDN	BHS
61	12/13	TEB	BDN	BHS
62	01/14	TEB	BDN	BHS
63	02/14	TEB	BDN	BHS
64	03/14	TEB	BDN	BHS
65	04/14	TEB	BDN	BHS
66	05/14	TEB	BDN	BHS
67	06/14	TEB	BDN	BHS
68	07/14	TEB	BDN	BHS
69	08/14	TEB	BDN	BHS
70	09/14	TEB	BDN	BHS
71	10/14	TEB	BDN	BHS
72	11/14	TEB	BDN	BHS
73	12/14	TEB	BDN	BHS
74	01/15	TEB	BDN	BHS
75	02/15	TEB	BDN	BHS
76	03/15	TEB	BDN	BHS
77	04/15	TEB	BDN	BHS
78	05/15	TEB	BDN	BHS
79	06/15	TEB	BDN	BHS
80	07/15	TEB	BDN	BHS
81	08/15	TEB	BDN	BHS
82	09/15	TEB	BDN	BHS
83	10/15	TEB	BDN	BHS
84	11/15	TEB	BDN	BHS
85	12/15	TEB	BDN	BHS
86	01/16	TEB	BDN	BHS
87	02/16	TEB	BDN	BHS
88	03/16	TEB	BDN	BHS
89	04/16	TEB	BDN	BHS
90	05/16	TEB	BDN	BHS
91	06/16	TEB	BDN	BHS
92	07/16	TEB	BDN	BHS
93	08/16	TEB	BDN	BHS
94	09/16	TEB	BDN	BHS
95	10/16	TEB	BDN	BHS
96	11/16	TEB	BDN	BHS
97	12/16	TEB	BDN	BHS
98	01/17	TEB	BDN	BHS
99	02/17	TEB	BDN	BHS
100	03/17	TEB	BDN	BHS
101	04/17	TEB	BDN	BHS
102	05/17	TEB	BDN	BHS
103	06/17	TEB	BDN	BHS
104	07/17	TEB	BDN	BHS
105	08/17	TEB	BDN	BHS
106	09/17	TEB	BDN	BHS
107	10/17	TEB	BDN	BHS
108	11/17	TEB	BDN	BHS
109	12/17	TEB	BDN	BHS
110	01/18	TEB	BDN	BHS
111	02/18	TEB	BDN	BHS
112	03/18	TEB	BDN	BHS
113	04/18	TEB	BDN	BHS
114	05/18	TEB	BDN	BHS
115	06/18	TEB	BDN	BHS
116	07/18	TEB	BDN	BHS
117	08/18	TEB	BDN	BHS
118	09/18	TEB	BDN	BHS
119	10/18	TEB	BDN	BHS
120	11/18	TEB	BDN	BHS
121	12/18	TEB	BDN	BHS
122	01/19	TEB	BDN	BHS
123	02/19	TEB	BDN	BHS
124	03/19	TEB	BDN	BHS
125	04/19	TEB	BDN	BHS
126	05/19	TEB	BDN	BHS
127	06/19	TEB	BDN	BHS
128	07/19	TEB	BDN	BHS
129	08/19	TEB	BDN	BHS
130	09/19	TEB	BDN	BHS
131	10/19	TEB	BDN	BHS
132	11/19	TEB	BDN	BHS
133	12/19	TEB	BDN	BHS
134	01/20	TEB	BDN	BHS
135	02/20	TEB	BDN	BHS
136	03/20	TEB	BDN	BHS
137	04/20	TEB	BDN	BHS
138	05/20	TEB	BDN	BHS
139	06/20	TEB	BDN	BHS
140	07/20	TEB	BDN	BHS
141	08/20	TEB	BDN	BHS
142	09/20	TEB	BDN	BHS
143	10/20	TEB	BDN	BHS
144	11/20	TEB	BDN	BHS
145	12/20	TEB	BDN	BHS
146	01/21	TEB	BDN	BHS
147	02/21	TEB	BDN	BHS
148	03/21	TEB	BDN	BHS
149	04/21	TEB	BDN	BHS
150	05/21	TEB	BDN	BHS
151	06/21	TEB	BDN	BHS
152	07/21	TEB	BDN	BHS
153	08/21	TEB	BDN	BHS
154	09/21	TEB	BDN	BHS
155	10/21	TEB	BDN	BHS
156	11/21	TEB	BDN	BHS
157	12/21	TEB	BDN	BHS
158	01/22	TEB	BDN	BHS
159	02/22	TEB	BDN	BHS
160	03/22	TEB	BDN	BHS
161	04/22	TEB	BDN	BHS
162	05/22	TEB	BDN	BHS
163	06/22	TEB	BDN	BHS
164	07/22	TEB	BDN	BHS
165	08/22	TEB	BDN	BHS
166	09/22	TEB	BDN	BHS
167	10/22	TEB	BDN	BHS
168	11/22	TEB	BDN	BHS
169	12/22	TEB	BDN	BHS
170	01/23	TEB	BDN	BHS
171	02/23	TEB	BDN	BHS
172	03/23	TEB	BDN	BHS
173	04/23	TEB	BDN	BHS
174	05/23	TEB	BDN	BHS
175	06/23	TEB	BDN	BHS
176	07/23	TEB	BDN	BHS
177	08/23	TEB	BDN	BHS
178	09/23	TEB	BDN	BHS
179	10/23	TEB	BDN	BHS
180	11/23	TEB	BDN	BHS
181	12/23	TEB	BDN	BHS
182	01/24	TEB	BDN	BHS
183	02/24	TEB	BDN	BHS
184	03/24	TEB	BDN	BHS
185	04/24	TEB	BDN	BHS
186	05/24	TEB	BDN	BHS
187	06/24	TEB	BDN	BHS
188	07/24	TEB	BDN	BHS
189	08/24	TEB	BDN	BHS
190	09/24	TEB	BDN	BHS
191	10/24	TEB	BDN	BHS
192	11/24	TEB	BDN	BHS
193	12/24	TEB	BDN	BHS
194	01/25	TEB	BDN	BHS
195	02/25	TEB	BDN	BHS
196	03/25	TEB	BDN	BHS
197	04/25	TEB	BDN	BHS
198	05/25	TEB	BDN	BHS
199	06/25	TEB	BDN	BHS
200	07/25	TEB	BDN	BHS



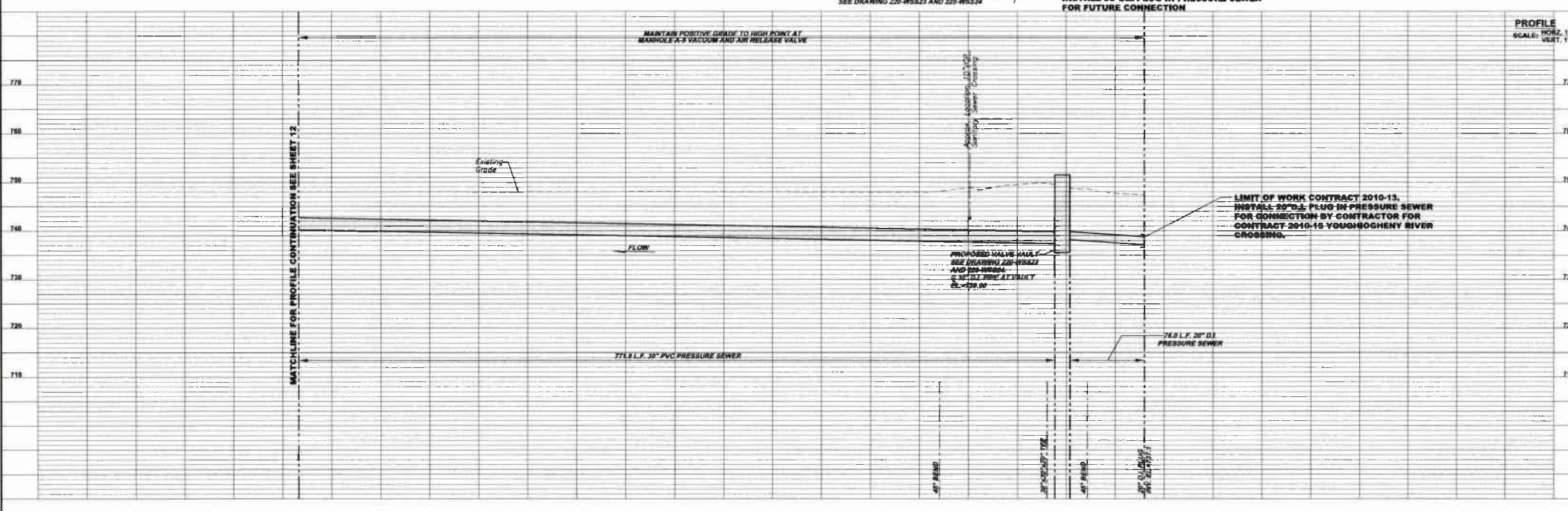
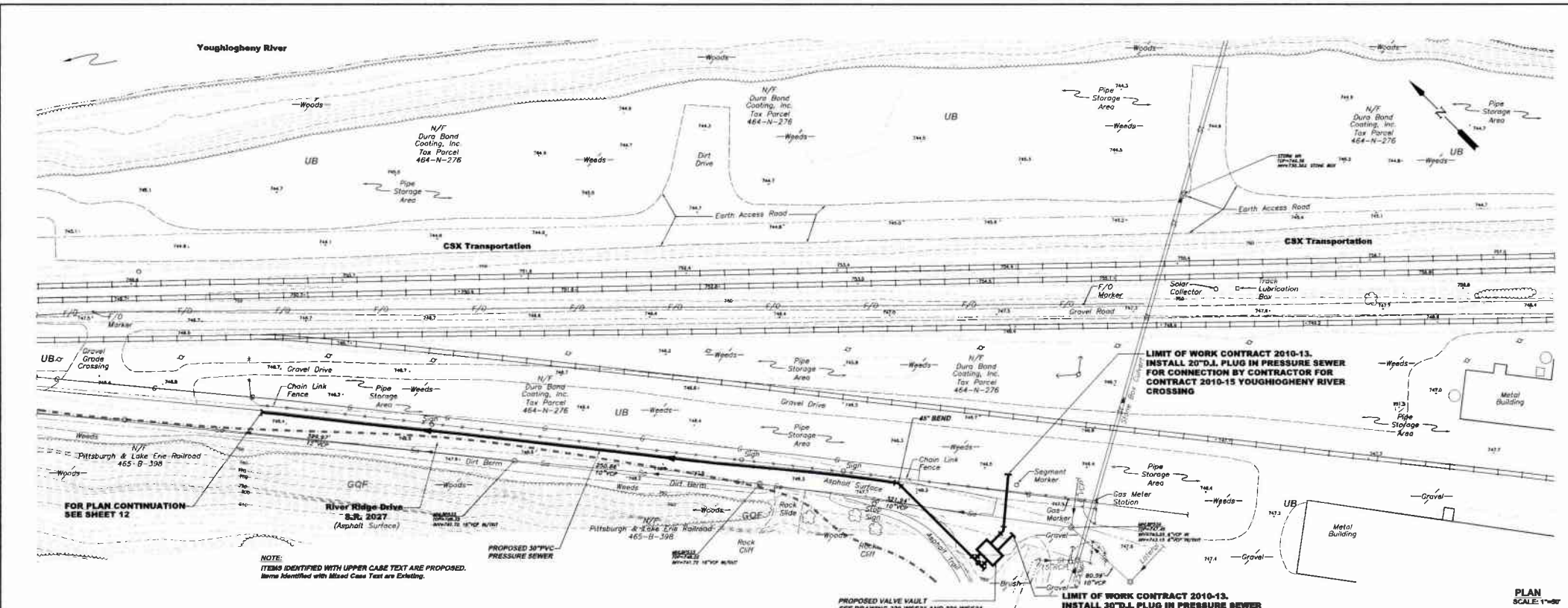
NOTE
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items Identified with Mixed Case Text are Existing.



PLAN
 SCALE: 1"=40'

PROFILE
 SCALE: HORIZ. 1"=50'
 VERT. 1"=4'

Revisions	Date	Revision
1	03/08	DP SUBMITTAL
2	10/08	REVISED
3	12/08	RELEASE FOR BID
4	01/09	
5	02/09	
6	03/09	
7	04/09	
8	05/09	
9	06/09	
10	07/09	
11	08/09	
12	09/09	
13	10/09	
14	11/09	
15	12/09	
16	01/10	
17	02/10	
18	03/10	
19	04/10	
20	05/10	
21	06/10	
22	07/10	
23	08/10	
24	09/10	
25	10/10	
26	11/10	
27	12/10	
28	01/11	
29	02/11	
30	03/11	
31	04/11	
32	05/11	
33	06/11	
34	07/11	
35	08/11	
36	09/11	
37	10/11	
38	11/11	
39	12/11	
40	01/12	
41	02/12	
42	03/12	
43	04/12	
44	05/12	
45	06/12	
46	07/12	
47	08/12	
48	09/12	
49	10/12	
50	11/12	
51	12/12	
52	01/13	
53	02/13	
54	03/13	
55	04/13	
56	05/13	
57	06/13	
58	07/13	
59	08/13	
60	09/13	
61	10/13	
62	11/13	
63	12/13	
64	01/14	
65	02/14	
66	03/14	
67	04/14	
68	05/14	
69	06/14	
70	07/14	
71	08/14	
72	09/14	
73	10/14	
74	11/14	
75	12/14	
76	01/15	
77	02/15	
78	03/15	
79	04/15	
80	05/15	
81	06/15	
82	07/15	
83	08/15	
84	09/15	
85	10/15	
86	11/15	
87	12/15	
88	01/16	
89	02/16	
90	03/16	
91	04/16	
92	05/16	
93	06/16	
94	07/16	
95	08/16	
96	09/16	
97	10/16	
98	11/16	
99	12/16	
100	01/17	
101	02/17	
102	03/17	
103	04/17	
104	05/17	
105	06/17	
106	07/17	
107	08/17	
108	09/17	
109	10/17	
110	11/17	
111	12/17	
112	01/18	
113	02/18	
114	03/18	
115	04/18	
116	05/18	
117	06/18	
118	07/18	
119	08/18	
120	09/18	
121	10/18	
122	11/18	
123	12/18	
124	01/19	
125	02/19	
126	03/19	
127	04/19	
128	05/19	
129	06/19	
130	07/19	
131	08/19	
132	09/19	
133	10/19	
134	11/19	
135	12/19	
136	01/20	
137	02/20	
138	03/20	
139	04/20	
140	05/20	
141	06/20	
142	07/20	
143	08/20	
144	09/20	
145	10/20	
146	11/20	
147	12/20	
148	01/21	
149	02/21	
150	03/21	
151	04/21	
152	05/21	
153	06/21	
154	07/21	
155	08/21	
156	09/21	
157	10/21	
158	11/21	
159	12/21	
160	01/22	
161	02/22	
162	03/22	
163	04/22	
164	05/22	
165	06/22	
166	07/22	
167	08/22	
168	09/22	
169	10/22	
170	11/22	
171	12/22	
172	01/23	
173	02/23	
174	03/23	
175	04/23	
176	05/23	
177	06/23	
178	07/23	
179	08/23	
180	09/23	
181	10/23	
182	11/23	
183	12/23	
184	01/24	
185	02/24	
186	03/24	
187	04/24	
188	05/24	
189	06/24	
190	07/24	
191	08/24	
192	09/24	
193	10/24	
194	11/24	
195	12/24	
196	01/25	
197	02/25	
198	03/25	
199	04/25	
200	05/25	
201	06/25	
202	07/25	
203	08/25	
204	09/25	
205	10/25	
206	11/25	
207	12/25	
208	01/26	
209	02/26	
210	03/26	
211	04/26	
212	05/26	
213	06/26	
214	07/26	
215	08/26	
216	09/26	
217	10/26	
218	11/26	
219	12/26	
220	01/27	
221	02/27	
222	03/27	
223	04/27	
224	05/27	
225	06/27	
226	07/27	
227	08/27	
228	09/27	
229	10/27	
230	11/27	
231	12/27	
232	01/28	
233	02/28	
234	03/28	
235	04/28	
236	05/28	
237	06/28	
238	07/28	
239	08/28	
240	09/28	
241	10/28	
242	11/28	
243	12/28	
244	01/29	
245	02/29	
246	03/29	
247	04/29	
248	05/29	
249	06/29	
250	07/29	
251	08/29	
252	09/29	
253	10/29	
254	11/29	
255	12/29	
256	01/30	
257	02/30	
258	03/30	
259	04/30	
260	05/30	
261	06/30	
262	07/30	
263	08/30	
264	09/30	
265	10/30	
266	11/30	
267	12/30	
268	01/31	
269	02/31	
270	03/31	
271	04/31	
272	05/31	
273	06/31	
274	07/31	
275	08/31	
276	09/31	
277	10/31	
278	11/31	
279	12/31	
280	01/32	
281	02/32	
282	03/32	
283	04/32	
284	05/32	
285	06/32	
286	07/32	
287	08/32	
288	09/32	
289	10/32	
290	11/32	
291	12/32	
292	01/33	
293	02/33	
294	03/33	
295	04/33	
296	05/33	
297	06/33	
298	07/33	
299	08/33	
300	09/33	
301	10/33	
302	11/33	
303	12/33	
304	01/34	
305	02/34	
306	03/34	
307	04/34	
308	05/34	
309	06/34	
310	07/34	
311	08/34	
312	09/34	
313	10/34	
314	11/34	
315	12/34	
316	01/35	
317	02/35	
318	03/35	
319	04/35	
320	05/35	
321	06/35	
322	07/35	
323	08/35	
324	09/35	
325	10/35	
326	11/35	
327	12/35	
328	01/36	
329	02/36	
330	03/36	
331	04/36	
332	05/36	
333	06/36	
334	07/36	
335	08/36	
336	09/36	
337	10/36	
338	11/36	
339	12/36	
340	01/37	
341	02/37	
342	03/37	
343	04/37	
344	05/37	
345	06/37	
346	07/37	
347	08/37	
348	09/37	
349	10/37	
350	11/37	
351	12/37	
352	01/38	
353	02/38	
354	03/38	
355	04/38	
356	05/38	
357	06/38	
358	07/38	
359	08/38	
360	09/38	
361	10/38	
362	11/38	
363	12/38	
364	01/39	
365	02/39	
366	03/39	
367	04/39	
368	05/39	
369	06/39	
370	07/39	
371	08/39	
372	09/39	
373	10/39	
374	11/39	
375	12/39	
376	01/4	



Revisions	Date	By
001 SUBMITTAL	03-10-09	TES
002 REVISED	06-08	BDH
003 RELEASE FOR BID	11-2011	BHG

3175 CAMBERELLE RUN ROAD
PITTSBURGH, PA 15205
PHONE: 412-440-0438
FAX: 412-440-0438
INFO@KLHENGINEERS.COM

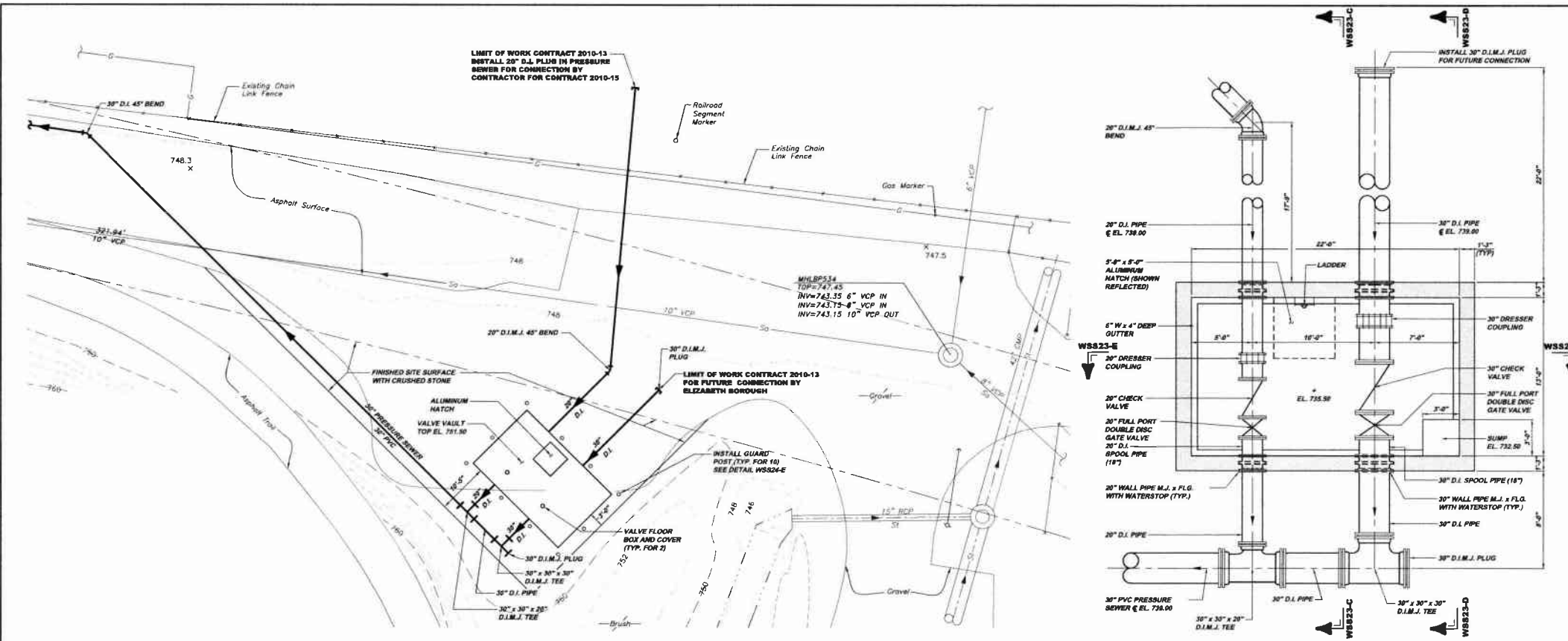
KLH ENGINEERS, INC.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-13
WEST SHORE SANITARY SEWER CONSTRUCTION
PLAN AND PROFILE

Scale:	As Shown
Date:	JUNE 2009
Drawn By:	TES
Checked By:	BDH
Approved By:	BHG

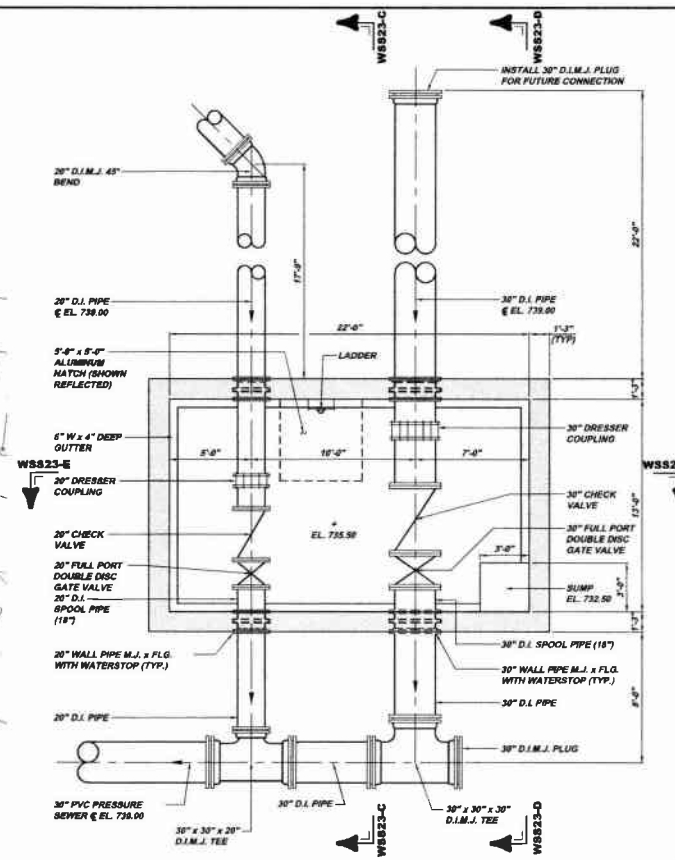
Sheet No.
13 of 28

Drawing No.
220-WSS22

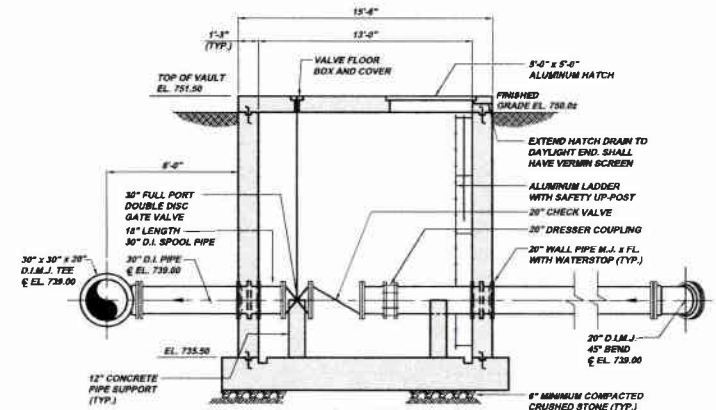


MCKEESPORT / ELIZABETH VALVE VAULT SITE PLAN WSS23-A
 SCALE: 1"=10'
 REFERENCE PLAN AND PROFILE DRAWING WSS22

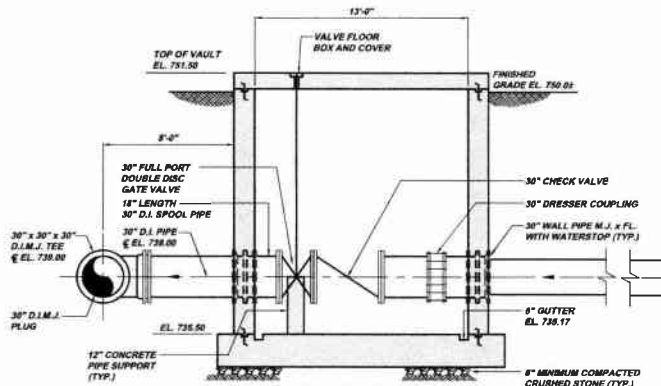
NOTE:
 ALL GATE VALVES SHALL BE FULL PORT NRS WITH EXTENDED SHAFT AND FLOOR BOX COVER.



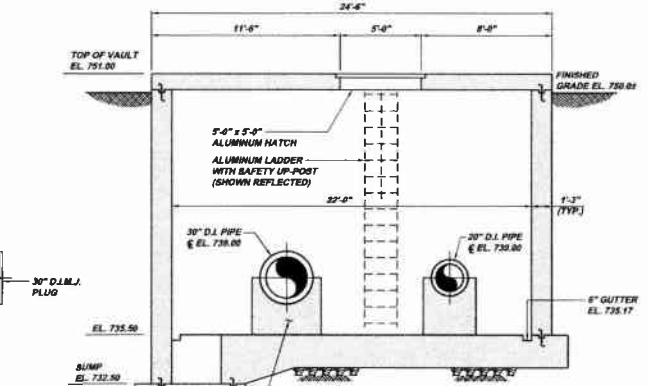
VALVE VAULT PLAN WSS23-B
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN WSS23-A



SECTION WSS23-C
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN WSS23-B



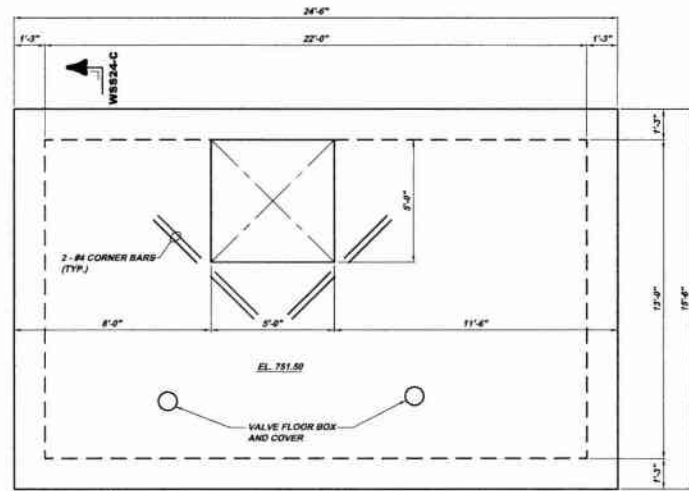
SECTION WSS23-D
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN WSS23-B



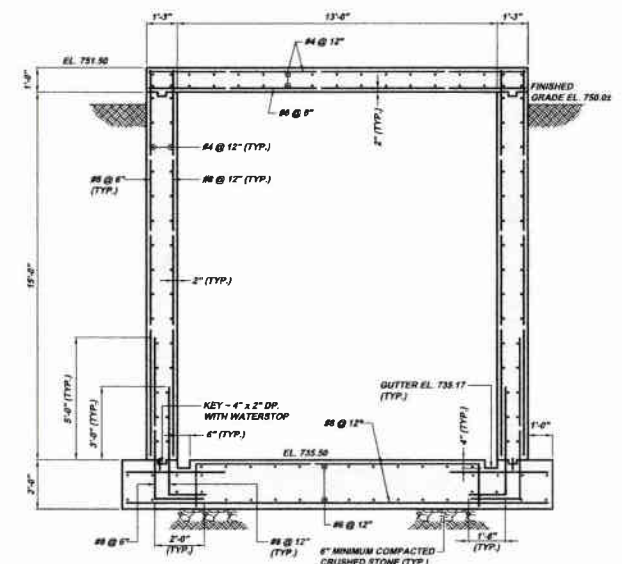
SECTION WSS23-E
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN WSS23-B

NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items Identified with Mixed Case Text are Existing.

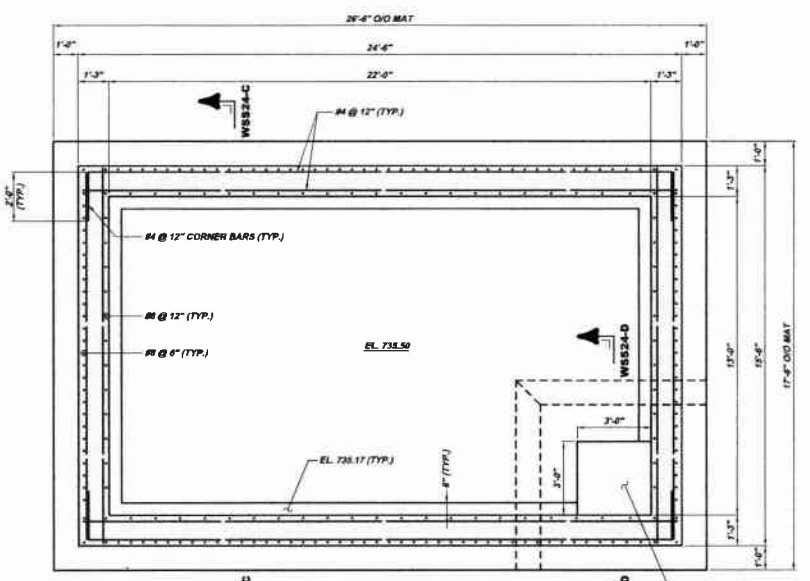
Scale:	As Shown	Revision:	
Date:	July 2009	Date:	07-31-09
Drawn By:	DDB	DES SUBMITTAL:	07-31-09
Checked By:	BCE	REVISED:	10-09
Approved By:	BHD	RELEASE FOR BID:	1-31-11
Sheet No.:	14 of 29	Project:	8172 CARMELLE RUN ROAD PITTSBURGH, PA 15208 PHONE: 412-444-8228 FAX: 412-444-8228 INFO@KLHENGINEERS.COM
Drawing No.:	220-WSS23	Client:	MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-13 WEST SHORE SANITARY SEWER CONSTRUCTION VALVE VAULT PLAN AND SECTIONS



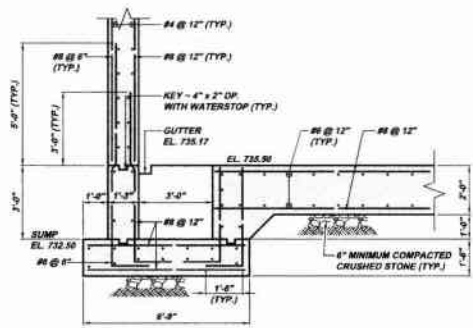
VALVE VAULT FOUNDATION PLAN WSS24-A
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN WSS23-B



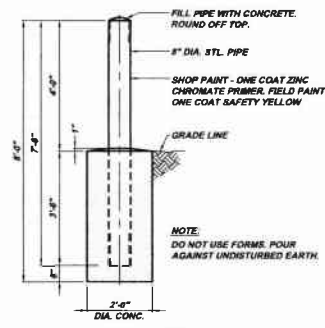
SECTION WSS24-C
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN WSS24-A



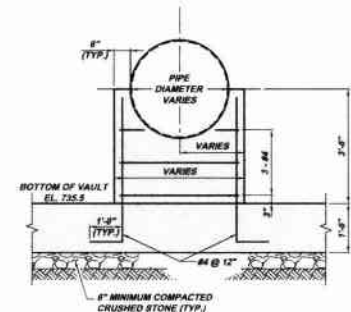
EL. 738.00 SECTIONAL PLAN WSS24-B
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN WSS24-A AND PLAN WSS23-B



SECTION WSS24-D
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN WSS24-B



DETAIL WSS24-E
 SCALE: 1/2" = 1'-0"
 REFERENCE PLAN WSS23-A



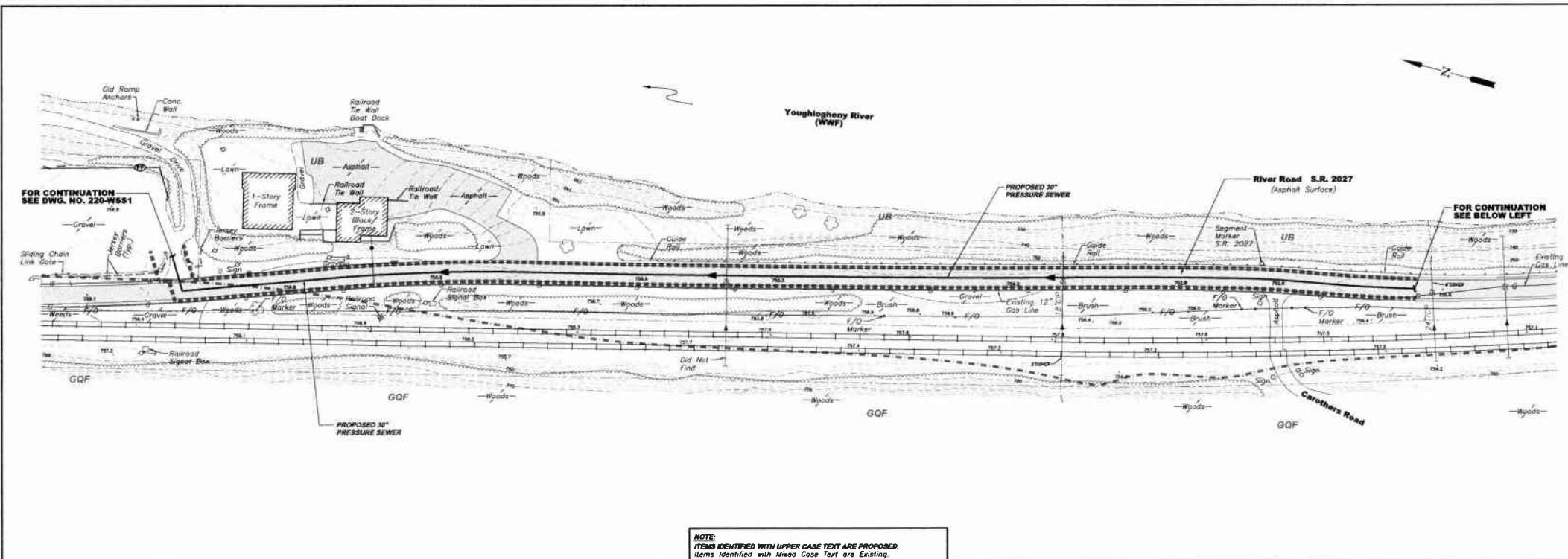
CONCRETE SUPPORT DETAIL WSS24-F
 SCALE: 1/2" = 1'-0"
 REFERENCE SECTION WSS23-E

Scale:	As Shown:	Revisions:	Date:	Revised:
1/2" = 1'-0"	July 2009	DDP SUBMITTAL	03-09	
		REVISED	10-09	
		RELEASE FOR BID	1-2011	

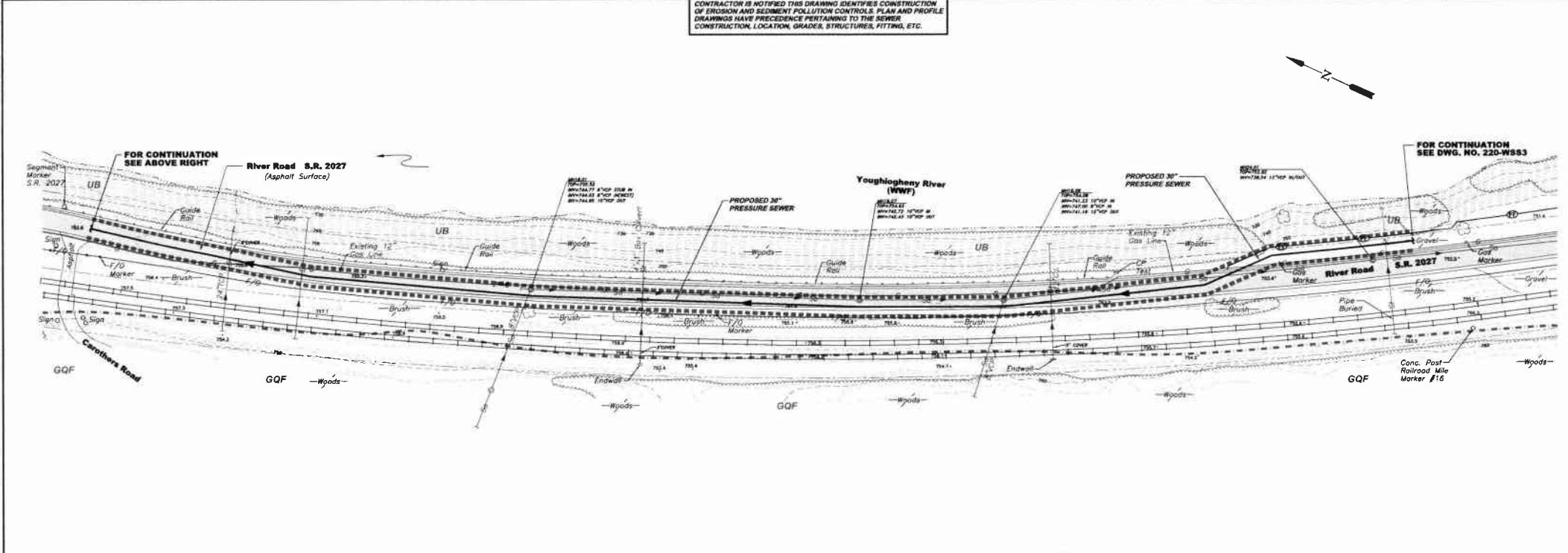
8173 CAMPBELL BLVD. ROAD PITTSBURGH, PA 15205 PHONE: 412-940-2238 FAX: 412-940-2238 INFO@KLHENGINEERS.COM		MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-13 WEST SHORE SANITARY SEWER CONSTRUCTION VALVE VAULT PLANS, SECTIONS AND DETAILS
Scale: Date: Drawn By: Checked By: Approved By:		

Sheet No.	15 of 28
Drawing No.	220-WSS24

NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items Identified with Mixed Case Text are Existing.



NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items Identified with Mixed Case Text are Existing.
 CONTRACTOR IS NOTIFIED THIS DRAWING IDENTIFIES CONSTRUCTION OF EROSION AND SEDIMENT POLLUTION CONTROLS. PLAN AND PROFILE DRAWINGS HAVE PRECEDENCE PERTAINING TO THE SEWER CONSTRUCTION, LOCATION, GRADES, STRUCTURES, FITTING, ETC.

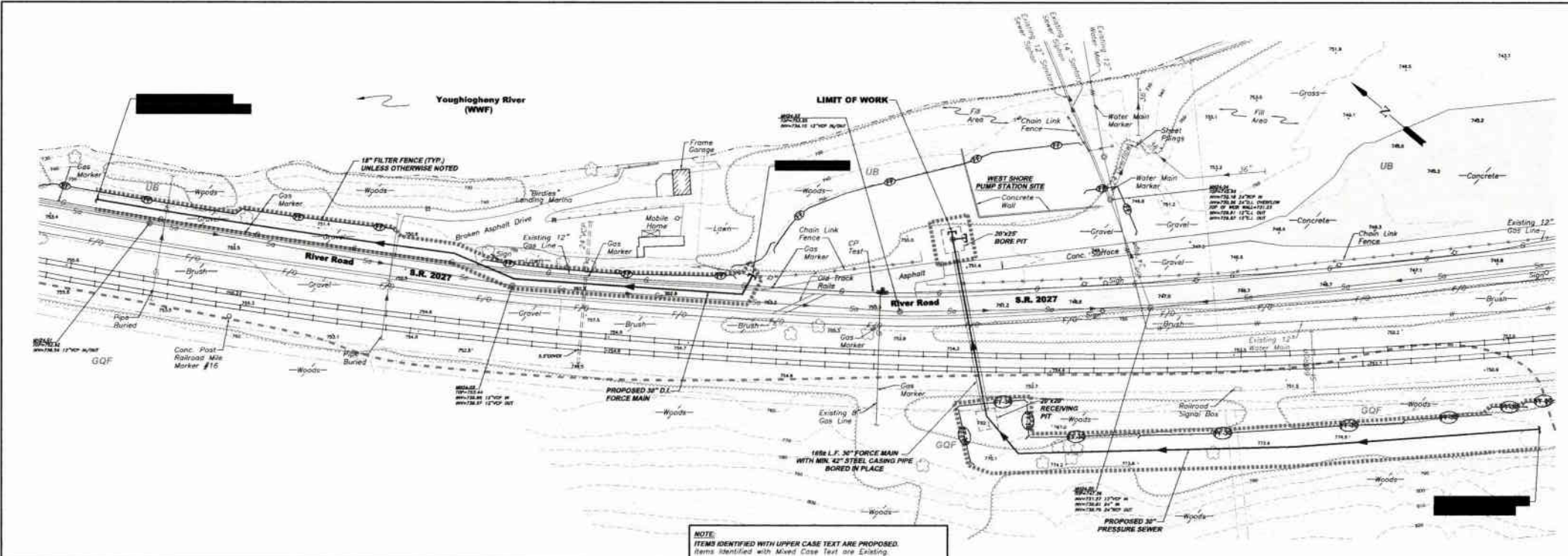


Revision	Date	By	Check	Appr.
1	03/10/09	TEB	BDH	ME
2	03/10/09	TEB	BDH	ME
3	03/10/09	TEB	BDH	ME
4	03/10/09	TEB	BDH	ME
5	03/10/09	TEB	BDH	ME
6	03/10/09	TEB	BDH	ME
7	03/10/09	TEB	BDH	ME
8	03/10/09	TEB	BDH	ME
9	03/10/09	TEB	BDH	ME
10	03/10/09	TEB	BDH	ME
11	03/10/09	TEB	BDH	ME
12	03/10/09	TEB	BDH	ME
13	03/10/09	TEB	BDH	ME
14	03/10/09	TEB	BDH	ME
15	03/10/09	TEB	BDH	ME
16	03/10/09	TEB	BDH	ME
17	03/10/09	TEB	BDH	ME
18	03/10/09	TEB	BDH	ME
19	03/10/09	TEB	BDH	ME
20	03/10/09	TEB	BDH	ME
21	03/10/09	TEB	BDH	ME
22	03/10/09	TEB	BDH	ME
23	03/10/09	TEB	BDH	ME
24	03/10/09	TEB	BDH	ME
25	03/10/09	TEB	BDH	ME
26	03/10/09	TEB	BDH	ME
27	03/10/09	TEB	BDH	ME
28	03/10/09	TEB	BDH	ME
29	03/10/09	TEB	BDH	ME
30	03/10/09	TEB	BDH	ME
31	03/10/09	TEB	BDH	ME
32	03/10/09	TEB	BDH	ME
33	03/10/09	TEB	BDH	ME
34	03/10/09	TEB	BDH	ME
35	03/10/09	TEB	BDH	ME
36	03/10/09	TEB	BDH	ME
37	03/10/09	TEB	BDH	ME
38	03/10/09	TEB	BDH	ME
39	03/10/09	TEB	BDH	ME
40	03/10/09	TEB	BDH	ME
41	03/10/09	TEB	BDH	ME
42	03/10/09	TEB	BDH	ME
43	03/10/09	TEB	BDH	ME
44	03/10/09	TEB	BDH	ME
45	03/10/09	TEB	BDH	ME
46	03/10/09	TEB	BDH	ME
47	03/10/09	TEB	BDH	ME
48	03/10/09	TEB	BDH	ME
49	03/10/09	TEB	BDH	ME
50	03/10/09	TEB	BDH	ME
51	03/10/09	TEB	BDH	ME
52	03/10/09	TEB	BDH	ME
53	03/10/09	TEB	BDH	ME
54	03/10/09	TEB	BDH	ME
55	03/10/09	TEB	BDH	ME
56	03/10/09	TEB	BDH	ME
57	03/10/09	TEB	BDH	ME
58	03/10/09	TEB	BDH	ME
59	03/10/09	TEB	BDH	ME
60	03/10/09	TEB	BDH	ME
61	03/10/09	TEB	BDH	ME
62	03/10/09	TEB	BDH	ME
63	03/10/09	TEB	BDH	ME
64	03/10/09	TEB	BDH	ME
65	03/10/09	TEB	BDH	ME
66	03/10/09	TEB	BDH	ME
67	03/10/09	TEB	BDH	ME
68	03/10/09	TEB	BDH	ME
69	03/10/09	TEB	BDH	ME
70	03/10/09	TEB	BDH	ME
71	03/10/09	TEB	BDH	ME
72	03/10/09	TEB	BDH	ME
73	03/10/09	TEB	BDH	ME
74	03/10/09	TEB	BDH	ME
75	03/10/09	TEB	BDH	ME
76	03/10/09	TEB	BDH	ME
77	03/10/09	TEB	BDH	ME
78	03/10/09	TEB	BDH	ME
79	03/10/09	TEB	BDH	ME
80	03/10/09	TEB	BDH	ME
81	03/10/09	TEB	BDH	ME
82	03/10/09	TEB	BDH	ME
83	03/10/09	TEB	BDH	ME
84	03/10/09	TEB	BDH	ME
85	03/10/09	TEB	BDH	ME
86	03/10/09	TEB	BDH	ME
87	03/10/09	TEB	BDH	ME
88	03/10/09	TEB	BDH	ME
89	03/10/09	TEB	BDH	ME
90	03/10/09	TEB	BDH	ME
91	03/10/09	TEB	BDH	ME
92	03/10/09	TEB	BDH	ME
93	03/10/09	TEB	BDH	ME
94	03/10/09	TEB	BDH	ME
95	03/10/09	TEB	BDH	ME
96	03/10/09	TEB	BDH	ME
97	03/10/09	TEB	BDH	ME
98	03/10/09	TEB	BDH	ME
99	03/10/09	TEB	BDH	ME
100	03/10/09	TEB	BDH	ME

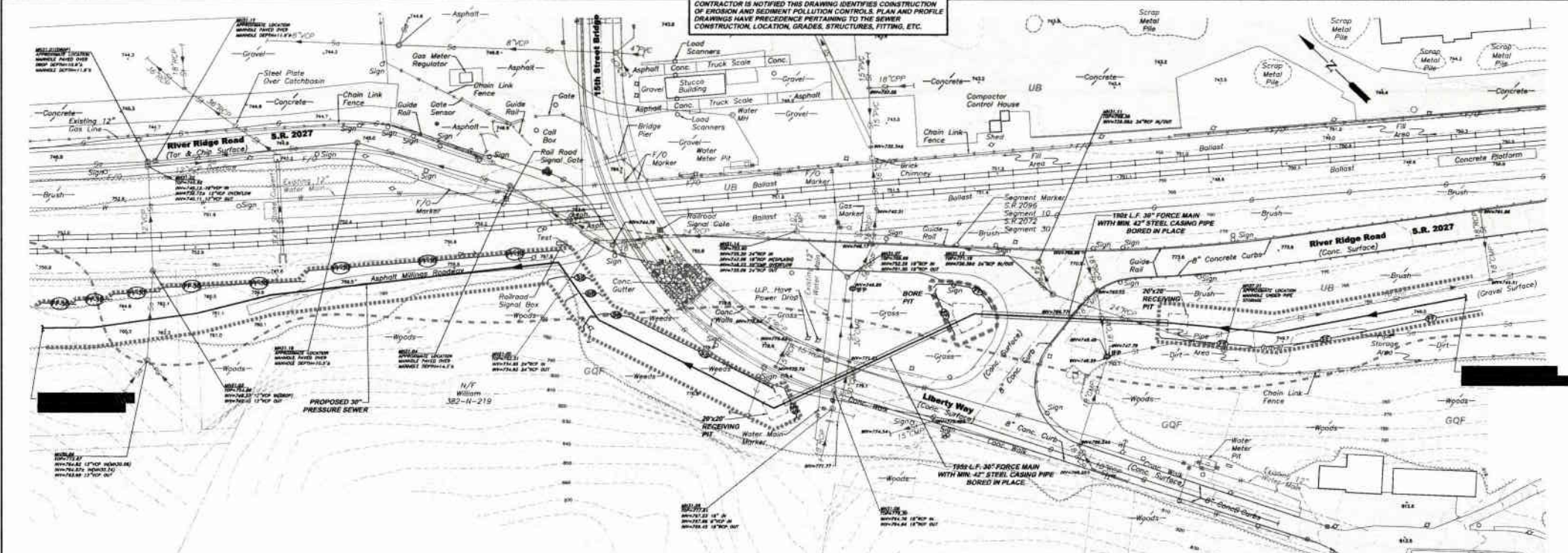
KLH ENGINEERS, INC.

**MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-13
 WEST SHORE PRESSURE SEWER CONSTRUCTION PROJECT
 EROSION SEDIMENT POLLUTION CONTROL PLAN SHEET 2 OF 9**

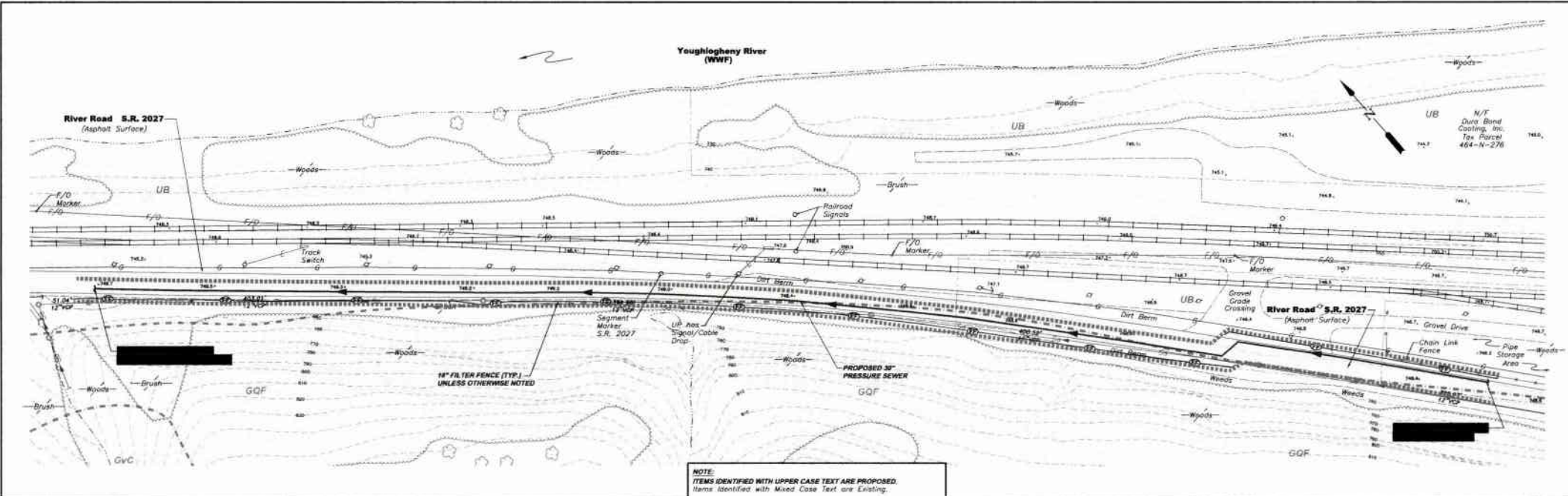
Scale: 1"=40'
 Date: FEBRUARY 2009
 Drawn By: TEB
 Checked By: BDH
 Approved By: ME
 Sheet No. 17 of 29
 Drawing No. 220-WSS2



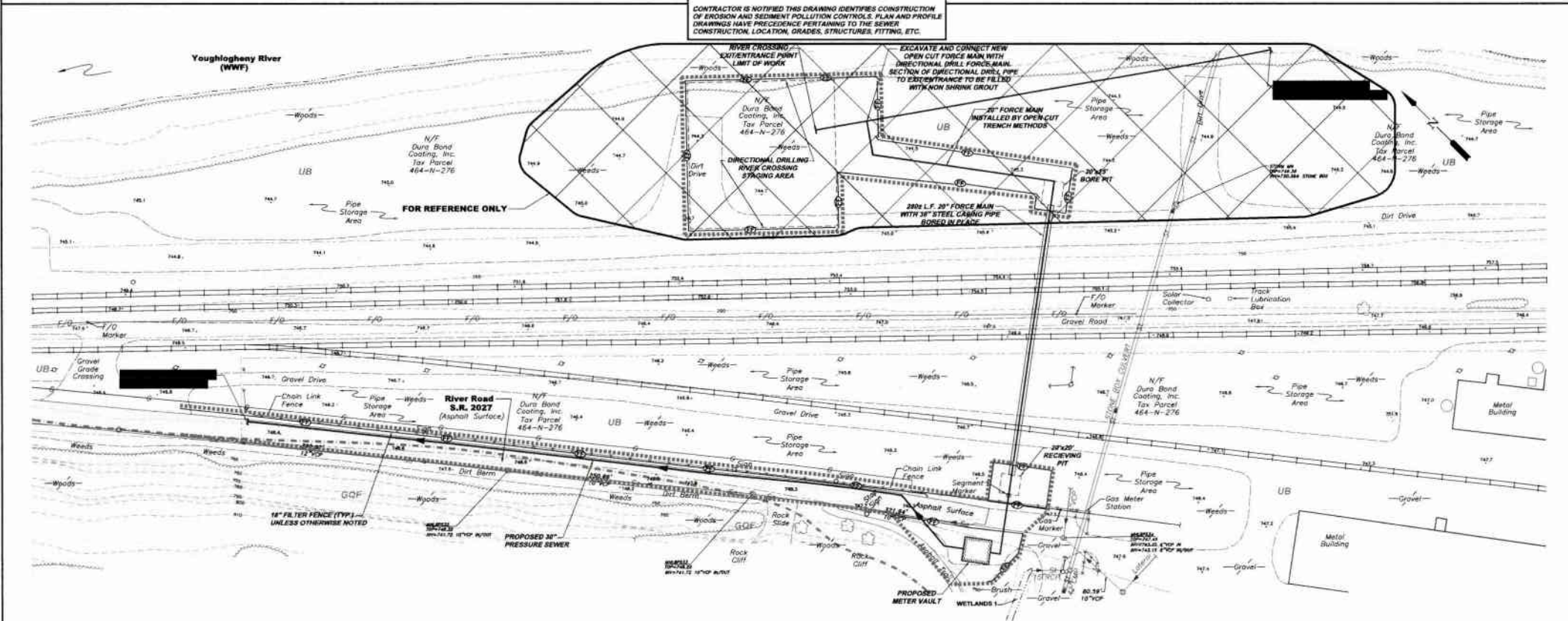
NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items identified with Mixed Case Text are Existing.
 CONTRACTOR IS NOTIFIED THIS DRAWING IDENTIFIES CONSTRUCTION
 OF EROSION AND SEDIMENT POLLUTION CONTROL'S PLAN AND PROFILE
 DRAWINGS HAVE PRECEDENCE PERTAINING TO THE SEWER
 CONSTRUCTION, LOCATION, GRADES, STRUCTURES, FITTING, ETC.



Scale:	1"=50'								
Date:	FEBRUARY 2008								
Drawn By:	TES								
Checked By:	RDH								
Approved By:	ME								
Sheet No.:	18 of 29								
Drawing No.:	220-WSS3								
Revisions:	<table border="1"> <tr> <th>Date</th> <th>Revisions</th> </tr> <tr> <td>7-31-08</td> <td>DEP SUBMITTAL</td> </tr> <tr> <td>8-1-08</td> <td>DEP RE-SUBMITTAL</td> </tr> <tr> <td>8-21-08</td> <td>RELEASE FOR BID</td> </tr> </table>	Date	Revisions	7-31-08	DEP SUBMITTAL	8-1-08	DEP RE-SUBMITTAL	8-21-08	RELEASE FOR BID
Date	Revisions								
7-31-08	DEP SUBMITTAL								
8-1-08	DEP RE-SUBMITTAL								
8-21-08	RELEASE FOR BID								
5175 CHARLES BLVD. ROOM 200 PITTSBURGH, PA 15205 PHONE 412-944-0810 FAX 412-944-0811 WWW.KLHENGINEERS.COM									
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-13 WEST SHORE PRESSURE SEWER CONSTRUCTION PROJECT EROSION AND SEDIMENT POLLUTION CONTROL PLAN SHEET 3 OF 9									



NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items identified with Mixed Case Text are Existing.
 CONTRACTOR IS NOTIFIED THIS DRAWING IDENTIFIES CONSTRUCTION OF EROSION AND SEDIMENT POLLUTION CONTROLS. PLAN AND PROFILE DRAWINGS HAVE PRECEDENCE PERTAINING TO THE SEWER CONSTRUCTION LOCATION, GRADES, STRUCTURES, FITTINGS, ETC.



Scale:	1"=50'
Date:	FEBRUARY 2009
Drawn By:	TES
Checked By:	BDH
Approved By:	ME

Revision	Date
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	
50	
51	
52	
53	
54	
55	
56	
57	
58	
59	
60	
61	
62	
63	
64	
65	
66	
67	
68	
69	
70	
71	
72	
73	
74	
75	
76	
77	
78	
79	
80	
81	
82	
83	
84	
85	
86	
87	
88	
89	
90	
91	
92	
93	
94	
95	
96	
97	
98	
99	
100	

8172 CAMPBELL RUN ROAD
 PITTSBURGH, PA 15205
 PHONE: 412-494-0838
 FAX: 412-494-0838
 WWW: KLHENGINEERS.COM

KLH ENGINEERS, INC.

**MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-13
 WEST SHORE PRESSURE SEWER CONSTRUCTION PROJECT
 EROSION AND SEDIMENT POLLUTION CONTROL PLAN SHEET 5 OF 9**

Sheet No. **20 of 29**
 Drawing No. **220-WSS5**



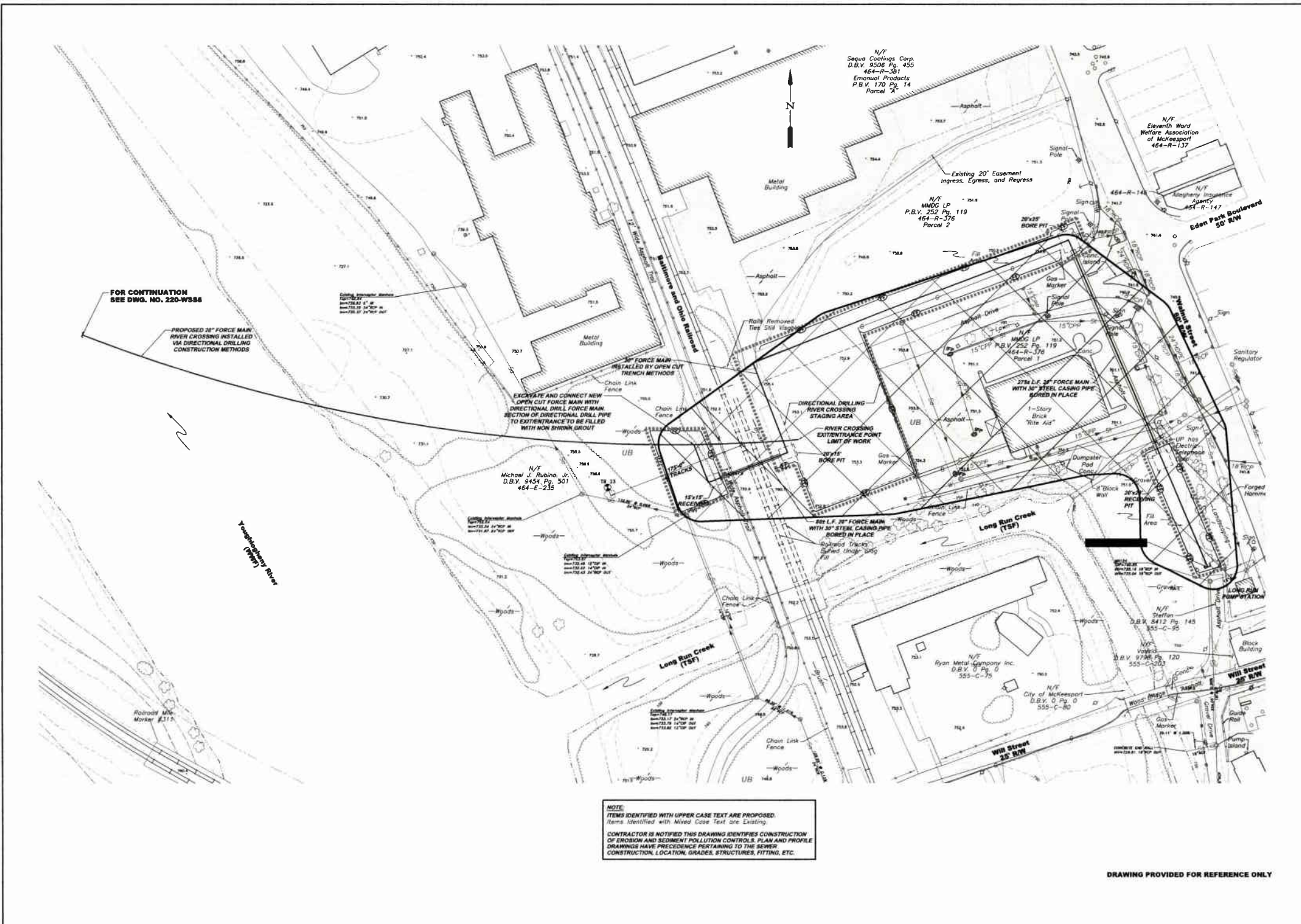
Scale:	1"=50'	Date:	FEBRUARY 2009
Drawn By:	TEB	Revised:	DGP SUBMITTAL
Checked By:	ROH	Date:	1-23-11
Approved By:	ME	Revised:	RELEASE FOR BID
Sheet No.	21 of 29	Date:	1-23-11
Drawing No.	220-WSS6	Drawn By:	DGP SUBMITTAL
		Checked By:	RELEASE FOR BID
		Approved By:	

8173 CAMPBELL RUN ROAD
 PITTSBURGH, PA 15203
 PHONE: 412-944-2338
 FAX: 412-944-2339
 INFO@KLHENGINEERS.COM

KLH ENGINEERS, INC.

**MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-13
 WEST SHORE PRESSURE SEWER CONSTRUCTION PROJECT
 EROSION AND SEDIMENT POLLUTION CONTROL PLAN SHEET 6 OF 9**

DRAWING PROVIDED FOR REFERENCE ONLY



FOR CONTINUATION
SEE DWG. NO. 220-W356



NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items identified with Mixed Case Text are Existing.
CONTRACTOR IS NOTIFIED THIS DRAWING IDENTIFIES CONSTRUCTION OF EROSION AND SEDIMENT POLLUTION CONTROLS. PLAN AND PROFILE DRAWINGS HAVE PRECEDENCE PERTAINING TO THE SEWER CONSTRUCTION, LOCATION, GRADES, STRUCTURES, FITTING, ETC.

DRAWING PROVIDED FOR REFERENCE ONLY

Scale:	1"=60'
Date:	FEBRUARY 2009
Drawn By:	TBS
Checked By:	BDH
Approved By:	ME
Sheet No.	22 of 29
Drawing No.	220-W357

**MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-13
WEST SHORE SANITARY SEWER CONSTRUCTION
EROSION AND SEDIMENT POLLUTION CONTROL PLAN SHEET 7 OF 9**

KLH ENGINEERS, INC.

Revisions	Date	By
1	03-09	ME
2	12-11	ME

8175 CAMBERLETT BLVD
PITTSBURGH, PA 15205
PHONE: 412-444-9438
FAX: 412-444-9439
INFO@KLHENGINEERS.COM

Implementation of the Erosion Sediment Pollution Control Plan

The foregoing procedures and all requirements of the specifications are contractual obligations of the CONTRACTOR performing the actual construction work. Said requirements also apply to any and all subcontractors working on the project. This plan will be implemented throughout the course of construction.

The requirements relative to temporary control measures, early permanent restoration and minimizing work areas, are the most important factors affecting construction performance. In view of those circumstances, it is believed that this particular plan, on this particular project, will be implemented throughout the course of work.

Use of the Erosion Sediment Pollution Control Plan

As previously stated herein, the "Erosion and Sediment Pollution Control Plan" has been prepared in response to and in accordance with certain rules and regulations promulgated by the Pennsylvania Department of Environmental Protection. The handling of stormwater, the topographic and geological features described, the types and classifications of soils, the staging of earthwork, the temporary and permanent control measures, and the requirements are to be used for the purpose of eliminating, minimizing, and/or controlling pollution of the streams and waterways from materials anticipated to be eroded from the earthwork to be disturbed as a result of construction of the work.

Project Description

The West Shore Force Main Project includes the construction of a new 30" force main which extends between the Long Run Pump Station and the West Shore Pump Station and the Municipal Authority of The City of McKeesport Wastewater Treatment Plant.

Long Run Pump Station is located in the City of McKeesport at the intersection of Walnut Street and Will Street. The West Shore Pump Station is located in Port Vue Borough between the Yaoughoghy River and River Road. The WWTP is located in the City Of McKeesport on Atlantic Avenue.

Wetlands

There are no wetlands within the limits of construction.

Sequencing And Staging Of Construction

General

The intent of the sequence of construction is to ensure that adequate control measures are provided for the areas in which construction activities are occurring at all times. Under no circumstances will earthmoving activities begin until the erosion control devices (BMP's) for the areas involved are installed.

Sequence Of Construction

Refer to the **Utility Line Trench Excavation Procedure** for limits on trench excavation before following this sequence.

Clear and grub areas shown on the plans where filter fabric fencing is proposed to be installed install filter fabric fencing, super filter fabric fence, water bars, trench plugs, inlet filter bags, and turf reinforcement mats at locations illustrated on the construction drawings. Note placement filter fabric fencing may not be limited to these areas. Filter fabric fencing may be used in combination with seed/mulching to stabilize areas disturbed by unforeseen construction.

Mobilize equipment to site. Delineate project boundary limits, clearly marking all pertinent features in the field.

After BMP's are installed and functioning properly, topsoil will be stripped from site in areas designated for grading/excavation and hauled offsite. Contractor to ensure the erosion control measures are installed at the approved offsite stockpile. Topsoil shall be temporarily seeded immediately after all topsoil is stripped as per the temporary seeding specifications on the E&S Plan.

Earthwork shall commence after all previously installed BMP's are checked and operational. Earthwork shall consist of cut and fill operations including excavation of trenches in which the proposed pipelines shall be installed. Excess excavated material shall be hauled off site to the contractor's approved stockpile site. During earthwork activity, interim control measures shall be placed as to limit excessive erosion to work area (i.e. filter fabric fence) as soon as any portion of the site is brought up to final design grade permanent slopes shall be permanently seeded as per seeding specifications on this plan.

Contractor's site superintendent will be responsible for the inspection of all erosion and sediment pollution control measures weekly and immediately after any run-off event. Corrective procedures shall be taken within 24 hours in the event an inspection should reveal the need for maintenance of existing measures or the placement of additional control measures to the site prior to any continued earthmoving or site improvement activities.

Upon completion of earth moving activities and the establishment of a uniform 70% perennial vegetative cover, all temporary BMP's may be removed.

General Notes

1. Earthwork for the project shall consist of the necessary excavation of trenches in which the proposed pipelines shall be installed. All areas disturbed will be returned to pre-construction grades and slopes and restored in kind.

2. Natural vegetation shall be preserved whenever possible throughout the project area. Vegetative cover will be established as soon as possible by seeding and mulching all disturbed areas. Disturbed areas will be limited to as small a section as possible at any one time.

3. Silt fence shall be installed prior to any construction activities. Silt fence shall be installed temporarily along toe of slope adjacent to trenches as required to filter run-off from exposed fill slope. Silt fence shall be removed upon establishment of a uniform 70% perennial vegetative cover.

4. Storm inlet Filter Protection shall be applied where noted, prior to excavation and removed upon site stabilization (uniform 70% perennial vegetative cover).

5. The CONTRACTOR shall inspect and maintain all BMP's on a weekly basis and after every run-off during construction. Any repairs shall be made with in 24 hours.

6. For utility line excavation, spoil piles shall be placed upslope of trench. Filter fabric fence shall be placed across graded trench on steeper slopes to retard run-off. All disturbed paved areas shall be restored in kind unless otherwise noted.

7. All excavation and grading shall be accomplished in a manner that complies with all the requirements and standards set forth in the Soil Erosion and Sedimentation Control Manual, Pennsylvania DEP.

8. The contractor working on site shall be responsible for all items of soil erosion and sedimentation control pertaining to his specific phase of work. Control measures shall be protected and maintained at all times to completion of project.

9. Contractor shall remove all accumulated sediment and dispose of the material at a DEP or Allegheny County Conservation District approved waste site.

10. Contractor will be responsible in submitting an erosion and sediment pollution control plan and obtaining appropriate permits by the DEP for the waste material disposal areas. Contractor shall not dispose of any soil to any area until the site is approved.

11. After final site stabilization has been achieved (final stabilization is defined as uniform 70% perennial vegetation), temporary erosion and sedimentation controls must be removed. Areas disturbed during the removal of the controls must be stabilized immediately.

12. Contractor shall be responsible for performing environmental due diligence on all fill material imported to or exported from the site to certify that all fill material is "clean fill".

13. Contractor shall be required to obtain approval from Allegheny County Conservation District for all offsite waste/borrow areas.

Utility Line Trench Excavation Procedure

General Exposed trench excavations have high potential for accelerated erosion and sediment pollution. Since these excavations are usually located at lower elevations along or across earth disturbance sites, open trenches serve to concentrate sediment laden runoff and convey it to site boundaries or waterways. The most important erosion and sediment pollution control consideration for trench construction is the limiting and specific scheduling of work activities.

Construction Requirements

- a. Limit advance clearing and grubbing operations to a distance equal to two times the length of pipe installation that can be completed in one day.
- b. Work crews and equipment for trenching, placement of pipe, plug construction and backfilling will be self contained and separate from clearing and grubbing and site restoration and stabilization operations.
- c. Limit daily trench excavation to the length of pipe placement, plug installation and backfilling that can be completed the same day.
- d. Trench plugs will be spaced and be constructed of the materials and to the details shown in Table 4.11 and the TRENCH PLUG DETAIL. At all crossings of waters of the Commonwealth, trench plugs will be installed at the banks after excavation. The plugs may be temporarily removed when placing the pipe, but then replaced.
- e. Water which accumulates in the open trench will be completely removed by pumping as shown by the PUMPED DISCHARGE SEDIMENT TRAP DETAIL before pipe placement and/or backfilling begins.
- f. On the day following pipe placement and trench backfilling, the disturbed area will be graded to final contours and appropriate temporary erosion and sediment pollution control measures/facilities will be installed. Seeding and mulching of all disturbed areas will be done at the end of each week.

Exceptions

In certain cases trenches cannot be backfilled until the pipe is hydrostatically tested, or anchors and other permanent features are installed. In these cases, ALL of the requirements listed under CONSTRUCTION REQUIREMENTS will remain in effect with the following exceptions:

- (1) Daily backfilling of the trench may be delayed for six (6) days. All pressure testing and the complete backfilling of the open trench must be completed by the seventh (7) working day.
- (2) If daily backfilling is delayed, the disturbed area will be graded to final contours, appropriate temporary erosion and sediment control measures/facilities will be installed, and the areas seeded and mulched within the next two (2) calendar days.

Vegetation

General All grounds disturbed by any of the operations necessary to complete the work for this project are to be permanently seeded, unless occupied by structures or paved. This is to be accomplished as soon as possible after construction and not later than ten (10) days.

If seeding cannot be completed within the ten day period due to weather conditions, the disturbed area shall be mulched with straw at the rate of 3 ton per acre. This straw shall be anchored with much netting according to the manufacturer's recommendations or other appropriate means.

Temporary seeding will be used to protect exposed long surfaces which will not be permanently protected for a period more than two months, but less than twelve months. Temporary vegetation will provide short-term rapid cover until permanent vegetation or other protection can be established.

Temporary Seeding Specifications: The purpose of temporary cover is to provide short-term rapid cover for the control of runoff and erosion until vegetation or other stabilization material can be established. Temporary cover shall be applied on all sediment producing areas where the period of exposure will be more than two months, but less than twelve months. Mulch cover shall be provided for less than two month's exposure.

The utility line construction is to be progressive with backfill following immediately. If it is necessary to stockpile soil, temporary grass cover shall be established where soil stockpiles are to be exposed for a period greater than thirty (30) days. When the soil stockpile will be exposed for a period greater than two (2) days, but less than thirty (30) days, the stockpile shall be covered with mulch or protective erosion control fabric.

The site preparation and establishment of temporary cover shall be conducted according to the following guidelines:

- a. Install needed surface water control measures.
- b. Perform all cultural operations at right angles to the slope.
- c. Apply ground limestone according to test or at the rate of 180 lb./1000 sq. ft.
- d. Apply uniformly recommended analysis fertilizer according to soil test or 10-20-20 at the rate of 23 lb./1000 sq. ft.
- e. Work in lime and fertilizer to a depth of 4 in. using any suitable equipment.
- f. Temporary cover seed mixture shall consist of 100% annual rye grass. Seed shall be applied uniformly at the rate of 1 lb./1000 sq. ft. during the recommended planting dates of March 1 to June 15 and August 15 to October 15.
- g. Cover grass seed with ½ in. of soil with suitable equipment.

Permanent Seeding Specifications: All areas will have permanent vegetation established. Areas along the pipelines shall have permanent vegetation established immediately upon completion of the pipeline. Sediment control devices will be removed only when the final vegetative cover and permanent facilities are completed. Completed areas will be covered with a minimum 4" inches of topsoil.

After the topsoil has been properly distributed, lime in the form of raw ground limestone shall be applied in an amount to be determined from an analysis of the soil by a qualified soil sampling service; then one week after the lime it has been spread, fertilizer shall be added. Fertilizer in the amount of 5-10-5, nitrogen, phosphorus and potash, respectively, shall be spread at the rate of 30 lb. per 1000 sq. ft. after which mulch shall be added. The entire area shall then be properly filled and hand-raked to a smooth, even grade. All slopes shall be removed from the topsoil. Permanent seeding of upland areas (non-wetland) shall consist of a mixture of 88% Kentucky 31 tall fescue and 12% red top, sown at the rate of 2 pounds per 1000 square foot. The area shall then be lightly brushed or raked to provide slight covering over the seed, after which it shall be lightly rolled in two directions. In the absence of a soil test, lime should be applied at a rate of 5 tons per acre, fertilizer should be applied at a rate of 100 lbs. of N, (200 lbs. of P₂O₅ and 200 lbs. K₂O) per acre (eg. 1,000 lbs. of 10-20-20 per acre).

Sowing may be done mechanically, by hand, or by an approved method of hydroseeding. In the latter case, alternate means of fertilizing combined with seeding will be permitted upon approval of methods by the OWNER's representative. Mulching material shall be in accordance with the recommendations of a local recognized nurseryman approved by the OWNER's representative.

Mulching: The purpose of mulch is to reduce erosion, prevent surface compaction, crusts, conserve moisture and aid in establishing plant cover and control weeds. Mulch shall be applied on any area subject to erosion, or which has unfavorable conditions for plant establishment and growth. The practice may be used along or in conjunction with other structural and vegetative conservation practices, such as waterways, ponds, sedimentation traps, or critical area planting. On sediment producing areas where the period of exposure is less than two months, mulch materials shall be applied according to the following guidelines:

- a. For area subject to critical erosion, temporary erosion control devices such as furrows, diversions, etc., within or adjacent to area to be mulched shall be installed.
- b. Straw or hay mulch shall be applied at the rate of 3 tons per acre. Chemically treated or salted straw or hay is not acceptable as mulch.
- c. Straw or hay mulch shall be anchored by either peg or twine or much netting.
- d. Mulched areas shall be checked periodically and immediately after severe storms for damage until the desired purpose of the mulching is achieved. Damaged portions of the mulch or tie-down material shall be repaired as soon as discovered.

Type of Soil Disturbed by Construction

The soil information for this project was obtained from the Soil Survey identification for Allegheny County as prepared by the U. S. Department of Agriculture Soil Conservation Service. The CONTRACTOR shall make his own interpretation of the information when necessary as to how it may or may not affect any or all work under this project, and shall be responsible for all construction activities relating thereto and resulting therefrom. Soil within construction limits are as follows:

UE - Urban Land

This nearly level land type is on flood plains. It consists mainly of fill material that was hauled in and placed over the natural soils. Slopes are 0 to 3 percent.

The composition of this mapping unit is more variable and areas are generally much larger than those of most other mapping units in the county. Mapping is adequate, however, for the anticipated uses of the soils.

The fill material is 2 feet or more thick. It is highly variable material, including rubbish, cinders, industrial waste, old brick, and other building materials, limestone, sandstone, shale, and other soil materials. It overlies natural soils such as Atkins, Philo, Newark, and Linside soils. The areas are covered extensively by buildings and other structures.

Included in mapping are small areas of Atkins, Newark, Philo, and Linside soils and areas of cut and fill land.

Areas of this land type receive surface runoff from adjacent, more sloping soils. Flooding is a problem in some areas.

The intense urban development precludes most other land uses. In the undeveloped areas, onsite investigation is required to determine the kind and degree of limitations. Not assigned a capability unit.

According to the Soil Survey of Allegheny County, Pennsylvania conducted by the USDA Soil Conservation Service, Urban Land is considered a hydric soil with surface runoff and potential flooding as limitations. These limitations will be addressed by using the following BMP's: Filter Fabric Fence, Inlet Filter Bags, Super Filter Bags, Super Filter Bags, Trench Plugs, and Turf Reinforcement Mat. A Pumped Discharged Sediment Trap will also be used in dewatering off excavations.

URB - Urban land-Rainboro complex, gently sloping.

This mapping unit is on terraces. Slopes are 0 to 8 percent.

The composition of this mapping unit is more variable and areas are generally much larger than those of most other mapping units in the county. Mapping is adequate, however, for the anticipated uses of the soils.

Included in mapping are small areas of Allegheny variant and Ernest soils and small areas of soils that have slopes of more than 8 percent slopes. Also included, mostly in the suburbs, are areas that are mainly Rainboro soils. In other areas, including much of Pittsburgh, the Rainboro soils are minor event.

Seasonal wetness is generally a limitation.

The intense urban development precludes most other land uses. In the undeveloped areas, onsite investigation is required to determine the kind and degree of limitations.

According to the Soil Survey of Allegheny County, Pennsylvania conducted by the USDA Soil Conservation Service, Urban Land - Rainboro Complex is considered a hydric soil with seasonal wetness being its only limitation. This limitation will be addressed by using the following BMP's: Filter Fabric Fence, Inlet Filter Bags, Super Filter Fabric Fence, Waterbars, Trench Plugs, and Turf Reinforcement Mat. A Pumped Discharged Sediment Trap will also be used in dewatering off excavations.

QOF - Oil-Fill-Upland complex, very steep.

This soil generally is on valley sides that parallel the streams. Slopes are 25 to 80 percent.

The composition of this mapping unit is more variable and areas are generally much larger than those of most other mapping units in the county. Mapping is adequate for the anticipated uses of the soils.

Runoff is rapid to very rapid. Springs and ground water seepage spots are common.

Susceptibility to landslide and slope are limitations for community development and recreation. This soil is not suited to cultivated crops because of the slope. It is suited to woodland and wildlife habitat. Capability unit is Vle-1.

Table 3 of the Allegheny County Soil Survey lists weathered bedrock at a depth of 1 ½ to 3 ½ feet as a soil feature affecting pipeline construction and maintenance. This limitation, if encountered will be addressed through the use of heavy machinery.

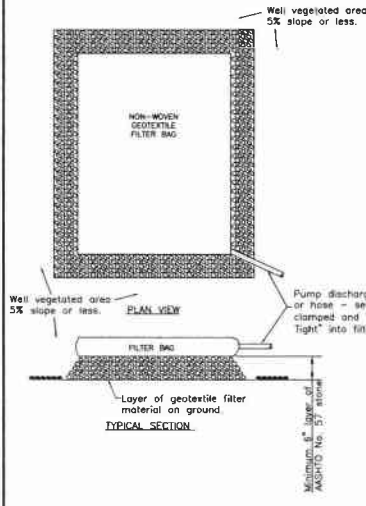


MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-13
EAST SHORE SANITARY SEWER CONSTRUCTION
EROSION AND SEDIMENT POLLUTION CONTROL PLAN SHEET 8 OF 9

Scale:	No. Scale
Date:	February 2009
Drawn By:	EHD
Checked By:	RJH
Approved By:	BE

DISTURBED AREA: 9.922 ACRES

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Mixed Case Text are Existing.



NOTES:

- The filter bag shall trap particles larger than 150 microns.
- The pumping rate for the filter bag shall not exceed 750 gpm or 1/2 the maximum specified by the manufacturer, whichever is less. Pump intake shall be floating or screened.
- Once half full, the filter bag and trapped sediment shall be disposed by the contractor at the contractor's dump site.
- Pump filter bag shall be inspected regularly and repaired within 24 hours if found defective. Pumping will cease upon any problem with the filter bag and must not be resumed until the problem is corrected.

FILTER BAG SPECIFICATIONS
Typical Properties

Weight	ASTM D3776	8.3 oz./yd.
Thickness	ASTM D1777	120 mils
Grab Tensile	ASTM D4632	240 lbs.
Grab Elongation at Break	ASTM D4632	50%
Puncture Resistance	ASTM D4833	115 lbs.
Trapezoidal Tear	ASTM D4533	100 lbs.
Mullen Burst Water	ASTM D3786	350 lbs.
Flow Rate	ASTM D4491	105 gpm/ft.
Permeability	ASTM D4491	1.7 sec.-1
UV Resistance	ASTM D4355	85% str. ret.
Bag Dimensions		15ft. x 13.25ft.

Pumped Discharge Sediment Trap Detail
N.T.S.

Standard Silt Fence
Design Standards/Restrictions:

- Silt Fence will be placed at level grade. Both ends of a fence section will be extended up the slope so that the bottom of the fence shall end at the top of the fence elevation.
- Silt fences will be designed to control runoff from drainage areas that do not exceed the maximum slope to slope length relationship as shown in TABLE C.
- 18" high fence shall be installed according to the STANDARD SILT FENCE DETAILS. Any fence greater than 18" high, may be installed according to the details shown, as long as the maximum slope lengths for 18" high fence are observed.
- 30" high fence, or any fence installed on uncompacted fill or extremely loose undisturbed soils will be constructed according to the SILT FENCE DETAILS.
- The formation of concentrated flows on the drainage slope above a silt fence installation is not permitted. If concentrated flows do occur, direct slope stabilization measures must be employed to prevent such conditions.
- Silt fences will not be placed in any area of concentrated flows such as ditches, swales, channels, etc.
- Silt fences will not be used in areas where rock or rocky soils prevent full and uniform anchoring of the fence toe.
- Silt fence material will not be placed across the entrance to pipes or culverts and will not be wrapped around the principal spillway structures of sediment traps or basins.

Installation:

- A trench will be plowed or otherwise excavated to the required depth (see STANDARD SILT FENCE DETAILS) with little or any disturbance to the downslope side of the trench. The bottom of the trench and the fence top will be placed on a level grade. When it is necessary to cross small depressions, the trench bottom and fence top edge may deviate slightly from the level grade. Grades in such sections will not exceed one percent (1%), nor will the deviation extend for more than 25 feet.
- Support stakes will be driven to the required depth below the existing ground at specified intervals.
- Stretch and fasten fabric to the upslope side of the support stakes (if a reinforced section, install reinforcement mesh prior to fastening the fabric).
- Where ends of the fabric come together, they will be overlapped, folded and stapled to prevent sediment bypass.
- The toe anchor will be backfilled and compacted to a density equal to the surrounding soils.
- If constructing a reinforced section, attach guy wires to support stakes. Provisions should be made for easy loosening and removal of the guy wires to allow for access to perform maintenance work.

Maintenance:

- The contractor shall appoint an inspector who is experienced and qualified in E&S controls to conduct regular inspections of Best Management Practices (BMPs) and perform any required maintenance. Inspector shall maintain weekly inspection records.
- Regular inspection and maintenance of BMPs shall begin immediately upon installation and continue until its removal. Any necessary repairs will be made within 24 hours. The fence installation should be inspected weekly and after every run-off event.
- Accumulated sediments will be removed as required to keep the fence functional. In all cases remove deposits where accumulations reach 1/2 the above ground height of the fence.
- Any section of Filter fabric fence which has been undermined or topped must be replaced by the end of the workday with a Rock Filter Outlet. See Rock Filter Outlet Detail.
- Adhere to any manufacturer's recommendations for replacing silt fence due to weathering.
- All trapped sediment shall be disposed by the Contractor at a DEP and Allegheny County Conservation District approved waste site.

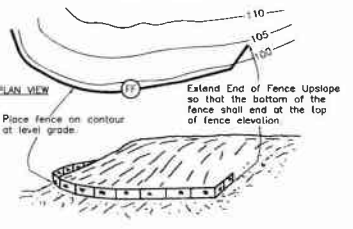
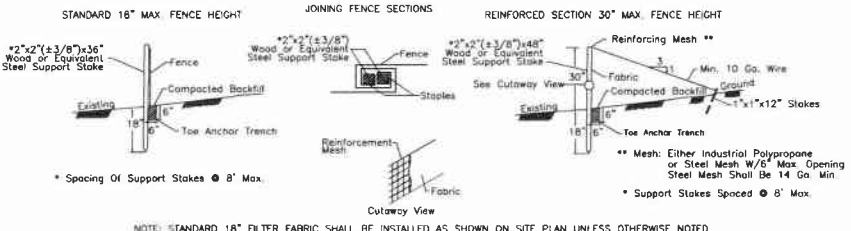


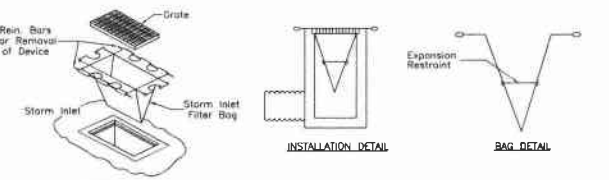
Illustration Filter Fabric Fence Detail
N.T.S.

TABLE C Maximum Slope Lengths for Filter Fabric Fences

Slope - Percent	Maximum Slope Length (ft) Above Fences		
	18" High Fence	30" High Fence	Super Silt Fence
5	100	200	1,000
10	50	100	500
15	35	70	300
20	25	50	200
25	20	35	150
30	15	25	100
35	12	20	75
40	10	15	50
45	8	12	35
50	6	10	25



Standard Silt Fence Details
N.T.S.



Storm Inlet Filter Bag Protection Detail
N.T.S.

Waterbars

Design Standards:

- Waterbars will be constructed to the minimum height and slope as shown in detail.
- Waterbars shall be spaced in compliance with the chart below.

Construction:

Construction will be to the dimensions and locations as shown on the site plan.

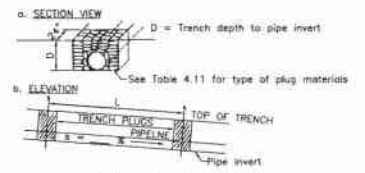
Maintenance:

Waterbars shall be inspected weekly and after every runoff event. Waterbars must be reestablished to the design dimensions and spacing. Temporary erosion and sediment pollution control measures/facilities shall be installed until the site is stabilized through seeding or natural vegetative regeneration. ONCE THE SITE HAS BEEN STABILIZED, WATERBARS ARE TO BE REMOVED, LOCATION SEEDED, FERTILIZED, MULCHED AND MAINTAINED UNTIL UNIFORM 70% PERENNIAL VEGETATIVE COVERAGE IS ACHIEVED.

TABLE 4.11 Required Spacing (L) and Materials for Trench Plugs

Trench Slope (%)	L (feet)	Plug Material
0 - 5	500	Earth Filled Sacks
5 - 15	500	Earth Filled Sacks
15 - 25	300	Earth Filled Sacks
25 - 35	200	Earth Filled Sacks
35 - 100	100	Earth Filled Sacks
OVER 100	50	Cement Filler Bags, (welded), or Mortared Stone

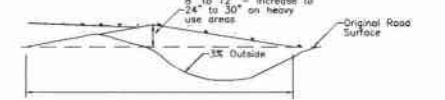
*Trench plugs are required at all stream, river or water body crossings regardless of trench slope. Otherwise not required.
**Top soil may not be used to fill sacks



Trench Plug Detail
N.T.S.

TABLE - Required Spacing for Waterbars

Grade %	Spore between Waterbars (feet)
5	250
10	150
15	100
20	75
25	60
30	45
35	40
40	35
45	30



Typical Section for Waterbars
N.T.S.

Super Silt Fence
Design Standards/Restrictions:

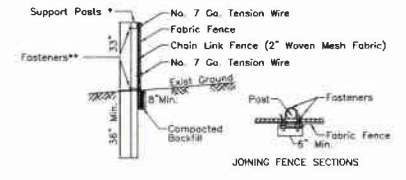
- The maximum slope length above any super silt fence should not exceed that shown in Table C. The slope length shown is the distance from the fence to the drainage divide or the nearest upslope channel.
- Super silt fence should not be used in areas where rock or rocky soils prevent the full and uniform anchoring of the fence or proper installation of the fence posts. It should be used only where access exists or can be made for the construction equipment required to install and remove the chain link fencing.
- Super silt fence should be installed at grade level. Both ends of fence section should be extended at least 8 feet upsloped 45 degrees to the main fence alignment to allow for pooling of water.
- The formation of concentrated flows on the drainage slope above a silt fence installation is not permitted. If concentrated flows do occur, direct slope stabilization measures must be employed to prevent such conditions.
- Silt fences will not be placed in any area of concentrated flows such as ditches, swales, channels, etc.
- Silt fences will not be used in areas where rock or rocky soils prevent full and uniform anchoring of the fence toe.
- Silt fence material will not be placed across the entrance to pipes or culverts and will not be wrapped around the principal spillway structures of sediment traps or basins.

Installation:

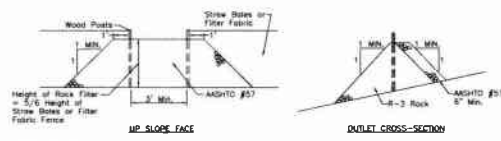
- An 8" deep trench should be excavated, minimizing the disturbance on the downslope side. The bottom of the trench should be at level grade. Maximum deviation from level grade should be 5%, and not extend for more than 50 ft.
- A chain link fence should be installed in the downslope side of the trench with the fence on the upslope side of the poles. Poles should be 2 1/2" diameter galvanized or aluminum posts set at 10' minimum spacing. Support posts must be installed by a post hole drill a minimum 36" below the ground surface and extend a minimum of 33" above ground surface. Poles do not need to be set in concrete.
- Filter fabric should be stretched and securely fastened to the fence with wire fasteners, staples, or preformed clips. It should extend a minimum 33" above ground surface.
- At fabric ends, both ends should be overlapped a minimum 6", folded, and secured to the fence. The fabric toe should be placed in the bottom of the trench, backfilled and compacted.

Maintenance:

- The contractor shall appoint an inspector who is experienced and qualified in E&S controls to conduct regular inspections of Best Management Practices (BMPs) and perform any required maintenance. Inspector shall maintain weekly inspection records.
- Regular inspection and maintenance of BMPs shall begin immediately upon installation and continue until its removal. Any necessary repairs will be made within 24 hours. The fence installation should be inspected weekly and after every run-off event.
- Accumulated sediments will be removed as required to keep the fence functional. In all cases remove deposits where accumulations reach 1/2 the above ground height of the fence.
- Any section of Filter fabric fence which has been undermined or topped must be replaced by the end of the workday with a Rock Filter Outlet. See Rock Filter Outlet Detail.
- Adhere to any manufacturer's recommendations for replacing silt fence due to weathering.
- All trapped sediment shall be disposed by the Contractor at a DEP and Allegheny County Conservation District approved waste site.



Super Filter Fabric Fence
N.T.S.



Rock Filter Outlet
Maintenance:

- Sediment must be removed when the accumulations reach 1/2 height of the outlet and disposed by the Contractor at a DEP and Allegheny County Conservation District approved waste site.

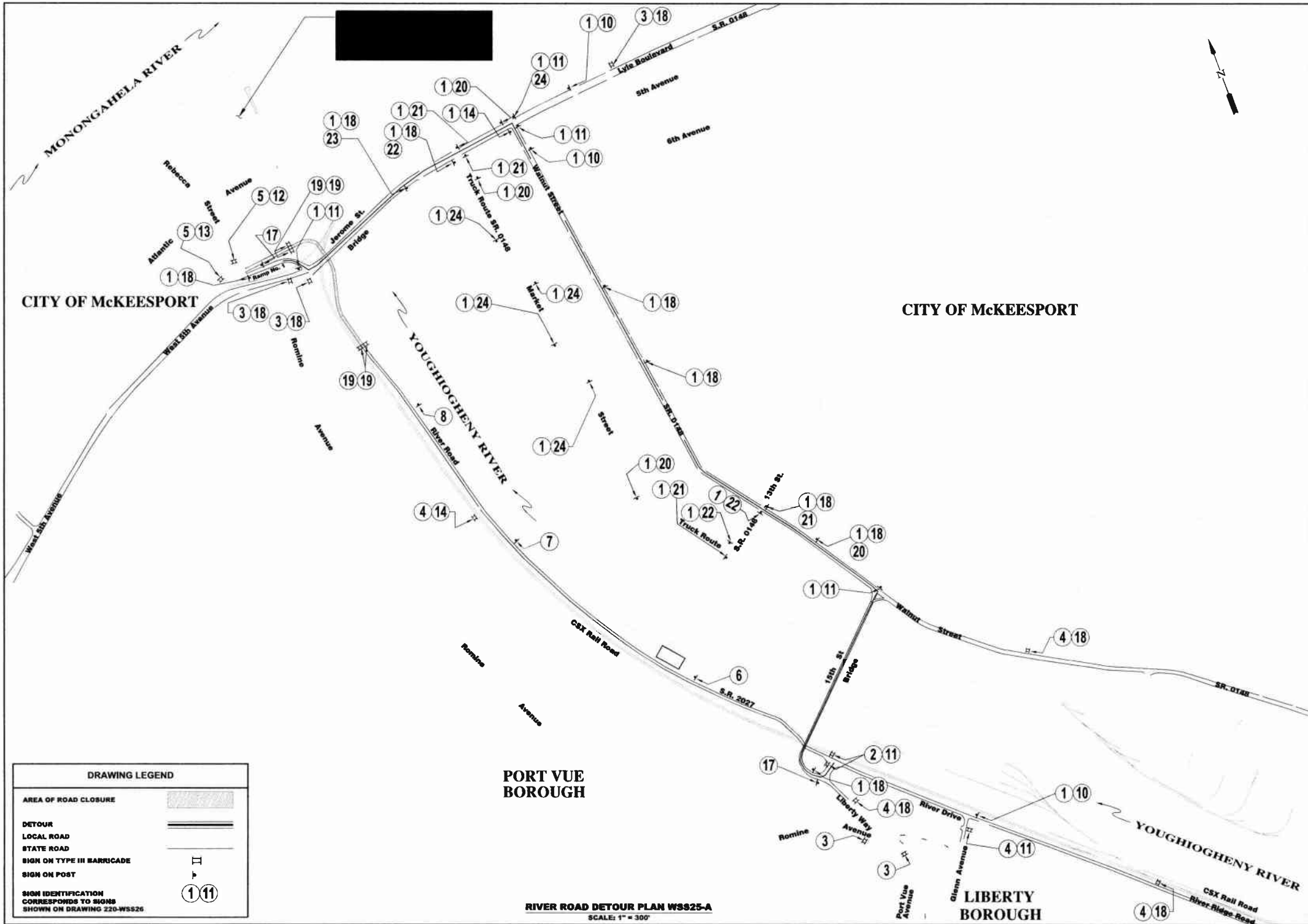
Rock Filter Outlet
N.T.S.

NOTE: ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED. Items Identified with Mixed Case Text are Existing.

KLH ENGINEERS, INC.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-13
EAST SHORE SANITARY SEWER CONSTRUCTION
EROSION AND SEDIMENT POLLUTION CONTROL PLAN SHEET 9 OF 9

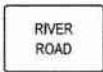
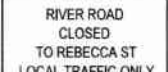
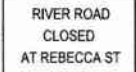
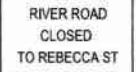
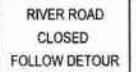



















Scale:	No. Issue:	Revision:	Date:
Drawn By:	Checked By:	Approved By:	
Design:	Rev. 001	Rev. 002	Rev. 003
Rev. 004	Rev. 005	Rev. 006	Rev. 007
Rev. 008	Rev. 009	Rev. 010	Rev. 011
Rev. 012	Rev. 013	Rev. 014	Rev. 015
Rev. 016	Rev. 017	Rev. 018	Rev. 019
Rev. 020	Rev. 021	Rev. 022	Rev. 023
Rev. 024	Rev. 025	Rev. 026	Rev. 027
Rev. 028	Rev. 029	Rev. 030	Rev. 031
Rev. 032	Rev. 033	Rev. 034	Rev. 035
Rev. 036	Rev. 037	Rev. 038	Rev. 039
Rev. 040	Rev. 041	Rev. 042	Rev. 043
Rev. 044	Rev. 045	Rev. 046	Rev. 047
Rev. 048	Rev. 049	Rev. 050	Rev. 051
Rev. 052	Rev. 053	Rev. 054	Rev. 055
Rev. 056	Rev. 057	Rev. 058	Rev. 059
Rev. 060	Rev. 061	Rev. 062	Rev. 063
Rev. 064	Rev. 065	Rev. 066	Rev. 067
Rev. 068	Rev. 069	Rev. 070	Rev. 071
Rev. 072	Rev. 073	Rev. 074	Rev. 075
Rev. 076	Rev. 077	Rev. 078	Rev. 079
Rev. 080	Rev. 081	Rev. 082	Rev. 083
Rev. 084	Rev. 085	Rev. 086	Rev. 087
Rev. 088	Rev. 089	Rev. 090	Rev. 091
Rev. 092	Rev. 093	Rev. 094	Rev. 095
Rev. 096	Rev. 097	Rev. 098	Rev. 099
Rev. 100	Rev. 101	Rev. 102	Rev. 103
Rev. 104	Rev. 105	Rev. 106	Rev. 107
Rev. 108	Rev. 109	Rev. 110	Rev. 111
Rev. 112	Rev. 113	Rev. 114	Rev. 115
Rev. 116	Rev. 117	Rev. 118	Rev. 119
Rev. 120	Rev. 121	Rev. 122	Rev. 123
Rev. 124	Rev. 125	Rev. 126	Rev. 127
Rev. 128	Rev. 129	Rev. 130	Rev. 131
Rev. 132	Rev. 133	Rev. 134	Rev. 135
Rev. 136	Rev. 137	Rev. 138	Rev. 139
Rev. 140	Rev. 141	Rev. 142	Rev. 143
Rev. 144	Rev. 145	Rev. 146	Rev. 147
Rev. 148	Rev. 149	Rev. 150	Rev. 151
Rev. 152	Rev. 153	Rev. 154	Rev. 155
Rev. 156	Rev. 157	Rev. 158	Rev. 159
Rev. 160	Rev. 161	Rev. 162	Rev. 163
Rev. 164	Rev. 165	Rev. 166	Rev. 167
Rev. 168	Rev. 169	Rev. 170	Rev. 171
Rev. 172	Rev. 173	Rev. 174	Rev. 175
Rev. 176	Rev. 177	Rev. 178	Rev. 179
Rev. 180	Rev. 181	Rev. 182	Rev. 183
Rev. 184	Rev. 185	Rev. 186	Rev. 187
Rev. 188	Rev. 189	Rev. 190	Rev. 191
Rev. 192	Rev. 193	Rev. 194	Rev. 195
Rev. 196	Rev. 197	Rev. 198	Rev. 199
Rev. 200	Rev. 201	Rev. 202	Rev. 203
Rev. 204	Rev. 205	Rev. 206	Rev. 207
Rev. 208	Rev. 209	Rev. 210	Rev. 211
Rev. 212	Rev. 213	Rev. 214	Rev. 215
Rev. 216	Rev. 217	Rev. 218	Rev. 219
Rev. 220	Rev. 221	Rev. 222	Rev. 223
Rev. 224	Rev. 225	Rev. 226	Rev. 227
Rev. 228	Rev. 229	Rev. 230	Rev. 231
Rev. 232	Rev. 233	Rev. 234	Rev. 235
Rev. 236	Rev. 237	Rev. 238	Rev. 239
Rev. 240	Rev. 241	Rev. 242	Rev. 243
Rev. 244	Rev. 245	Rev. 246	Rev. 247
Rev. 248	Rev. 249	Rev. 250	Rev. 251
Rev. 252	Rev. 253	Rev. 254	Rev. 255
Rev. 256	Rev. 257	Rev. 258	Rev. 259
Rev. 260	Rev. 261	Rev. 262	Rev. 263
Rev. 264	Rev. 265	Rev. 266	Rev. 267
Rev. 268	Rev. 269	Rev. 270	Rev. 271
Rev. 272	Rev. 273	Rev. 274	Rev. 275
Rev. 276	Rev. 277	Rev. 278	Rev. 279
Rev. 280	Rev. 281	Rev. 282	Rev. 283
Rev. 284	Rev. 285	Rev. 286	Rev. 287
Rev. 288	Rev. 289	Rev. 290	Rev. 291
Rev. 292	Rev. 293	Rev. 294	Rev. 295
Rev. 296	Rev. 297	Rev. 298	Rev. 299
Rev. 300	Rev. 301	Rev. 302	Rev. 303
Rev. 304	Rev. 305	Rev. 306	Rev. 307
Rev. 308	Rev. 309	Rev. 310	Rev. 311
Rev. 312	Rev. 313	Rev. 314	Rev. 315
Rev. 316	Rev. 317	Rev. 318	Rev. 319
Rev. 320	Rev. 321	Rev. 322	Rev. 323
Rev. 324	Rev. 325	Rev. 326	Rev. 327
Rev. 328	Rev. 329	Rev. 330	Rev. 331
Rev. 332	Rev. 333	Rev. 334	Rev. 335
Rev. 336	Rev. 337	Rev. 338	Rev. 339
Rev. 340	Rev. 341	Rev. 342	Rev. 343
Rev. 344	Rev. 345	Rev. 346	Rev. 347
Rev. 348	Rev. 349	Rev. 350	Rev. 351
Rev. 352	Rev. 353	Rev. 354	Rev. 355
Rev. 356	Rev. 357	Rev. 358	Rev. 359
Rev. 360	Rev. 361	Rev. 362	Rev. 363
Rev. 364	Rev. 365	Rev. 366	Rev. 367
Rev. 368	Rev. 369	Rev. 370	Rev. 371
Rev. 372	Rev. 373	Rev. 374	Rev. 375
Rev. 376	Rev. 377	Rev. 378	Rev. 379
Rev. 380	Rev. 381	Rev. 382	Rev. 383
Rev. 384	Rev. 385	Rev. 386	Rev. 387
Rev. 388	Rev. 389	Rev. 390	Rev. 391
Rev. 392	Rev. 393	Rev. 394	Rev. 395
Rev. 396	Rev. 397	Rev. 398	Rev. 399
Rev. 400	Rev. 401	Rev. 402	Rev. 403
Rev. 404	Rev. 405	Rev. 406	Rev. 407
Rev. 408	Rev. 409	Rev. 410	Rev. 411
Rev. 412	Rev. 413	Rev. 414	Rev. 415
Rev. 416	Rev. 417	Rev. 418	Rev. 419
Rev. 420	Rev. 421	Rev. 422	Rev. 423
Rev. 424	Rev. 425	Rev. 426	Rev. 427
Rev. 428	Rev. 429	Rev. 430	Rev. 431
Rev. 432	Rev. 433	Rev. 434	Rev. 435
Rev. 436	Rev. 437	Rev. 438	Rev. 439
Rev. 440	Rev. 441	Rev. 442	Rev. 443
Rev. 444	Rev. 445	Rev. 446	Rev.



DRAWING LEGEND	
AREA OF ROAD CLOSURE	
DETOUR	
LOCAL ROAD	
STATE ROAD	
SIGN ON TYPE III BARRICADE	
SIGN ON POST	
SIGN IDENTIFICATION CORRESPONDS TO SIGNS SHOWN ON DRAWING 220-WSS26	

RIVER ROAD DETOUR PLAN WSS25-A
SCALE: 1" = 300'

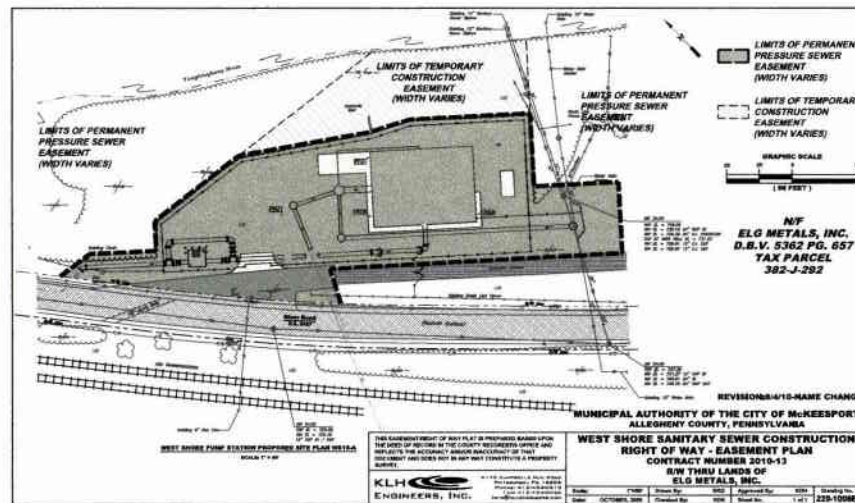
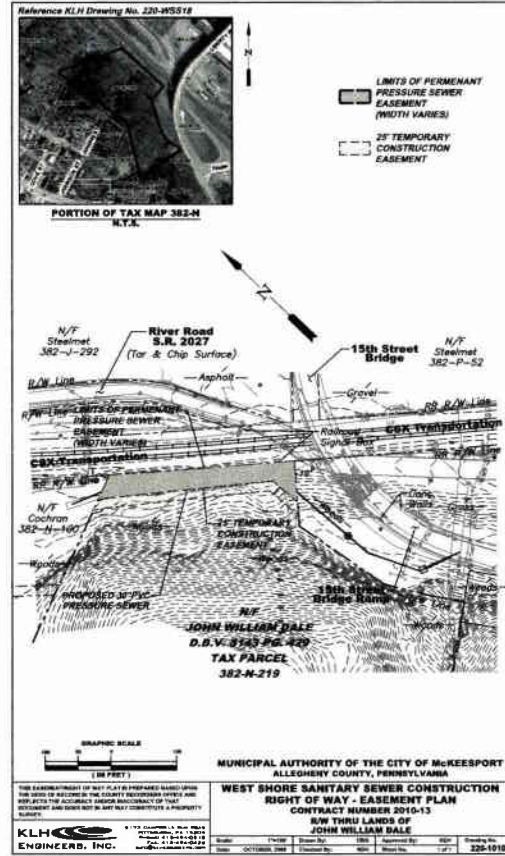
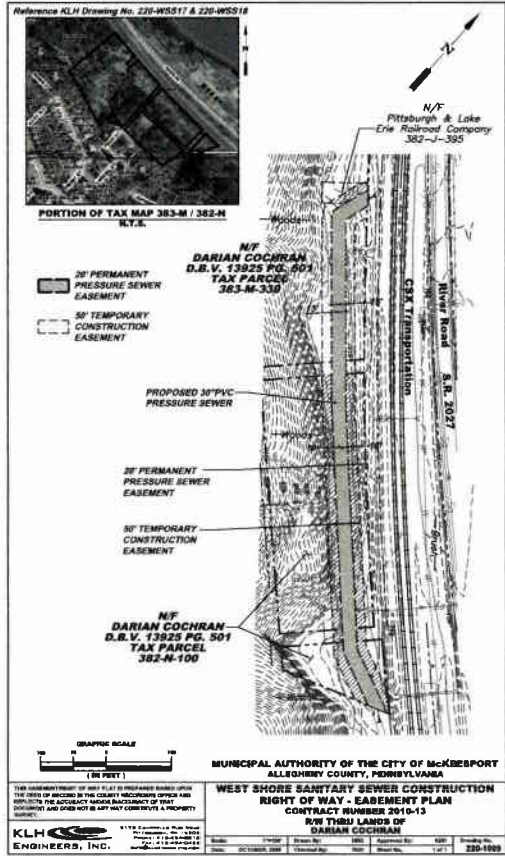
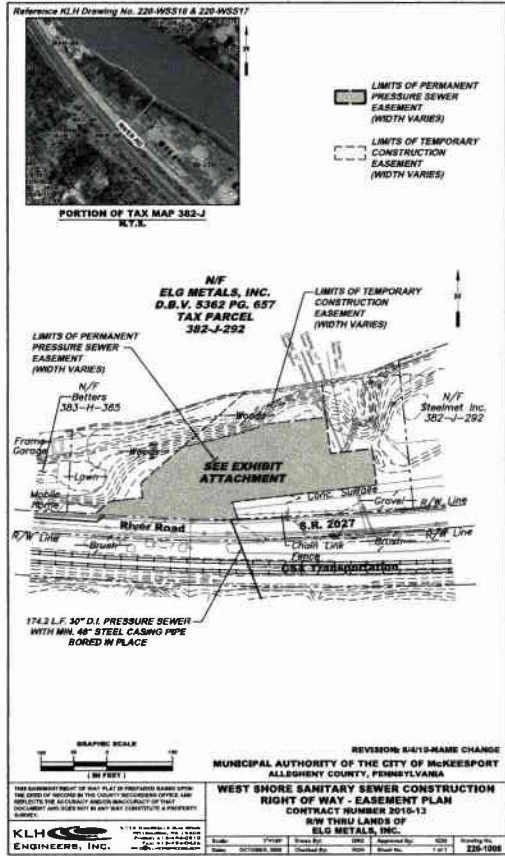
<p>KLH ENGINEERS, INC.</p> <p>5179 CLARKVILLE ROAD, BOX 1000 PITTSBURGH, PA 15208 PHONE: 412-454-0810 FAX: 412-454-0811 WWW.KLHENGINEERS.COM</p>	<p>Revisions</p> <table border="1"> <thead> <tr> <th>Date</th> <th>Revisions</th> <th>Date</th> <th>Revisions</th> </tr> </thead> <tbody> <tr> <td>1-2011</td> <td>RELEASE FOR BID</td> <td></td> <td></td> </tr> </tbody> </table>	Date	Revisions	Date	Revisions	1-2011	RELEASE FOR BID		
Date	Revisions	Date	Revisions						
1-2011	RELEASE FOR BID								
<p>MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-43 WEST SHORE SANITARY SEWER CONSTRUCTION RIVER ROAD DETOUR PLAN SHEET 1 OF 2</p>	<p>As Shown: OCT 2008</p> <p>Date: OCT 2008</p> <p>Drawn By: MJE</p> <p>Checked By: MJE</p> <p>Approved By: MJE</p>								
<p>Sheet No. 25 of 28</p> <p>Drawing No. 220-WSS25</p>									

① QTY. = 28 4" SERIES "C" LETTERS ON ORANGE REFLECTIVE SHEETING  FAB-1 36" X 24"	② QTY. = 2 4" SERIES "C" LETTERS ON ORANGE REFLECTIVE SHEETING  FAB-2 60" X 30"	③ QTY. = 5 4" SERIES "C" LETTERS ON ORANGE REFLECTIVE SHEETING  FAB-3 48" X 36"	④ QTY. = 5 4" SERIES "C" LETTERS ON ORANGE REFLECTIVE SHEETING  FAB-5 48" X 36"	⑤ QTY. = 2 4" SERIES "C" LETTERS ON ORANGE REFLECTIVE SHEETING  FAB-4 48" X 30"	⑥ QTY. = 1  W20 - 3 W30 - 1 - 3 36" X 36"	⑦ QTY. = 1  W20 - 3 W30 - 1 - 2 36" X 36"	⑧ QTY. = 1  W20 - 3 W30 - 1 - 1 36" X 36"
⑨ QTY. = 0  M4 - 9BL 30" X 24"	⑩ QTY. = 3  M4 - 9SL 30" X 24"	⑪ QTY. = 7  M4 - 9L 30" X 24"	⑫ QTY. = 1  M4 - 9AL 30" X 24"	⑬ QTY. = 1  M4 - 9AR 30" X 24"	⑭ QTY. = 2  M4 - 9R 30" X 24"	⑮ QTY. = 0  M4 - 9SR 30" X 24"	⑯ QTY. = 0  M4 - 9BR 30" X 24"
⑰ QTY. = 2  M4 - 8A 24" X 18"	⑱ QTY. = 14  M4 - 9S 30" X 24"	⑲ QTY. = 4  R11-2 48" X 30"	⑳ QTY. = 4  M4 - 8-2SL 24" X 36"	㉑ QTY. = 4  M4 - 8-2L 24" X 36"	㉒ QTY. = 3  M4 - 8-2R 24" X 36"	㉓ QTY. = 1  M4 - 8-2SR 24" X 36"	㉔ QTY. = 5  M4 - 8-2S 24" X 36"

RIVER ROAD DETOUR SIGNS WSS26-A
SCALE: 1/2" = 1'-0"

- GENERAL NOTES:**
- CONTRACTOR TO CONTACT THE FOLLOWING TWO (2) WEEKS IN ADVANCE OF PLACING DETOUR:
- PENNDOT PERMIT OFFICE 412-420-4801
 - PENNDOT PRESS OFFICE-JIM STRUZZI- 412-420-8010
 - PENNDOT TRAFFIC MANAGEMENT CENTER-JASON PREVITE-412-420-8030
4. ALL AFFECTED MUNICIPALITIES
5. ALL AFFECTED EMERGENCY SERVICES
6. ALL AFFECTED SCHOOL DISTRICTS
7. PORT AUTHORITY OF ALLEGHENY COUNTY-CHUCK ROMPOLA-412-946-8321
8. PENNDOT ASSISTANT COUNTY MAINTNANCE MANAGER-LOU BASCIOTTA-412-221-3422

5173 CAMPBELL RUN ROAD PITTSBURGH, PA 15205 PHONE: 412-499-0220 FAX: 412-499-0226 info@klhengineers.com	KLH ENGINEERS, INC.
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-13 WEST SHORE SANITARY SEWER CONSTRUCTION RIVER ROAD DETOUR PLAN SHEET 2 OF 2	Revision Date Description 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Scale: 1/2" = 1' Date: OCT 2009 Drawn By: MJE Checked By: MJE Approved By: MJE	Sheet No. 26 of 29 Drawing No. 220-WSS26

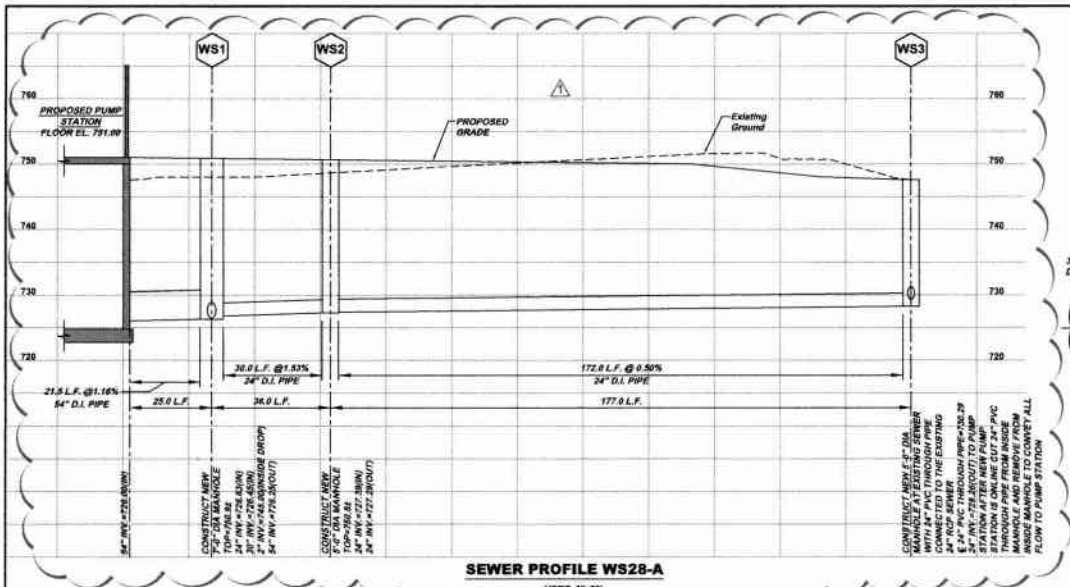


Scale:	As Shown	Date:	DECEMBER 2010	Drawn By:	TES	Checked By:	RDH	Approved By:	SHG
Street No.	28 of 29								
Drawing No.	220-WSS28								

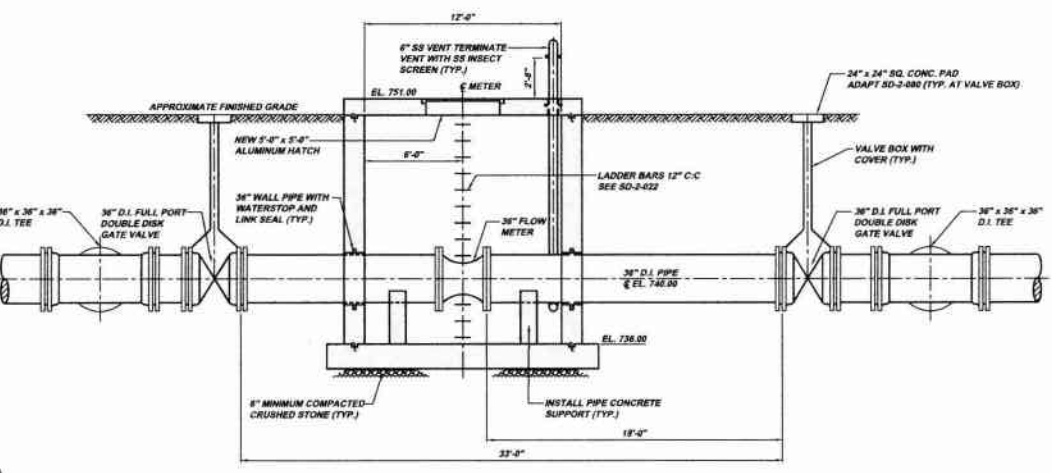
9173 CHAMBERS RUN ROAD
PITTSBURGH, PA 15208
PHONE: 412-944-0916
FAX: 412-944-0916
INFO@KLHENGINEERS.COM

KLH ENGINEERS, INC.

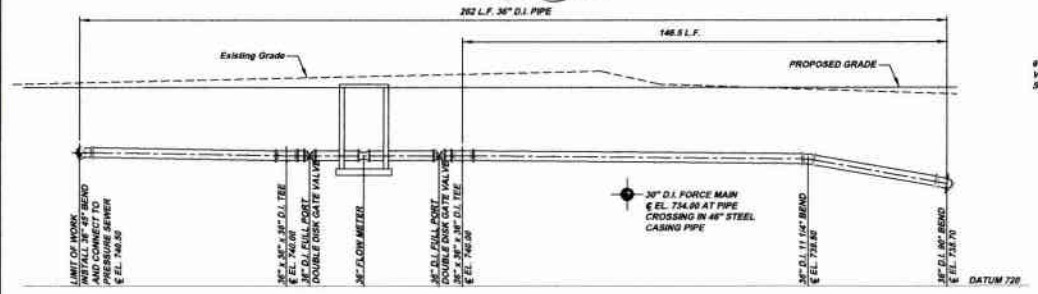
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-13
WEST SHORE SANITARY SEWER CONSTRUCTION
RIGHT OF WAY PLANS



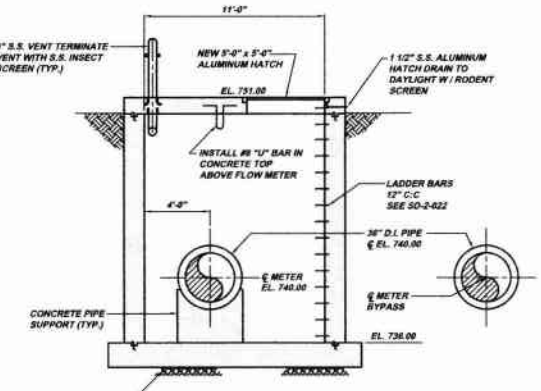
SEWER PROFILE WS28-A
SCALE: HORIZ. 1"=20'
VERT. 1"=10'



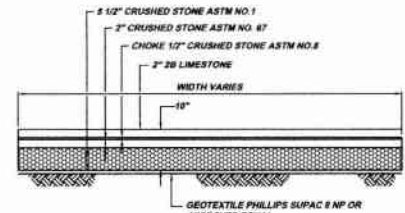
SECTION WS28-D
SCALE: 1/4" = 1'-0"
REFERENCE PLAN WS28-C



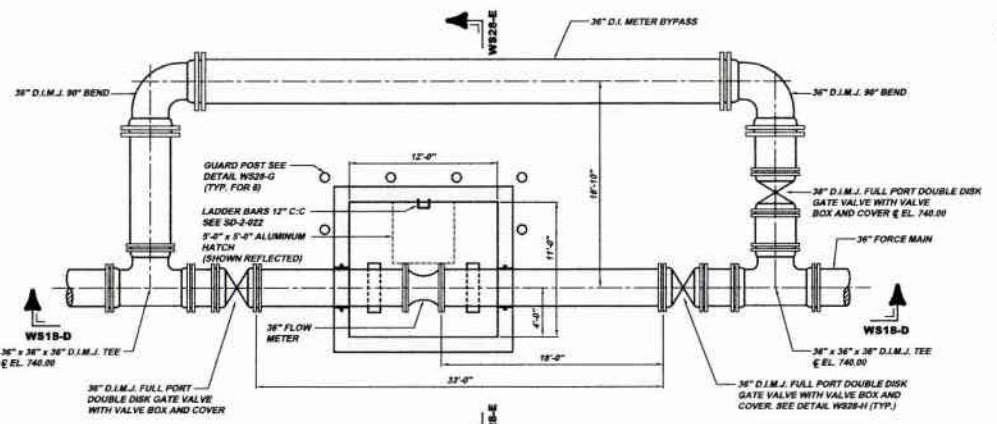
SEWER PROFILE WS28-B
SCALE: VERT. 1"=10'
HORIZ. 1"=20'



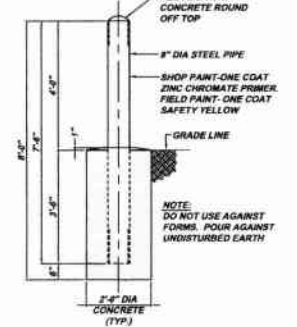
SECTION WS28-E
SCALE: 1/4" = 1'-0"
REFERENCE PLAN WS28-C



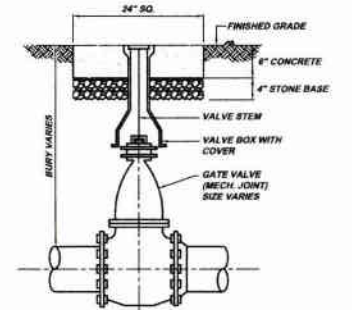
DETAIL WS28-F
SCALE: N.T.S.
REFERENCE PLAN WS16-A



METER VAULT PLAN WS28-C
SCALE: 3/16" = 1'-0"



DETAIL WS28-G
SCALE: N.T.S.
REFERENCE PLAN WS28-C



TYPICAL BURIED VALVE DETAIL WS28-H
SCALE: N.T.S.

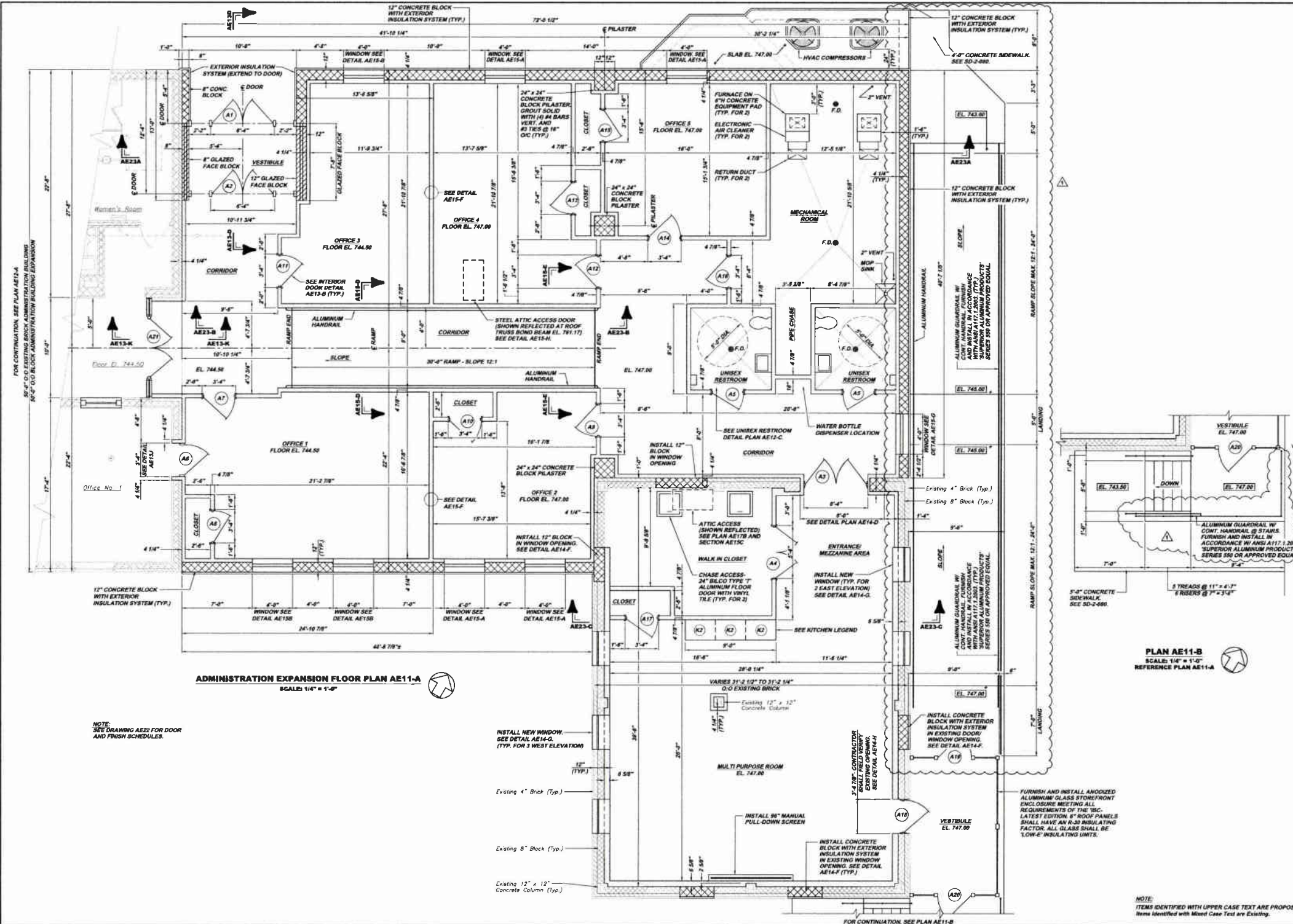
NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items identified with Mixed Case Text are Existing.

Revisions	Date	By	Checked By	Approved By
3-11	2-11	Δ	GENERAL REVISION	
10-10	10-10	Δ	REVISION	
15-08	15-08	Δ	REVISION	
12-01	12-01	Δ	RELEASE FOR BID	

Scale:	As Shown
DATE:	JULY 2008
Drawn By:	DMB
Checked By:	RCH
Approved By:	BSG

Project No.:	5175 CLARESBURG RUN ROAD
Location:	PITTSBURGH, PA 15205
Contract No.:	PA 03-03-018
Contract Title:	WEST SHORE PUMP STATION CONSTRUCTION
Client:	MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
Contract Number:	2010-03 AND 2010-04
Project Name:	ALLEGHENY COUNTY, PENNSYLVANIA
Project Address:	1134 4th Street, McKeesport, PA 15110
Project Description:	WEST SHORE PUMP STATION CONSTRUCTION
Project Manager:	KLH ENGINEERS, INC.
Project Engineer:	KLH ENGINEERS, INC.
Project Designer:	KLH ENGINEERS, INC.
Project Checker:	KLH ENGINEERS, INC.
Project Approver:	KLH ENGINEERS, INC.

Sheet No.:	4 of 44
Drawing No.:	220-WS28



ADMINISTRATION EXPANSION FLOOR PLAN AE11-A
SCALE 1/4" = 1'-0"

PLAN AE11-B
SCALE 1/4" = 1'-0"
REFERENCE PLAN AE11-A

FOR CONTINUATION, SEE PLAN AE11-A
30'-0" O.D. EXISTING BRICK ADMINISTRATION BUILDING
30'-0" O.D. BLOCK ADMINISTRATION BUILDING EXPANSION

NOTE:
SEE DRAWING AE22 FOR DOOR
AND FINISH SCHEDULES.

FURNISH AND INSTALL ANODIZED ALUMINUM GLASS STOREFRONT ENCL. OBTAIN MEETING ALL REQUIREMENTS OF THE IBC. LATEST EDITION. IF ROOF PANELS SHALL HAVE AN R-30 INSULATING FACTOR. ALL GLASS SHALL BE "LOW-E" INSULATING UNITS.

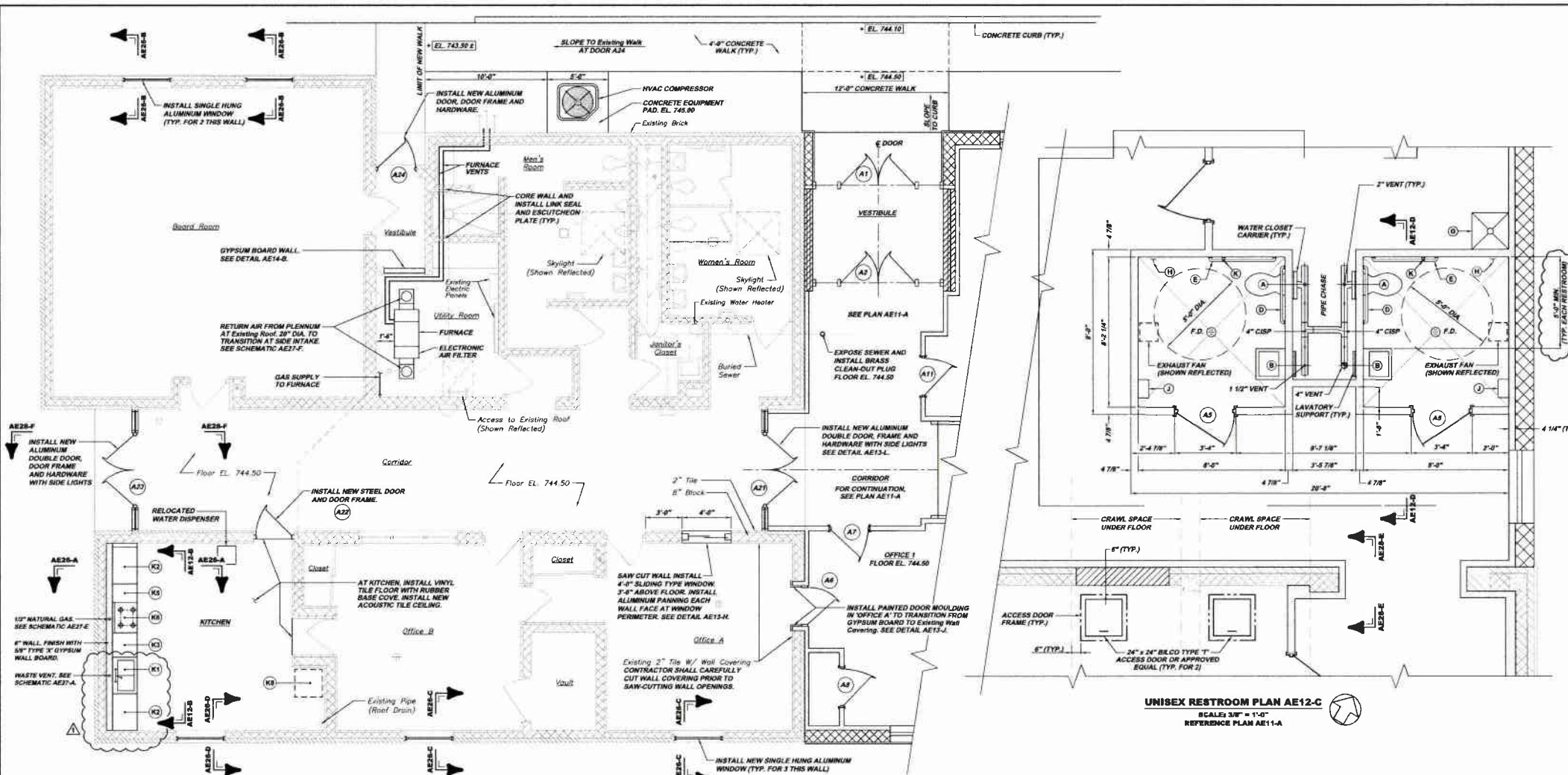
NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
ITEMS IDENTIFIED WITH MIXED CASE TEXT ARE EXISTING.

Scale:	As Shown	Revision:	
Date:	AUGUST 2010	Date:	
Drawn By:	DRP, JEA	Release For Bid:	1-2011
Checked By:	ROH	Code Compliance:	1-2011
Approved By:	SHS	Revisions:	
Sheet No.:	8	1-2011	
Drawing No.:	220-AE11 A1	1-2011	

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 & 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
ADMINISTRATION BUILDING EXPANSION PLAN AND DETAILS

KLH ENGINEERS, INC.

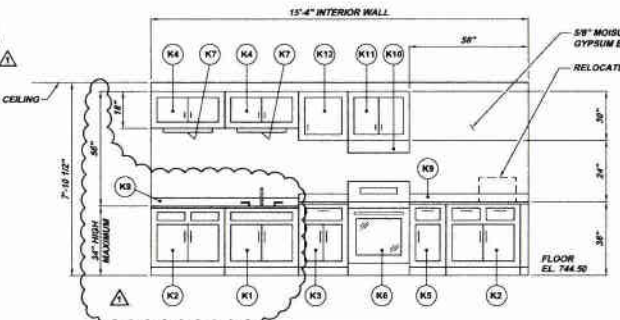
5173 D. BARBER LN. SUITE 100
PITTSBURGH, PA 15205
PHONE: 412-944-9310
FAX: 412-944-9311
WWW.KLHENGINEERS.COM



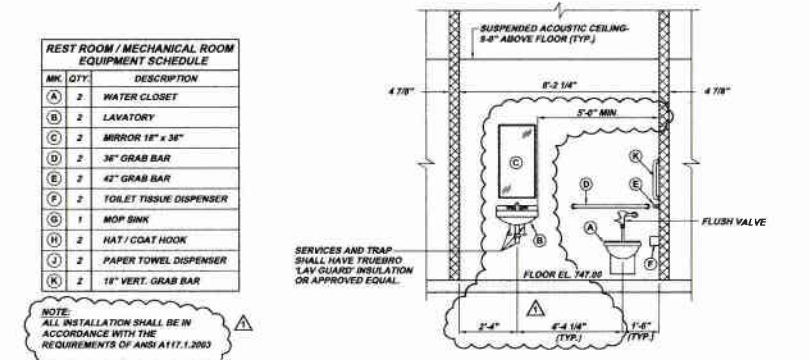
ADMINISTRATION EXPANSION FLOOR PLAN AE12-A
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN AE11-A

KITCHEN LEGEND

MK	DESCRIPTION
K1	36" SINK BASE CABINET WITH ACCESSIBLE SINK AND FAUCET SET
K2	36" DRAWER / CUPBOARD BASE CABINET
K3	24" DRAWER BASE CABINET
K4	36" W x 18" HIGH WALL CABINET
K5	18" DRAWER BASE CABINET
K6	36" GAS RANGE
K7	UNDER CABINET LIGHT
K8	REFRIGERATOR RELOCATED
K9	COUNTER TOP W/ 4" HIGH BACKSPASH
K10	36" RANGE HOOD
K11	30" W x 36" HIGH WALL CABINET
K12	24" W x 36" HIGH WALL CABINET



SECTION AE12-B
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN AE12-A

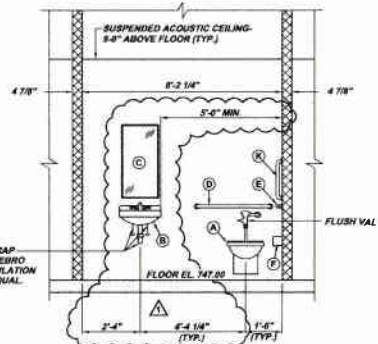


UNISEX RESTROOM PLAN AE12-C
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN AE11-A

REST ROOM / MECHANICAL ROOM EQUIPMENT SCHEDULE

MK	QTY	DESCRIPTION
A	2	WATER CLOSET
B	2	LAVATORY
C	2	MIRROR 18" x 36"
D	2	36" GRAB BAR
E	2	42" GRAB BAR
F	2	TOILET TISSUE DISPENSER
G	1	MOP SINK
H	2	HAT / COAT HOOK
J	2	PAPER TOWEL DISPENSER
K	2	18" VERT. GRAB BAR

NOTE: ALL INSTALLATION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ANS A117.1, 2003



SECTION AE12-D
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN AE12-C

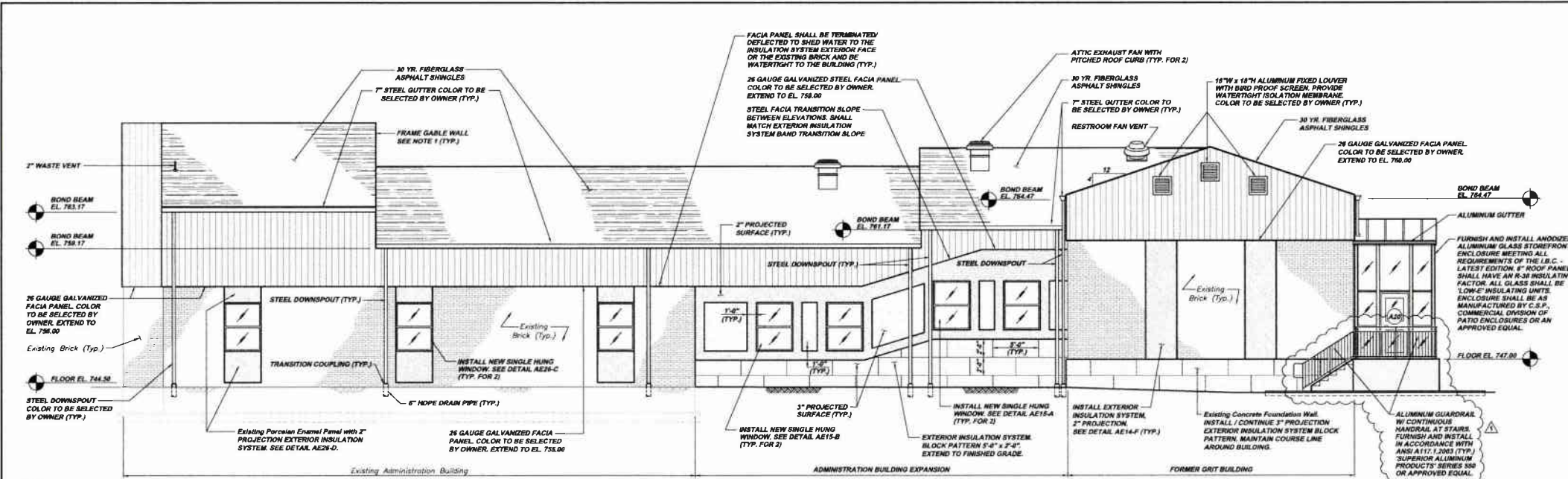
NOTE: ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED. Items Identified with Mixed Case Text are Existing.

KLH ENGINEERS, INC.

**MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 ADMINISTRATION BUILDING EXPANSION PLANS AND SECTIONS**

As Shown	Date	By	Checked By	Approved By
12011	AUGUST 2010	DWB	RHM	SHG

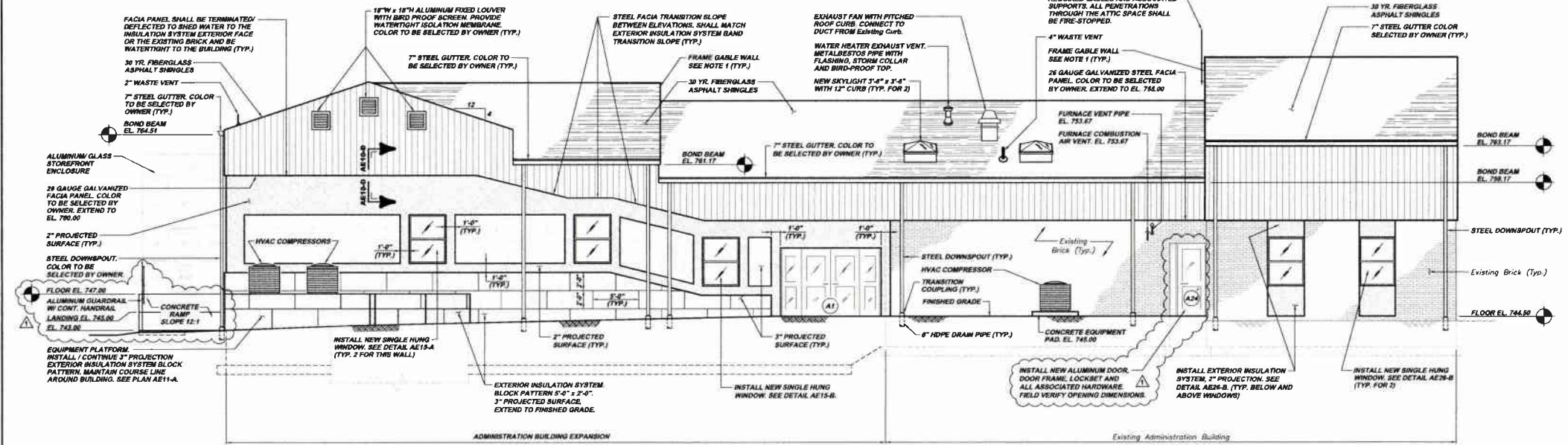
Scale: 3/8" = 1'-0"
 Drawing No. 220-AE12-A1
 Sheet No. 9



NOTES:

1. CONTRACTOR SHALL CONSTRUCT FRAME GABLE WALL ABOVE LOW ROOF LINE. INSTALL STUDS 16" CENTER TO CENTER AND FINISH AREA ABOVE LOW ROOF WITH CELOTEX TUFF R GA 3000 EXTERNAL SHEATHING TAPE ALL JOINTS WITH SELF-ADHESIVE CELOTEX TAPE. INSTALL ALUMINUM BASE FLASHING AND CAP FLASHING AT BUILDING WALL. BASE FLASHING TO BE INSTALLED WITH EACH COURSE OF SHINGLES. THE UPPER EDGE OF EACH PIECE OF FLASHING SHALL EXTEND A MINIMUM OF 3 INCHES ABOVE EACH COURSE OF SHINGLES. THE LOWER EDGE SHOULD BE 1/2" ABOVE THE BUTTS OF THE SHINGLES FORMING THE NEXT COURSE. BASE FLASHING MUST EXTEND UP THE WALL AND ONTO THE ROOF MINIMUM 4" CAP FLASHING SHALL COVER THE BASE FLASHING 4" MINIMUM. STEP IN CAP FLASHING SHALL NOT EXCEED MAXIMUM OF 8". FINISH SURFACE SHALL BE 26 GA. GALVANIZED STEEL WALL PANELS. COLOR TO BE SELECTED BY OWNER. PANELS TO BE FINISHED AROUND PENETRATIONS TO EXCLUDE WATER AND OR MOISTURE IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. PROVIDE WATER/TIGHT ISOLATION MEMBRANE BETWEEN GALVANIZED WALL PANELS AND ALUMINUM FLASHING (TYP.)

ADMINISTRATION BUILDING SOUTH ELEVATION AEB-A
SCALE: 3/16" = 1'-0"



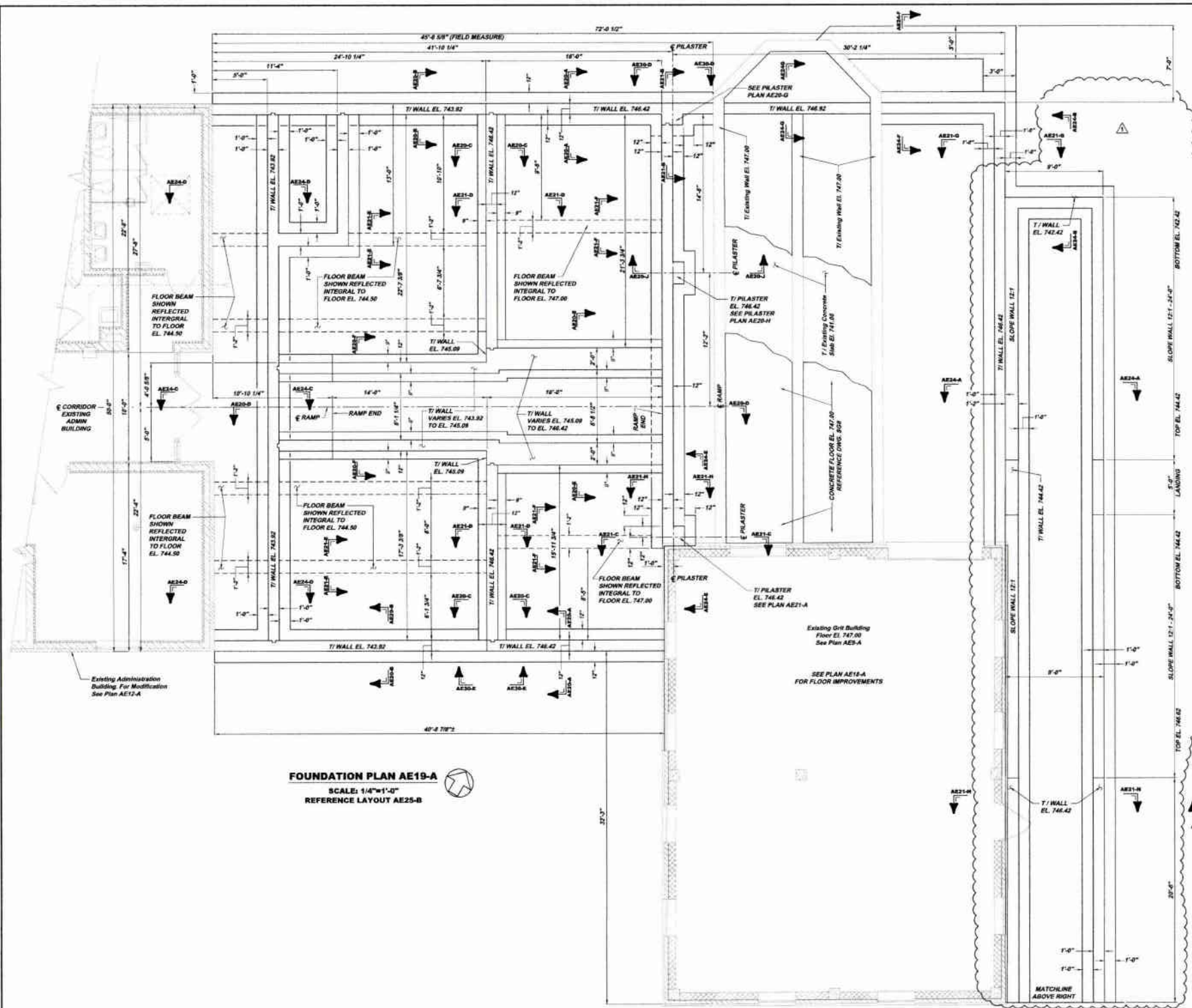
ADMINISTRATION BUILDING NORTH ELEVATION AEB-B
SCALE: 3/16" = 1'-0"

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
ITEMS IDENTIFIED WITH MIXED CASE TEXT ARE EXISTING.

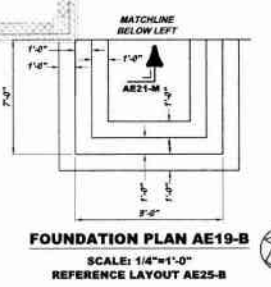
Scale:	As Shown
Date:	AUGUST 2010
Drawn By:	DRP/JEA
Checked By:	DRP
Approved By:	SHD
Sheet No.	10
Drawing No.	220-AE9-A1

5.173 CANFIELD RUN, SUITE 300
 PITTSBURGH, PA 15201
 PHONE: 412-281-2200
 FAX: 412-281-2202
 INFO@KLEINENGINEERS.COM

KLEIN ENGINEERS, INC.
 MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 ADMINISTRATION BUILDING EXPANSION ELEVATIONS



FOUNDATION PLAN AE19-A
 SCALE: 1/4"=1'-0"
 REFERENCE LAYOUT AE25-B



FOUNDATION PLAN AE19-B
 SCALE: 1/4"=1'-0"
 REFERENCE LAYOUT AE25-B

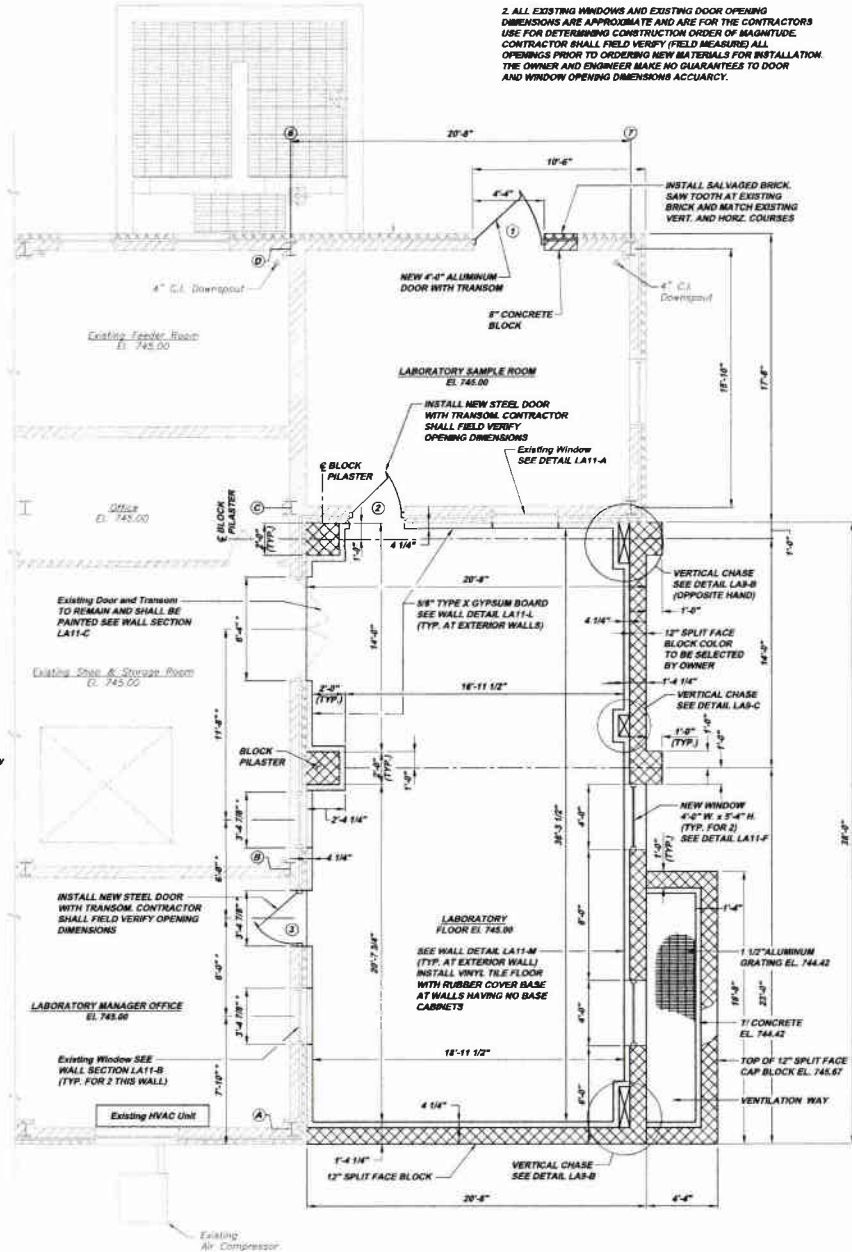
NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items Identified with Mixed Case Text are Existing.

Date	Revision	Released For	By
12/2011	1	RELEASE FOR BID	REYMONS
12/2011	2	REVISIONS	REYMONS

5175 CAMPBELL BLVD. #200 PITTSBURGH, PA 15206 PH: 412-294-0310 FAX: 412-294-0310 INFO@KLHENGINEERS.COM	
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-01 AND 2010-02 WASTEWATER TREATMENT PLANT EXPANSION ADMINISTRATION BUILDING FOUNDATION PLAN	
As Shown: AUGUST 2010 Date: Drawn By: Checked By: Approved By:	Scale: Date: Drawn By: Checked By: Approved By:
Sheet No.	24
Drawing No.	220-AE19 A1

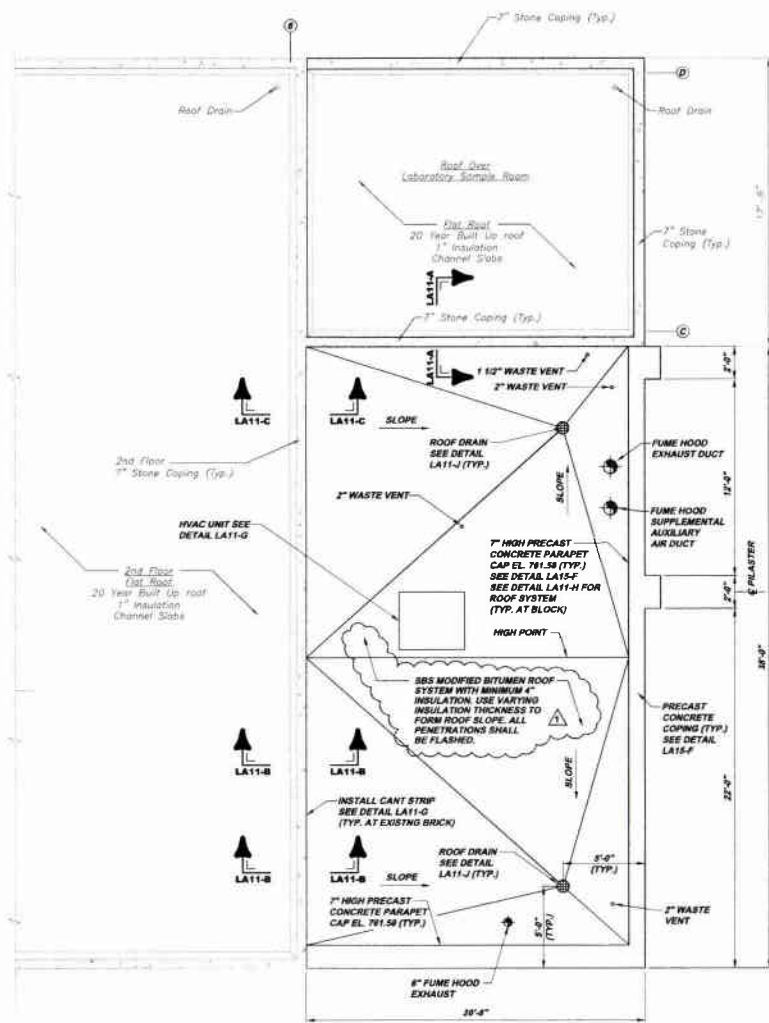
NOTES:

1. ALL WINDOWS SHALL BE ALUMINUM SINGLE HUNG TYPE MATCHING WINDOW UNITS INSTALLED AT THE CBI BUILDING. ALL WINDOW UNITS SHALL BE PROVIDED WITH LOW E GLASS.
2. ALL EXISTING WINDOWS AND EXISTING DOOR OPENING DIMENSIONS ARE APPROXIMATE AND ARE FOR THE CONTRACTORS USE FOR DETERMINING CONSTRUCTION ORDER OF MAGNITUDE. CONTRACTOR SHALL FIELD VERIFY (FIELD MEASURE) ALL OPENINGS PRIOR TO ORDERING NEW MATERIALS FOR INSTALLATION. THE OWNER AND ENGINEER MAKE NO GUARANTEES TO DOOR AND WINDOW OPENING DIMENSIONS ACCURACY.



LABORATORY ADDITION PLAN LAB-A
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN LA12-A

LABORATORY BUILDING DOOR SCHEDULE (ALL HARDWARE US 32 FINISH)										
MARK	LOCATION	QTY.	DOOR DESCRIPTION	DIMENSIONS (ROUGH OPENING)	LOCKSET (SARGENT) (FINISH US 32)	HINGE (FINISH US 32)	CLOSER (LCM)	THRESHOLD (NATIONAL GUARD)	KICKPLATE (ROCK WOOD)	WEATHER-STRIP (NATIONAL GUARD)
1	EXTERIOR SAMPLE ROOM	1	CLINE INSULATED ALUMINUM DOOR HAVING HALF GLASS WITH ALUMINUM FRAME AND TRANSOM. ALL GLASS SHALL BE LOW E.	CONTRACTOR SHALL FIELD VERIFY OPENING DIMENSIONS 4'-4 1/2" x 10'-3 3/8"	MORTISE TYPE PANIC EXIT DEVICE SERIES 8900 ESCUTCHION AND LEVER TRIM SERIES 8100	MCKINNEY STAINLESS STEEL CONTINUOUS TYPE (HEAVY DUTY RATED)	1480 ADA COMPLIANT	425	10" HIGH x .050" EACH PANEL	160 SONS PERIMETER SEAL 101 VORIS SWEEP
2	INTERIOR AT LABORATORY / SAMPLE ROOM	1	CECO CORP HOLLOW METAL DOOR, STEEL FRAME, 3'-4 1/2" x 7'-0" WITH 12"x12" WINDOW WITH WIRE GLASS, 1 1/2 HOUR FIRE RATED WITH TRANSOM	CONTRACTOR SHALL FIELD VERIFY OPENING DIMENSIONS 3'-4 1/2" x 10'-3 3/8"	MORTISE TYPE PANIC EXIT DEVICE SERIES 8900 ESCUTCHION AND LEVER TRIM SERIES 8100	HAUER BB1191	1480 ADA COMPLIANT	—	10" HIGH x .050"	160 SA PERIMETER SEAL
3	INTERIOR AT LABORATORY / LAB MANAGER	1	CECO CORP HOLLOW METAL DOOR, STEEL FRAME, 3'-4 1/2" x 7'-0" WITH 12"x12" WINDOW WITH WIRE GLASS, 1 1/2 HOUR FIRE RATED WITH TRANSOM	CONTRACTOR SHALL FIELD VERIFY OPENING DIMENSIONS	MORTISE TYPE PANIC EXIT DEVICE SERIES 8900 ESCUTCHION AND LEVER TRIM SERIES 8100	HAUER BB1191	1480 ADA COMPLIANT	—	10" HIGH x .050"	160 SA PERIMETER SEAL



LABORATORY ADDITION ROOF PLAN LAB-B
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN LAB-A

NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items identified with lower case text are existing.

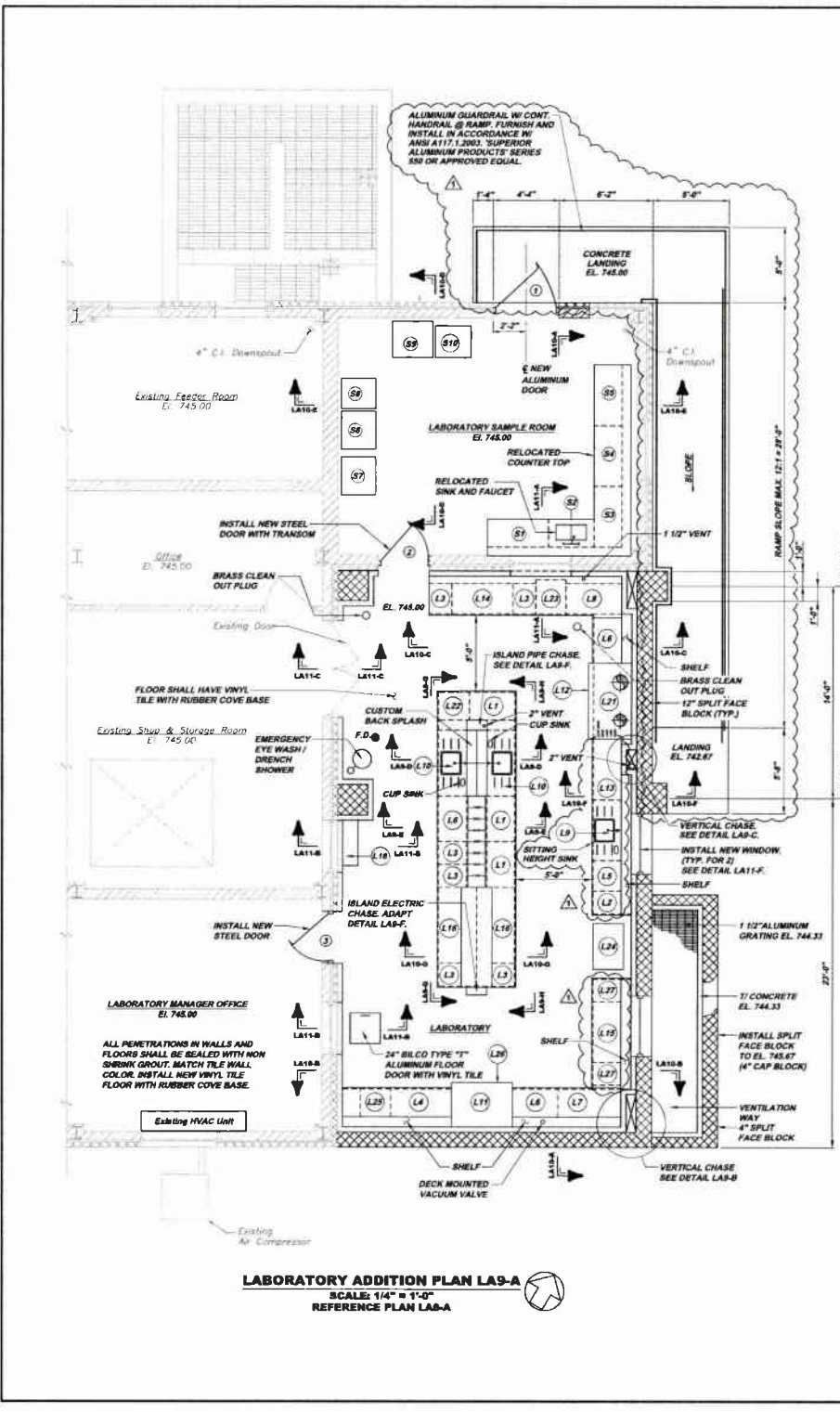
5172 CAMPBELL BLVD. SUITE 100
 PITTSBURGH, PA 15205
 PHONE: 412-224-0424
 FAX: 412-224-0424
 INFO@KLHENGINEERS.COM

KLH ENGINEERS, INC.

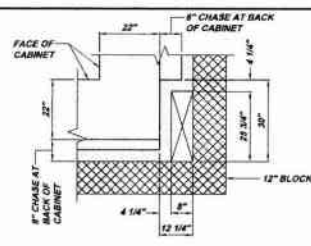
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 LABORATORY ADDITION PLANS AND DETAILS

Scale:	Date:	Drawn By:	Checked By:
As Shown	AUGUST 2010	DMB	RDH
Sheet No.:	6	Approved By:	BHS

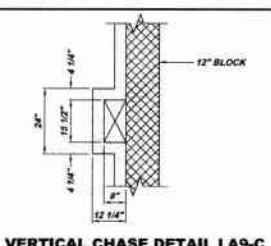
Drawing No. **220-LAB_A1**



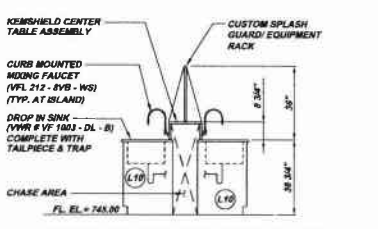
LABORATORY ADDITION PLAN LA9-A
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN LAB-A



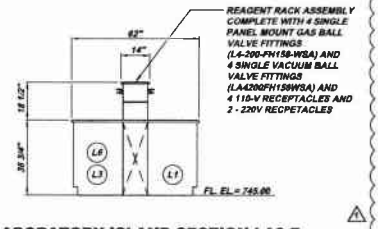
VERTICAL CHASE DETAIL LA9-B
 SCALE: 1/2" = 1'-0"
 REFERENCE PLAN LA9-A
 (TYPICAL AND OPPOSITE HAND)



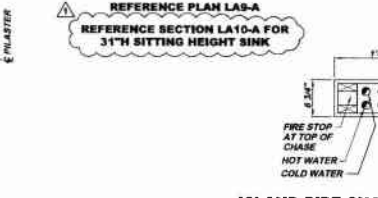
VERTICAL CHASE DETAIL LA9-C
 SCALE: 1/2" = 1'-0"
 REFERENCE PLAN LA9-A



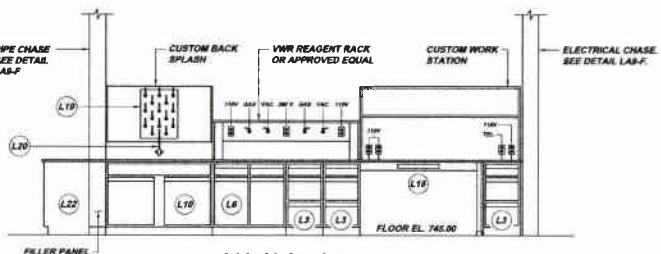
LABORATORY ISLAND SECTION LA9-D
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN LA9-A
 REFERENCE SECTION LA10-A FOR
 31" SITTING HEIGHT SINK



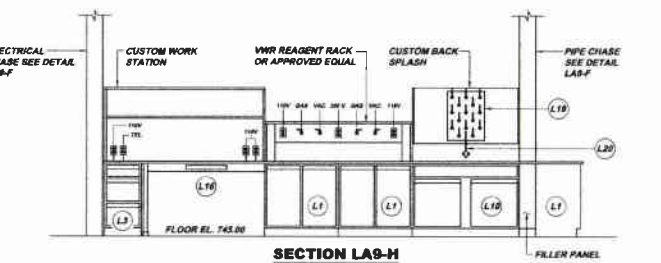
LABORATORY ISLAND SECTION LA9-E
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN LA9-A



ISLAND PIPE CHASE DETAIL LA9-F
 SCALE: 1" = 1'-0"



SECTION LA9-G
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN LA9-A



SECTION LA9-H
 SCALE: 3/8" = 1'-0"
 REFERENCE PLAN LA9-A

LABORATORY LEGEND	
MARK	DESCRIPTION (UNLESS OTHERWISE NOTED, VWR SCIENTIFIC PRODUCTS OR APPROVED EQUAL)
(L1)	36" Cupboard Cabinet CFC-2636-12
(L2)	18" Drawer Cabinet (Sitting Height) CFD-1262-19
(L3)	18" Drawer Cabinet CFD-2812-10 (2 File Drawers w/ Hangers)
(L4)	48" Drawer Cabinet CFD-2318-19
(L5)	24" Cupboard and Drawer Cabinet (Sitting Height) CFE-1464-12
(L6)	36" Cupboard and Drawer Cabinet CFE-2416-13
(L7)	48" Left Side Blind Corner Cabinet CFO-2128-12
(L8)	48" Right Side Blind Corner Cabinet CFO-2136-13
(L9)	48" Sink Cabinet (Sitting Height) "Keveunes" G06M312246-0206, Drop In Sink VF-1003-01-B
(L10)	32" Sink Cabinet CFC-2648-F22, Drop-In Sink VF-1003-01-B
(L11)	48" Steel Fume Hood Base Cabinet CFO 2668-0F2 (FOR RELOCATED HOOD)
(L12)	60" Steel Fume Hood Base Cabinet, 1/2 Acid BCFG-ACID-301 on Right Side and 1/2 Flammable BCFG-SOLV-301, Work Top R205 A8 Cup Sink VF 0481-08
(L13)	48" Cupboard Cabinet (Sitting Height) CFC-1418-12
(L14)	36" One Drawer Table Apron (Standing Height), Pedestal Leg, Knee Space Filler CFA0182228-03
(L15)	48" One Drawer Table Apron (Sitting Height), Pedestal Leg, Knee Space Filler CFA0182228-02
(L16)	80" One Drawer Table Apron Pedestal Leg, Knee Space Filler CFA02M2260-03
(L17)	36" Wall Cabinet with Sliding Glass Doors CFW-M2636-0L
(L18)	36" Full Height Storage Cabinet CFS-2116-01
(L19)	Framed Glass Door CFS-3011-00 and Lock CFF-5304-07Y
(L20)	Mod-Rack (RedShip) S.S. Pegboard VFS-V1824
(L21)	Curb Mounted Gooseneck Faucet with Vacuum Breaker Cat. No. VFL212-6V8-4W
(L22)	80" Steel Fume Hood HS-80X1480 and Hood Trim Package CFS-8026-C7 Pre-Plumbed for 2 Services, Complete with Gooseneck Faucet, Digital Air Velocity Alarm, and 2 110V Receptacles on Face, Work Top VFS-2265-A1
(L23)	24" Under Counter Refrigerator Marvel Scientific Model No. 8CAR
(L24)	Undercounter Steam Scrubber Catalog No. 82020-622
(L25)	VWR Balance Table 12567-330
(L26)	24" Cupboard Cabinet CFC-2634-0L2 (Swings Left)
(L27)	Relocated 48" Hood
(L28)	18" Drawer Cabinet (Sitting Height) CFD-1812-10

LABORATORY SAMPLE ROOM LEGEND	
MARK	DESCRIPTION
(S1)	RELOCATED 48" Base Cabinet
(S2)	RELOCATED 36" Sink Base Cabinet
(S3)	RELOCATED 48" Base Corner Cabinet
(S4)	RELOCATED 48" Drawer / Cupboard Base Cabinet
(S5)	RELOCATED 48" Drawer / Cupboard Base Cabinet
(S6)	RELOCATED Incubator 2'-3" x 2'-4" x 6'-4"
(S7)	RELOCATED Incubator 2'-4" x 2'-3" x 5'-0"
(S8)	RELOCATED Incubator 2'-3" x 2'-0" x 4'-8"
(S9)	RELOCATED Incubator 2'-4" x 2'-4" x 6'-4"
(S10)	RELOCATED Incubator 2'-4" x 2'-1" x 5'-2"

NOTE:
 All Furniture Identified Above is Relocated from Existing Laboratory Annex. All Incubators are Existing and RELOCATED.

KLH ENGINEERS, INC.

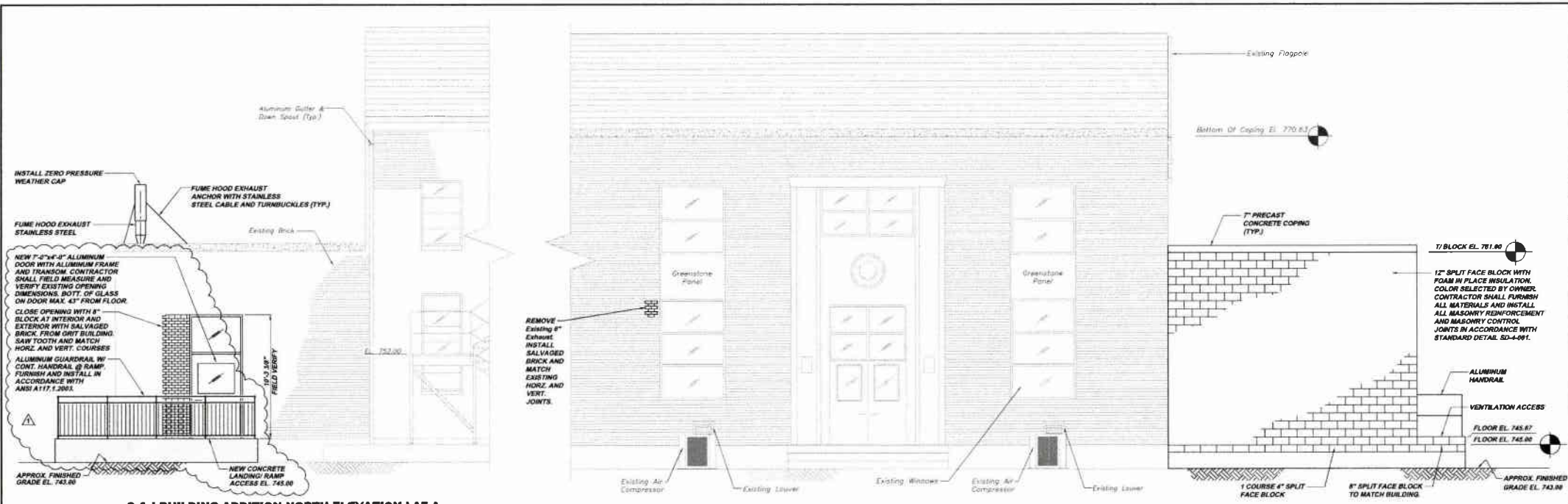
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 LABORATORY ADDITION PLAN AND DETAILS

As Shown: AUGUST 2010
 Date: AUGUST 2010
 Drawn By: DBS
 Checked By: MSH
 Approved By: SHG

Revision: 7
 Date: _____
 Description: _____

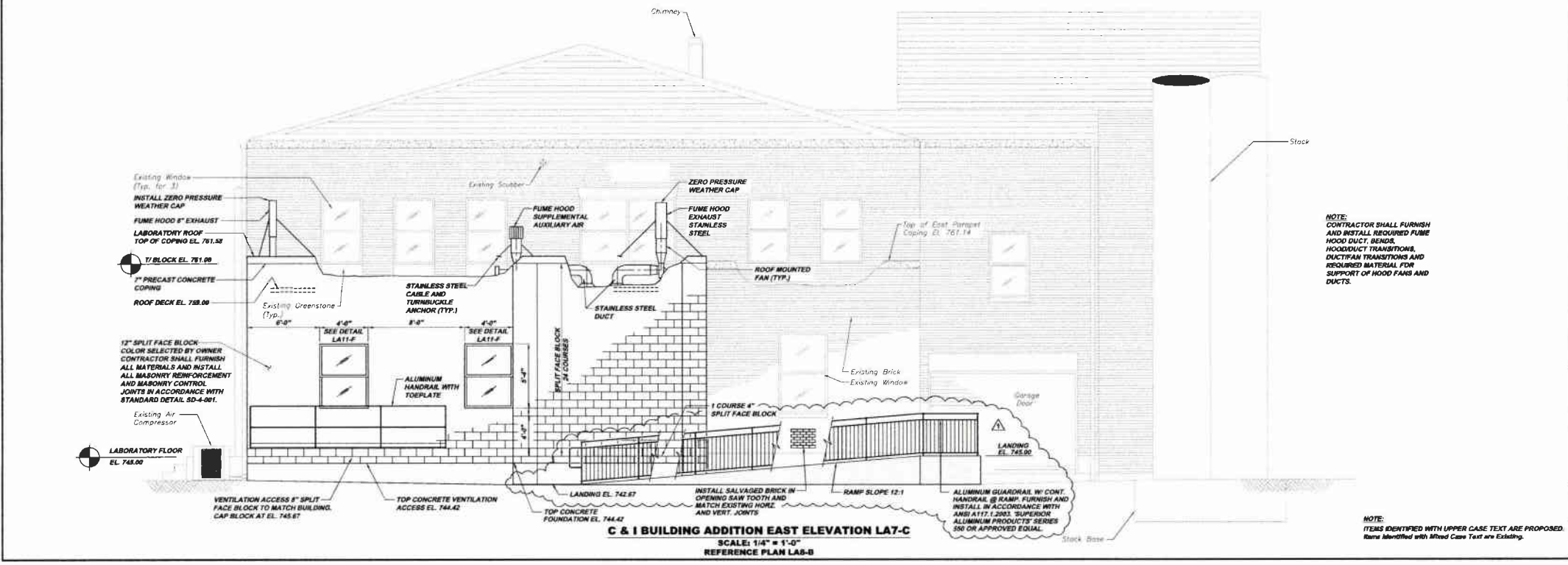
Release for Bid: _____
 Code Compliance: _____
 Revisions: _____

Scale: 1/4" = 1'-0"
 Drawing No. 220-LA9-A1



C & I BUILDING ADDITION NORTH ELEVATION LA7-A
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN LAB-B

C & I BUILDING ADDITION SOUTH ELEVATION LA7-B
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN LAB-B

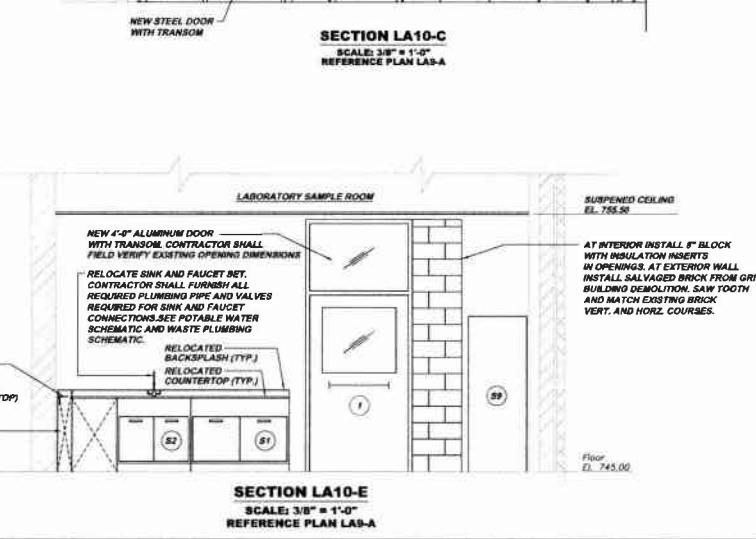
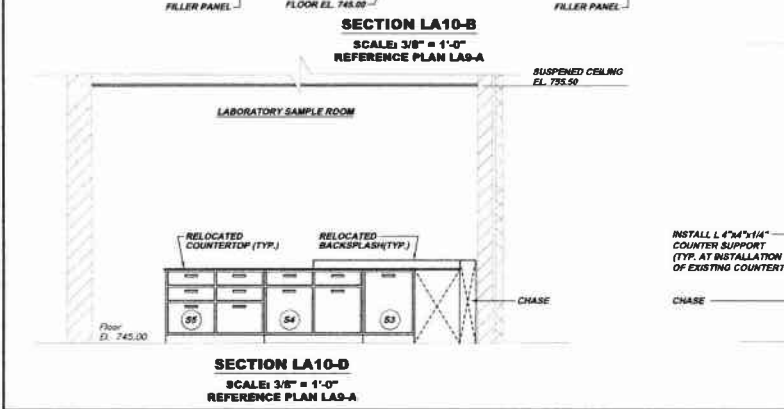
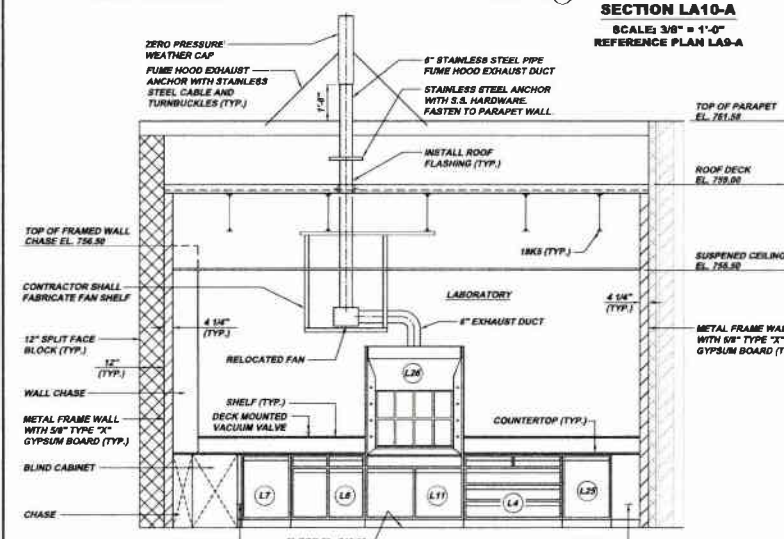
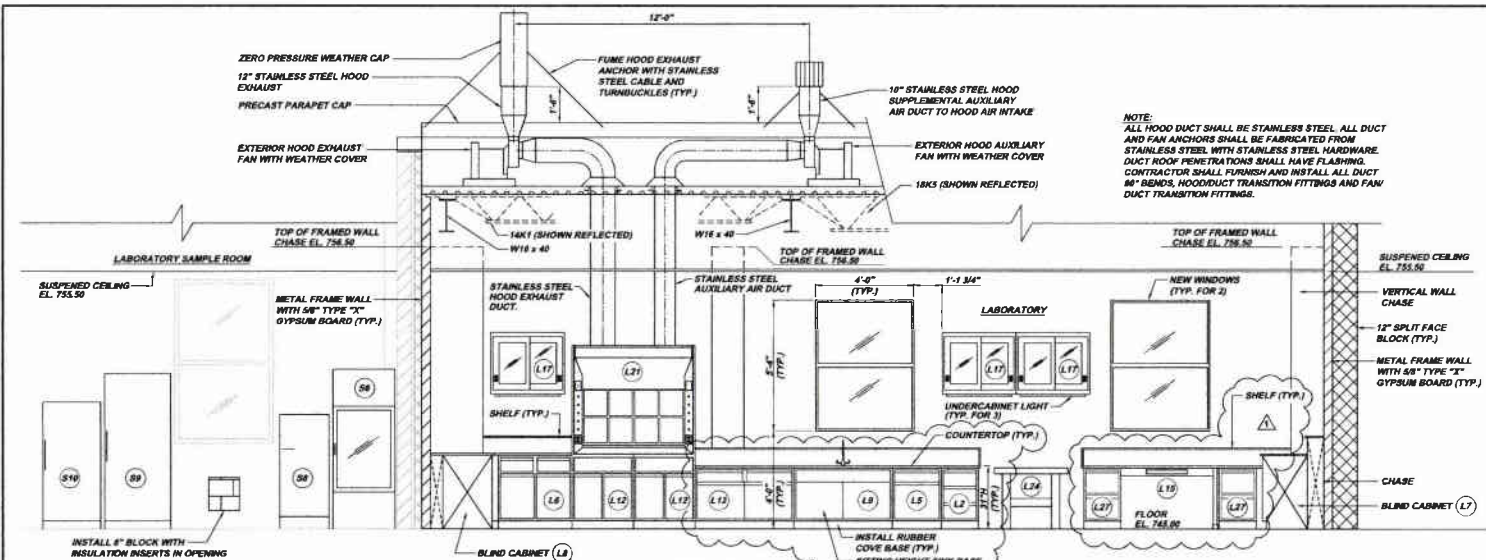


C & I BUILDING ADDITION EAST ELEVATION LA7-C
 SCALE: 1/4" = 1'-0"
 REFERENCE PLAN LAB-B

NOTE:
 CONTRACTOR SHALL FURNISH AND INSTALL REQUIRED FUME HOOD DUCT, BENDS, HOOD/DUCT TRANSITIONS, DUCT/FAN TRANSITIONS AND REQUIRED MATERIAL FOR SUPPORT OF HOOD FANS AND DUCTS.

NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items Identified with Mixed Case Text are Existing.

Revision	Date	Revision	Date
1-2011	1-2011	RELEASE FOR BID	1-2011
2-2011	2-2011	CODE COMPLIANCE	2-2011
3-2011	3-2011	REVISIONS	3-2011
5173 S. HARPER AVE. SUITE 100 PITTSBURGH, PA 15206 PHONE: 412-494-0310 FAX: 412-494-0310 INFO@KLHENGINEERS.COM			
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-01 AND 2010-02 WASTEWATER TREATMENT PLANT EXPANSION LABORATORY ADDITION ELEVATIONS			
Scale:	As Shown	As Shown	As Shown
Date:	AUGUST 2010	AUGUST 2010	AUGUST 2010
Drawn By:	DMB	DMB	DMB
Checked By:	RDF	RDF	RDF
Approved By:	EHJ	EHJ	EHJ
Sheet No.	8		
Drawing No.	220-LA7-A1		

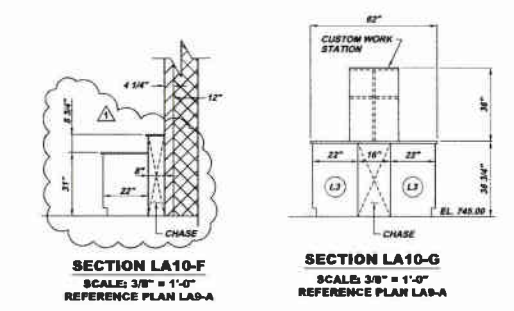


LABORATORY LEGEND	
MARK	DESCRIPTION
(L1)	36" Cupboard Cabinet CFC-2036-12
(L2)	18" Drawer Cabinet (Sitting Height) CFD-1262-10
(L3)	18" Drawer Cabinet CFD-2315-10 (2 File Drawers w/ Hangers)
(L4)	48" Drawer Cabinet CFD-2315-18
(L5)	24" Cupboard and Drawer Cabinet (Sitting Height) CFE-1404-12
(L6)	36" Cupboard and Drawer Cabinet CFE-2418-12
(L7)	48" Left Side Blind Corner Cabinet CFC-2138-12
(L8)	48" Right Side Blind Corner Cabinet CFC-2138-12
(L9)	48" Sink Cabinet (Sitting Height) "Kneeurser" 00MM12248-0209, Drop-In Sink VF-1003-D4-B
(L10)	52" Sink Cabinet CFC-2049-F22, Drop-In Sink VF-1003-D4-B
(L11)	48" Steel Fume Hood Base Cabinet CFC-2088-0V2 (FOR RELOCATED HOOD)
(L12)	80" Steel Fume Hood Base Cabinet, 1/2 Acid 8CFG-AC10-301 on Right Side and 1/2 Flammable 8CFG-SOLV-301, Work Top 8295 A8 Cup Sink VF-0491-08
(L13)	48" Cupboard Cabinet (Sitting Height) CFC-1418-12
(L14)	36" One Drawer Table Apron (Standing Height), Pedestal Leg, Knee Space Filler CFA01M2216-03
(L15)	48" One Drawer Table Apron (Sitting Height), Pedestal Leg, Knee Space Filler CFA01M2248-03
(L16)	60" One Drawer Table Apron Pedestal Leg, Knee Space Filler CFA02M260-03
(L17)	36" Wall Cabinet with Sliding Glass Doors CFV-M036-DL
(L18)	38" Full Height Storage Cabinet CFS-2116-01
(L19)	Framed Glass Door CFS-3611-06 and Lock CFF-0304-0W
(L20)	Mod-Rack (RedShip) 9.3. Pegboard VFB1634
(L21)	Curt Mounted Geoscreening Faucet with Vacuum Breaker Cat. No. VFL212-9VB-W9
(L22)	60" Steel Fume Hood K5-02K5660 and Hood Trim Package CFS-8026-C7 Pre-Plumbed for 2 Services, Complete with Geoscreen Faucet, Digital Air Velocity Alarm, and 2 110V Recaptacles on Face, Work Top VFS-0295-A1
(L23)	24" Under Counter Refrigerator Marvel Scientific Model No. 6CAR
(L24)	Undercounter Steam Scrubber Catalog No. 62020-822
(L25)	VWR Balance Table 12547-330
(L26)	24" Cupboard Cabinet CFC-2034-0L2 (Swings Left)
(L27)	Relocated 48" Hood
(L28)	18" Drawer Cabinet (Sitting Height) CFD-1812-10

FURNISH 16 GAUGE METAL WALL ANGLES ATTACHED TO THE WALL TO SUPPORT THE REAR CHANGING OF MONITORS AND WALL TABLE SERVICE LEDGES AS NEEDED. FURNISH PIPE CHASE CORNER END AND REAR SCRIBE EXISTING FILLER PANEL ASSEMBLY AS NEEDED TO COMPLETE CABINETRY.

LABORATORY SAMPLE ROOM LEGEND	
MARK	DESCRIPTION
(S1)	RELOCATED 48" Base Cabinet
(S2)	RELOCATED 36" Sink Base Cabinet
(S3)	RELOCATED 48" Base Corner Cabinet
(S4)	RELOCATED 48" Drawer / Cupboard Base Cabinet
(S5)	RELOCATED 48" Drawer / Cupboard Base Cabinet
(S6)	RELOCATED Incubator 2'-3" x 2'-4" x 8'-4"
(S7)	RELOCATED Incubator 2'-6" x 2'-3" x 8'-0"
(S8)	RELOCATED Incubator 2'-3" x 2'-0" x 4'-8"
(S9)	RELOCATED Incubator 2'-8" x 2'-4 1/2" x 8'-4"
(S10)	RELOCATED Incubator 2'-4" x 2'-1" x 8'-3"

NOTE:
All Furniture Identified Above is Relocated from Existing Laboratory Annex. All Incubators are Existing and RELOCATED.



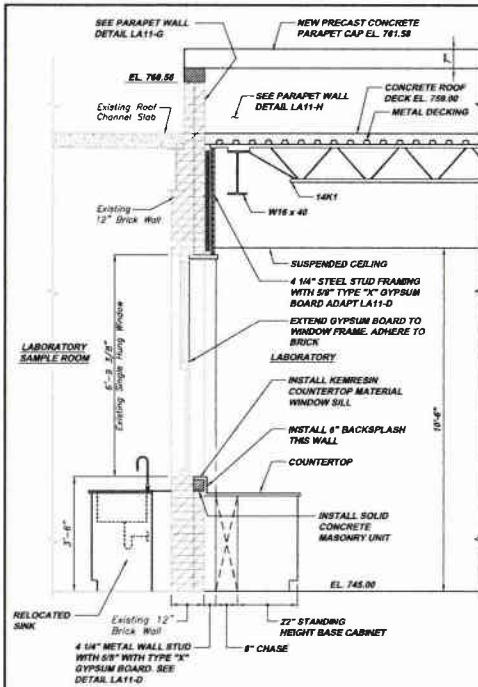
NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Mixed Case Text are Existing.

KLH ENGINEERS, INC.

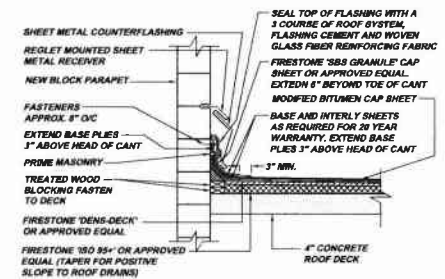
MUNICIPAL AUTHORITY OF THE CITY OF MCKESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
LABORATORY ADDITION SECTIONS

Scale: As Shown
Date: AUGUST 2019
Drawn By: DMB
Checked By: MCH
Approved By: SHS

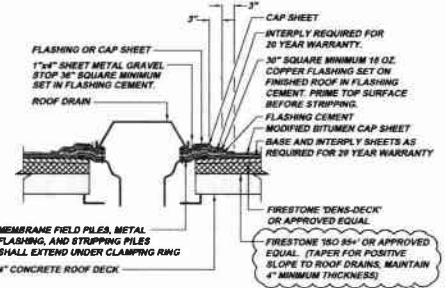
Sheet No. 9
Drawing No. 220-LA10-A1



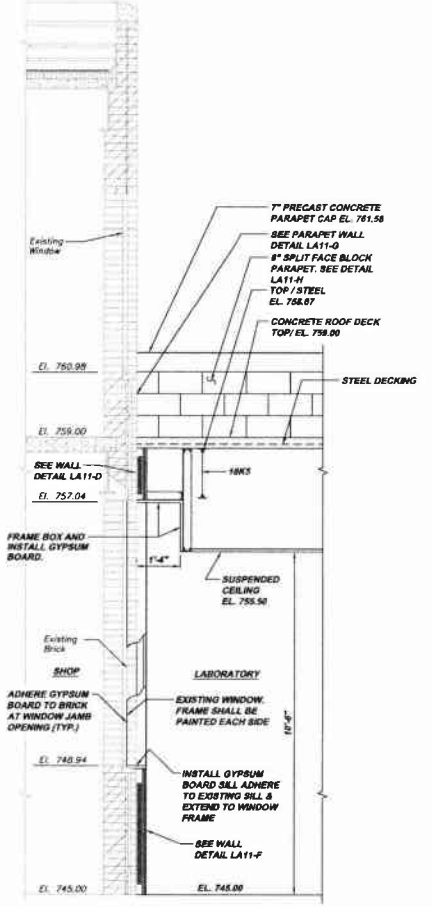
WALL SECTION LA11-A
SCALE: 1/2" = 1'-0"
REFERENCE PLAN LAB-A



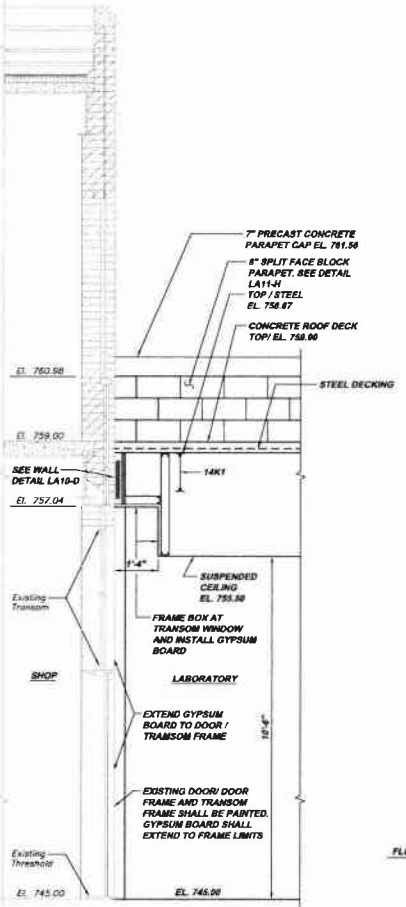
PARAPET WALL DETAIL LA11-H
NOT TO SCALE



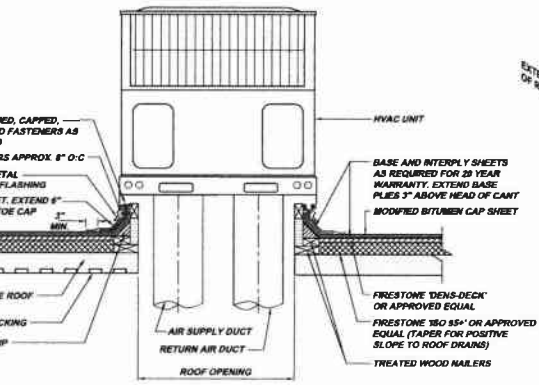
ROOF DRAIN DETAIL LA11-J
NOT TO SCALE



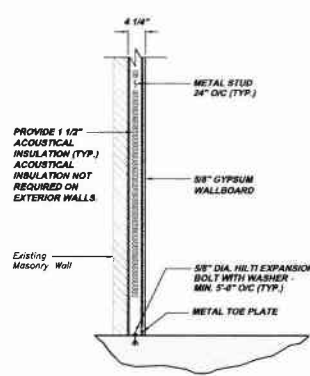
WALL SECTION LA11-B
SCALE: 1/2" = 1'-0"
REFERENCE PLAN LAB-A



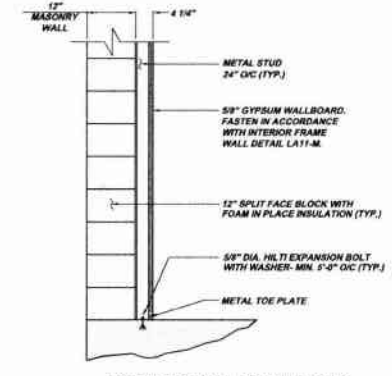
WALL SECTION LA11-C
SCALE: 1/2" = 1'-0"
REFERENCE PLAN LAB-A



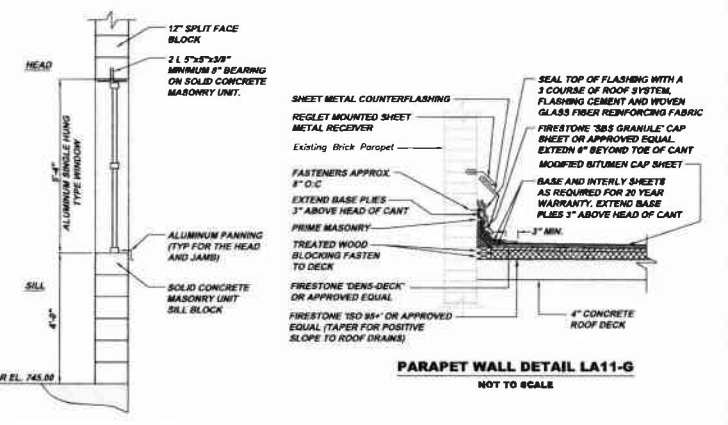
HVAC DETAIL LA11-K
NOT TO SCALE



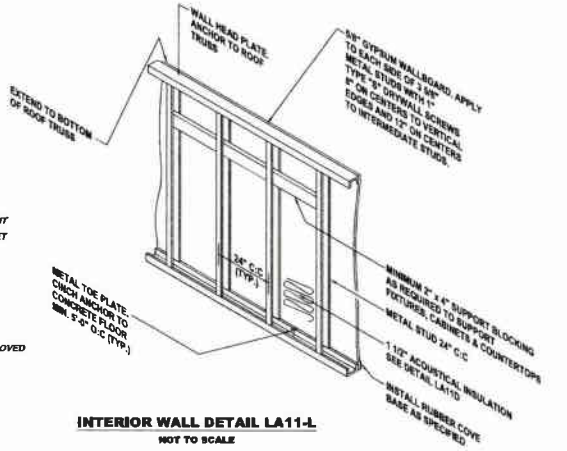
INTERIOR WALL DETAIL LA11-D
SCALE: 3/4" = 1'-0"
(TYP. AT OFFICE)



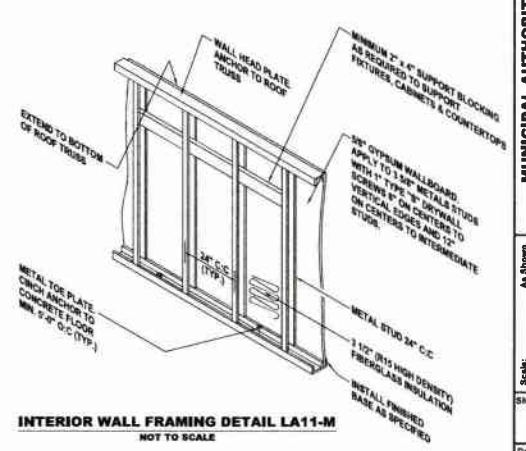
EXTERIOR WALL DETAIL LA11-E
SCALE: 3/4" = 1'-0"
(TYP. AT OFFICE)



WINDOW DETAIL LA11-F
SCALE: 1/2" = 1'-0"
REFERENCE PLAN LAB-A



INTERIOR WALL DETAIL LA11-L
NOT TO SCALE



INTERIOR WALL FRAMING DETAIL LA11-M
NOT TO SCALE

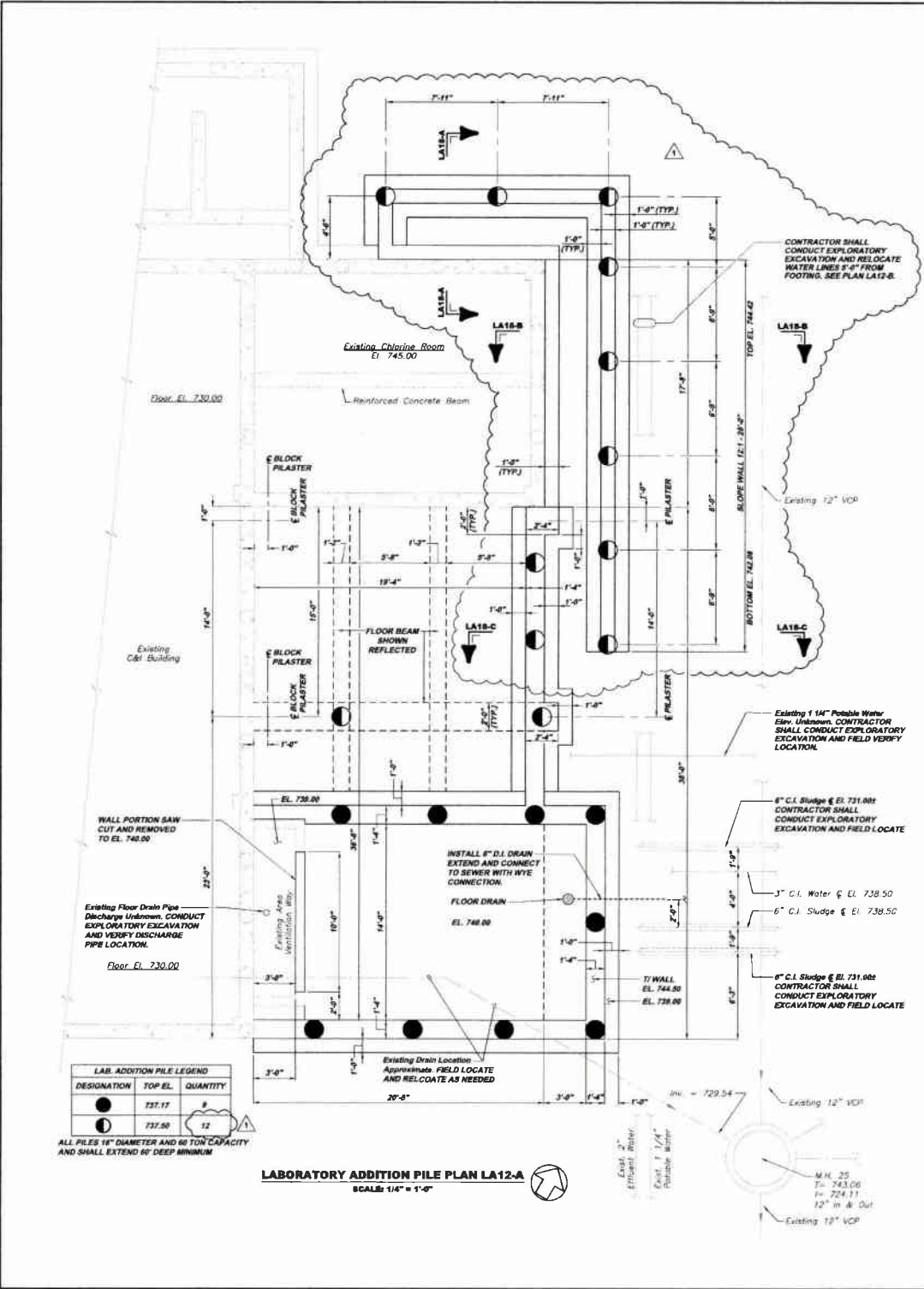
NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Mixed Case Text are Existing.

Scale:	As Shown	Revision	
Date:	AUGUST 2018	Rev	
Drawn By:	DMB	Release for Bid	
Checked By:	RDM	Code Compliance	
Approved By:	SHG	Resubmit	
Sheet No.:	10	Drawn No.:	220-LA11-A1

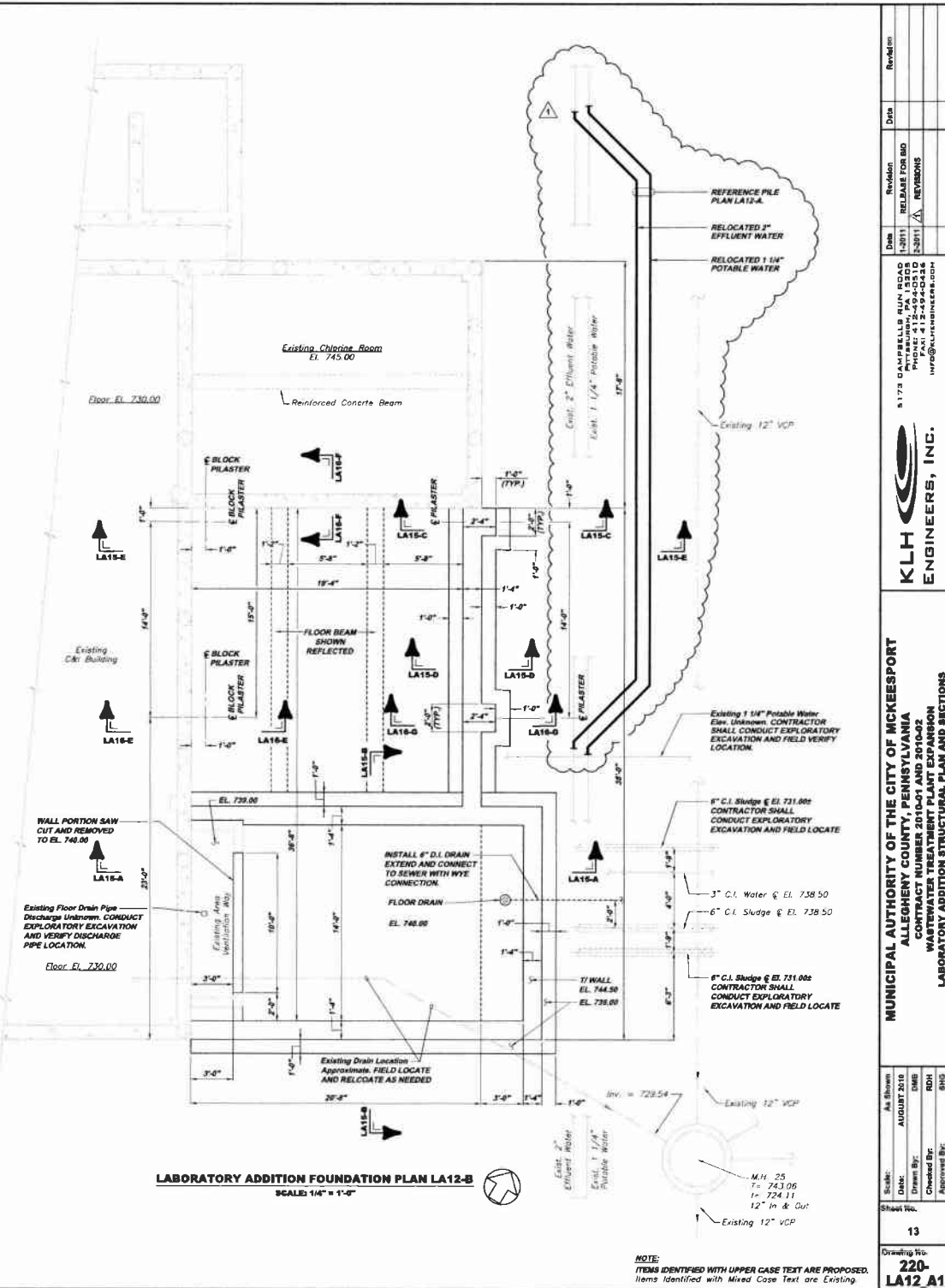
KLH ENGINEERS, INC.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
LABORATORY ADDITION SECTIONS AND DETAILS

5173 CAMPBELL BLVD. SUITE 1000
PITTSBURGH, PA 15204
PHONE: 412-261-3333
FAX: 412-261-3330
INFO@KLHENGINEERS.COM



LABORATORY ADDITION PILE PLAN LA12-A
SCALE: 1/4" = 1'-0"



LABORATORY ADDITION FOUNDATION PLAN LA12-B
SCALE: 1/4" = 1'-0"

Revision	Date	Revision	Date
1-2011	RELEASE FOR BID	2-2011	REVISED
2-2011	REVISED		

5175 OAKLAND BLVD., SUITE 200
 HARRISBURG, PA 17109
 Phone: 717-654-0010
 Fax: 717-654-0011
 info@klh-engineers.com

KLH ENGINEERS, INC.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 LABORATORY ADDITION STRUCTURAL PLAN AND SECTIONS

Scale:	As Shown
Date:	AUGUST 2010
Drawn By:	DMB
Checked By:	RDH
Approved By:	9MS

Sheet No. 13
 Drawing No. 220-LA12-A1

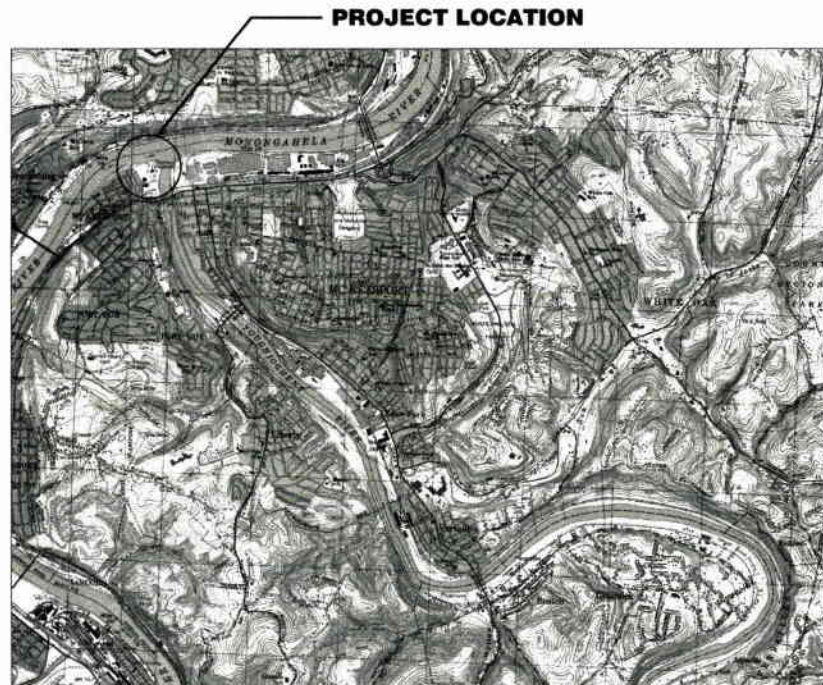
NOTE:
 ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
 Items identified with Mixed Case Text are Existing.

MUNICIPAL AUTHORITY OF THE CITY OF McKEESPORT

ALLEGHENY COUNTY, PENNSYLVANIA

CONTRACT No. 2010-01 GENERAL/ MECHANICAL CONSTRUCTION CONTRACT No. 2010-02 ELECTRICAL CONSTRUCTION WASTEWATER TREATMENT PLANT EXPANSION

PART 1 of 2



LOCATION MAP
SCALE: 1" = 2000'

UTILITIES LIST

DUQUESNE LIGHT COMPANY
2825 NEW BEAVER AVE.
PITTSBURGH, PA. 15233
CONTACT: PAM MEHAUS

VERIZON PENNSYLVANIA INC.
201 STANWIX ST. 4TH FLOOR
PITTSBURGH, PA. 15222

COMCAST
5211 BROWNSVILLE RD.
PITTSBURGH, PA. 15236

MUNICIPAL AUTHORITY OF
WESTMORELAND COUNTY
124 PARK & POOL RD.
NEW STANTON, PA. 15672
CONTACT: DONALD GUERRA

EQUITABLE GAS COMPANY
200 ALLEGHENY CENTER MALL
PITTSBURGH PA. 15212
CONTACT: ENGINEERING DEPT.

CITY OF McKEESPORT
500 FIFTH AVENUE
McKEESPORT, PA. 15132
CONTACT: NICKOLAS J. SHERMENTI

FIBER TECHNOLOGIES NETWORKS LLC
300 MERIDIAN CENTRE
ROCHESTER, NY. 14618

VERIZON BUSINESS
2400 N. GLENVILLE
RICHARDSON, TX. 75082
CONTACT: DEAN BOYERS

MUNICIPAL AUTHORITY OF THE
CITY OF McKEESPORT
100 ATLANTIC AVE.
McKEESPORT, PA. 15132

UNITED STATES STEEL CORP.
C/O POWER PIPING CO.
602 HELENA ST.
WEST MIFFLIN PA

**RELEASE FOR BID
JANUARY, 2011
REVISED
OCTOBER, 2009
DEP SUBMITTAL
JULY 31, 2009**

KLH 
ENGINEERS, INC.
5173 CAMPBELLS RUN ROAD
PITTSBURGH, PA 15205

NOTE: IN ACCORDANCE WITH THE PENNSYLVANIA UNDERGROUND UTILITY LINE PROTECTION LAW, ACT 287 OF 1974 AS AMENDED BY ACT 199 OF 2004, THE CONTRACTOR MUST NOTIFY ALL UTILITY COMPANIES PRIOR TO EXCAVATION FOR FIELD LOCATION AND SIZE CONFORMATION. AT LEAST THREE (3) DAYS NOTIFICATION PRIOR TO THE ACTUAL START OF EXCAVATION IS REQUIRED. UTILITIES CAN BE NOTIFIED THROUGH THE PENNSYLVANIA ONE CALL SYSTEM, INC. BY CALLING 1-800-242-1776. THE PENNSYLVANIA ONE CALL DESIGN SERIAL NUMBER FOR THIS PROJECT IS 3055742

MUNICIPAL AUTHORITY OF THE CITY OF McKEESPORT

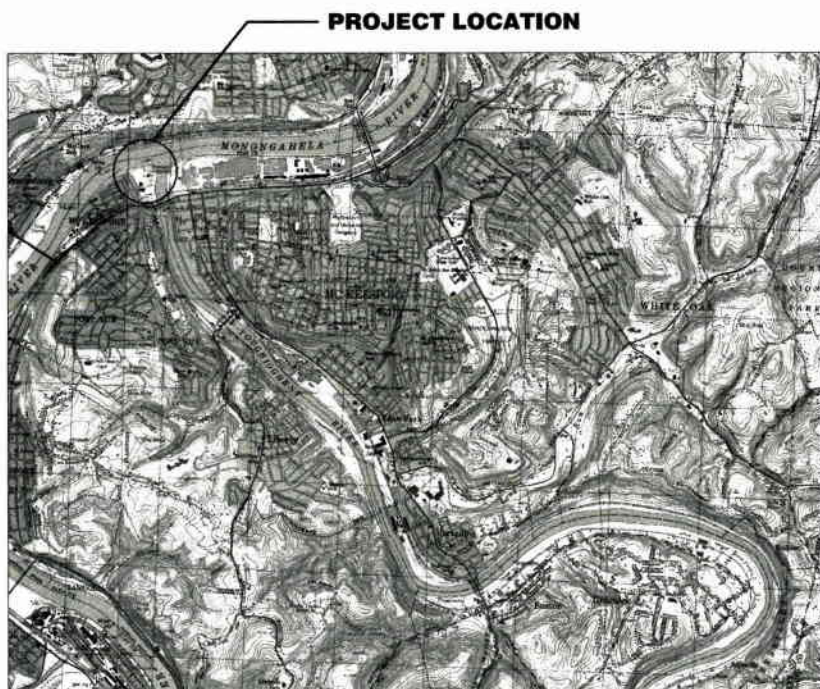
ALLEGHENY COUNTY, PENNSYLVANIA

CONTRACT No. 2010-01 GENERAL/ MECHANICAL CONSTRUCTION

CONTRACT No. 2010-02 ELECTRICAL CONSTRUCTION

WASTEWATER TREATMENT PLANT EXPANSION

PART 2 of 2



LOCATION MAP

SCALE: 1" = 2000'

UTILITIES LIST

DUQUESNE LIGHT COMPANY
2925 NEW BEAVER AVE.
PITTSBURGH, PA. 15233
CONTACT: PAM NIEHAUS

COMCAST
5211 BROWNSVILLE RD.
PITTSBURGH, PA. 15236

EQUITABLE GAS COMPANY
200 ALLEGHENY CENTER MALL
PITTSBURGH PA. 15212
CONTACT: ENGINEERING DEPT.

FIBER TECHNOLOGIES NETWORKS LLC
300 MERIDIAN CENTRE
ROCHESTER, NY. 14618

**MUNICIPAL AUTHORITY OF THE
CITY OF McKEESPORT**
100 ATLANTIC AVE.
McKEESPORT, PA. 15132

VERIZON PENNSYLVANIA INC.
201 STAMWIX ST. 4TH FLOOR
PITTSBURGH, PA. 15222

**MUNICIPAL AUTHORITY OF
WESTMORELAND COUNTY**
124 PARK & POOL RD.
NEW STANTON, PA. 15672
CONTACT: DONALD GUERRA

CITY OF McKEESPORT
500 FIFTH AVENUE
McKEESPORT, PA. 15132
CONTACT: NICKOLAS J. SHERMENTI

VERIZON BUSINESS
2400 N. GLENVILLE
RICHARDSON, TX. 75082
CONTACT: DEAN BOYERS

UNITED STATES STEEL CORP.
C/O POWER PIPING CO.
602 HELENA ST.
WEST MIFFLIN PA.

**RELEASE FOR BID
JANUARY, 2011
REVISED
OCTOBER, 2009
DEP SUBMITTAL
JULY 31, 2009**

KLH 
ENGINEERS, INC.
5173 CAMPBELLS RUN ROAD
PITTSBURGH, PA 15205

NOTE: IN ACCORDANCE WITH THE PENNSYLVANIA UNDERGROUND UTILITY LINE PROTECTION LAW, ACT 287 OF 1974 AS AMENDED BY ACT 199 OF 2004, THE CONTRACTOR MUST NOTIFY ALL UTILITY COMPANIES PRIOR TO EXCAVATION FOR FIELD LOCATION AND SIZE CONFORMATION. AT LEAST THREE (3) DAYS NOTIFICATION PRIOR TO THE ACTUAL START OF EXCAVATION IS REQUIRED. UTILITIES CAN BE NOTIFIED THROUGH THE PENNSYLVANIA ONE CALL SYSTEM, INC. BY CALLING 1-800-242-1776. THE PENNSYLVANIA ONE CALL DESIGN SERIAL NUMBER FOR THIS PROJECT IS 3055742

WASTEWATER TREATMENT PLANT EXPANSION DRAWING LIST

GENERAL INFORMATION

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-GI1	TITLE SHEET
2	220-GI2	DRAWING LIST AND DRAWING NUMBER CROSS REFERENCE SHEET 1 OF 2
3	220-GI3	DRAWING LIST AND DRAWING NUMBER CROSS REFERENCE SHEET 2 OF 2

PROCESS FLOW

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-PF1	EXISTING WWTP PROCESS FLOW DIAGRAM
2	220-PF2	PROPOSED WWTP PROCESS FLOW DIAGRAM
3	220-PF3	EXISTING WWTP HYDRAULIC PROFILE
4	220-PF4	PROPOSED WWTP HYDRAULIC PROFILE

GRADING AND EROSION SEDIMENT POLLUTION CONTROL

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-WP1	PROPOSED SITE GRADING & EROSION AND SEDIMENT POLLUTION CONTROL PLAN
2	220-WP2	PROPOSED SITE GRADING & EROSION AND SEDIMENT POLLUTION CONTROL PLAN
3	220-WP3	PROPOSED SITE GRADING & EROSION AND SEDIMENT POLLUTION CONTROL PLAN
4	220-WP4	PROPOSED SITE GRADING & EROSION AND SEDIMENT POLLUTION CONTROL PLAN
5	220-WP5	EROSION AND SEDIMENT POLLUTION CONTROL PLAN
6	220-WP6	EROSION AND SEDIMENT POLLUTION CONTROL PLAN

YARD PIPE PLAN

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-YP1	EXISTING YARD PIPE PLAN SHEET 1 OF 2
2	220-YP2	EXISTING YARD PIPE PLAN SHEET 2 OF 2
3	220-YP3	PROPOSED YARD PIPING PLAN SHEET 1 OF 4
4	220-YP4	PROPOSED YARD PIPING PLAN SHEET 2 OF 4
5	220-YP5	PROPOSED YARD PIPING PLAN SHEET 3 OF 4
6	220-YP6	PROPOSED YARD PIPING PLAN SHEET 4 OF 4
7	220-YP7	PROPOSED YARD DETAILS
8	220-YP8	PROPOSED YARD DETAILS
9	220-YP9	SANITARY SEWER PROFILES AND DETAILS
10	220-YP10	STORM SEWER PROFILES

SITE PLANS

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-S1	SITE LAYOUT PLAN
2	220-S2	HEADWORKS BUILDING PILE PLAN
3	220-S3	SEQUENTIAL BATCH REACTOR (SBR) PILE PLAN
4	220-S4	UV BUILDING PILE PLAN
5	220-S5	SITE LANDSCAPING PLAN

TICO BUILDING DEMOLITION

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-TB2	TICO BUILDING DEMOLITION PLAN
2	220-TB1	TICO BUILDING DEMOLITION PHOTOGRAPHS
3	220-TB3	TICO BUILDING DEMOLITION PHOTOGRAPHS
4	220-TB4	TICO BUILDING DEMOLITION PHOTOGRAPHS
5	220-TB5	TICO BUILDING DEMOLITION PHOTOGRAPHS

WASTEWATER TREATMENT PLANT PUMP STATION

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-PS1	DEMOLITION ELEVATIONS
2	220-PS2	DEMOLITION PLANS
3	220-PS3	DEMOLITION PLANS
4	220-PS11	DEMOLITION PLANS, SECTIONS AND DETAILS
5	220-PS4	DEMOLITION SECTIONS
6	220-PS5	DEMOLITION PHOTOGRAPHS
7	220-PS6	DEMOLITION PHOTOGRAPHS
8	220-PS7	DEMOLITION PHOTOGRAPHS
9	220-PS8	IMPROVEMENT ELEVATIONS
10	220-PS10	IMPROVEMENT PLANS
11	220-PS18	IMPROVEMENT PLANS
12	220-PS14	IMPROVEMENT SECTIONS
13	220-PS13	IMPROVEMENT SECTIONS, DETAILS AND SCHEDULE
14	220-PS9	ROOF IMPROVEMENT PLAN AND DETAILS
15	220-PS12	WALL AND WINDOW IMPROVEMENT DETAILS
16	220-PS19	SCHEMATIC DIAGRAMS
17	220-PS15	STRUCTURAL PLANS, SECTIONS AND DETAILS
18	220-PS16	STRUCTURAL PLANS, SECTIONS AND DETAILS
19	220-PS17	STRUCTURAL PLANS, SECTIONS AND DETAILS

HEADWORKS

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-HW2	ELEVATIONS AND DETAILS
2	220-HW1	ELEVATIONS
3	220-HW38	BOTTOM FLOOR PLAN EL. 753.29
4	220-HW44	BOILER ROOM FLOOR PLAN AND SECTIONS
5	220-HW18	MECHANICAL FLOOR PLAN EL. 773.12
6	220-HW20	MECHANICAL PLAN AND SECTIONS
7	220-HW24	MECHANICAL SECTIONS
8	220-HW25	MECHANICAL SECTIONS
9	220-HW23	MECHANICAL SECTIONS
10	220-HW40	BUILDING SECTIONS
11	220-HW39	BUILDING SECTIONS
12	220-HW42	BUILDING DETAILS
13	220-HW41	BUILDING SCHEMATIC DIAGRAMS
14	220-HW43	BOILER / UNIT HEATER SCHEMATIC DIAGRAM AND SCHEDULE
15	220-HW14	EL. 753.29 STRUCTURAL PLAN
16	220-HW22	STRUCTURAL PLANS AND SECTIONS
17	220-HW19	EL. 767.12 STRUCTURAL PLAN
18	220-HW16	STRUCTURAL PLANS
19	220-HW29	STRUCTURAL PLANS AND SECTIONS
20	220-HW21	STRUCTURAL PLANS AND SECTIONS
21	220-HW28	STRUCTURAL PLANS AND SECTIONS
22	220-HW34	STRUCTURAL PLANS AND SECTIONS
23	220-HW35	STRUCTURAL PLANS AND SECTIONS
24	220-HW33	STRUCTURAL SECTIONS
25	220-HW31	STRUCTURAL SECTIONS
26	220-HW32	STRUCTURAL SECTIONS
27	220-HW17	STRUCTURAL SECTIONS
28	220-HW30	STRUCTURAL SECTIONS
29	220-HW36	STRUCTURAL PLANS, SECTIONS AND DETAILS
30	220-HW26	STRUCTURAL PLAN AND SECTIONS
31	220-HW27	STRUCTURAL SECTIONS AND DETAILS
32	220-HW12	MASONRY & ROOF PLANS
33	220-HW11	ROOF SECTIONS AND DETAILS
34	220-HW13	STRUCTURAL ROOF SECTIONS AND DETAILS

SEQUENTIAL BATCH REACTOR (SBR)

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-SBR9	TOP PLAN
2	220-SBR10	BOTTOM PLAN
3	220-SBR11	MECHANICAL SECTIONS
4	220-SBR12	MECHANICAL SECTIONS
5	220-SBR18	EFFLUENT WATER SCHEMATIC DIAGRAMS
6	220-SBR1	STRUCTURAL PLAN
7	220-SBR2	STRUCTURAL PLANS AND SECTIONS
8	220-SBR3	STRUCTURAL PLANS AND SECTIONS
9	220-SBR4	STRUCTURAL PLAN AND SECTIONS
10	220-SBR15	STRUCTURAL PLANS, SECTIONS AND DETAILS
11	220-SBR7	STRUCTURAL PLANS, SECTIONS AND DETAILS
12	220-SBR14	STRUCTURAL PLANS, SECTIONS AND DETAILS
13	220-SBR17	STRUCTURAL PLANS, SECTIONS AND DETAILS

UV BUILDING

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-UV13	BUILDING ELEVATIONS
2	220-UV1	BUILDING PLAN
3	220-UV2	BUILDING PLAN, SECTION AND DETAIL
4	220-UV3	BUILDING SECTION
5	220-UV12	BUILDING SECTIONS
6	220-UV6	STRUCTURAL PLAN
7	220-UV8	STRUCTURAL SECTION
8	220-UV7	STRUCTURAL PLAN AND SECTIONS
9	220-UV11	BRIDGE CRANE PLAN, SECTIONS AND DETAILS
10	220-UV10	STRUCTURAL PLAN AND SECTIONS
11	220-UV5	STRUCTURAL PLAN AND SECTIONS

CHLORINE BUILDING

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-CL1	BUILDING ELEVATIONS
2	220-CL2	PLANS AND SECTIONS
3	220-CL3	SECTIONS AND DETAILS
4	220-CL4	PLANS, SECTIONS AND DETAILS
5	220-CL5	SCHEMATIC DIAGRAMS

CHLORINE CONTACT TANK

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-CT1	CHLORINE CONTACT TANK PLANS
2	220-CT2	CHLORINE CONTACT TANK PLAN AND SECTIONS

PROCESS AIR BUILDING

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-PA1	BUILDING ELEVATIONS
2	220-PA2	BUILDING PLANS AND DETAILS
3	220-PA3	BUILDING SECTIONS
4	220-PA4	BUILDING SECTIONS AND DETAILS
5	220-PA5	ROOF PLAN, SECTIONS AND DETAILS
6	220-PA6	STRUCTURAL PLANS AND SECTIONS
7	220-PA7	SECTIONS AND DETAILS
8	220-PA8	SCHEMATIC DIAGRAMS
9	220-PA10	SCHEMATIC DIAGRAM AND DETAILS

DIGESTER AIR BUILDING

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-DA8	CHLORINE CONTACT TANK DEMOLITION PLAN AND PHOTOGRAPHS
2	220-DA7	CHLORINE CONTACT TANK DEMOLITION SECTIONS AND PHOTOGRAPHS
3	220-DA1	DIGESTER AIR BUILDING ELEVATIONS
4	220-DA13	DIGESTER AIR BUILDING ELEVATIONS
5	220-DA8	DIGESTER AIR BUILDING PLANS
6	220-DA2	DIGESTER AIR BUILDING PLAN AND SECTIONS
7	220-DA5	DIGESTER AIR BUILDING PLANS, SECTIONS AND DETAILS
8	220-DA4	DIGESTER AIR BUILDING SECTION
9	220-DA3	DIGESTER AIR BUILDING SECTIONS AND DETAILS
10	220-DA10	DIGESTER AIR BUILDING FOUNDATION PLAN, SECTIONS AND DETAILS
11	220-DA11	DIGESTER AIR BUILDING SCHEMATIC DIAGRAMS
12	220-DA9	DIGESTER AIR BUILDING SCHEMATIC DIAGRAMS

AEROBIC DIGESTERS

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-AD4	PRIMARY / FLOCCULATION TANK DEMOLITION PLAN AND PHOTOGRAPHS
2	220-AD5	PRIMARY / FLOCCULATION TANK DEMOLITION PLAN AND PHOTOGRAPHS
3	220-AD6	PRIMARY / FLOCCULATION TANK DEMOLITION SECTIONS
4	220-AD1	AEROBIC DIGESTER TOP PLAN, SECTIONS AND DETAILS
5	220-AD7	AEROBIC DIGESTER BOTTOM PLAN AND SECTIONS
6	220-AD2	AEROBIC DIGESTER SECTIONS
7	220-AD3	AEROBIC DIGESTER SECTION AND SCHEMATIC DIAGRAMS

PIPE TUNNEL

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-PT1	PIPE TUNNEL DEMOLITION PLAN, SECTIONS AND PHOTOGRAPHS
2	220-PT2	PIPE TUNNEL DEMOLITION SECTIONS AND PHOTOGRAPHS
3	220-PT8	SCREW PUMP AND FLUME DEMOLITION
4	220-PT9	SCREW PUMP DEMOLITION PHOTOGRAPHS
5	220-PT10	SCREW PUMP AND FLUME DEMOLITION
6	220-PT4	PIPE TUNNEL IMPROVEMENT PLAN AND PHOTOGRAPHS
7	220-PT5	PIPE TUNNEL IMPROVEMENT PLAN AND SECTIONS
8	220-PT3	PIPE TUNNEL IMPROVEMENT PLAN AND SECTIONS
9	220-PT6	PIPE TUNNEL IMPROVEMENT SECTIONS
10	220-PT7	PIPE TUNNEL IMPROVEMENT SECTION

C & I BUILDING MODIFICATION

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-CI1	CHLORINE DEMOLITION PLANS, SECTIONS AND PHOTOGRAPHS
2	220-CI2	CHLORINE DEMOLITION PHOTOGRAPHS AND SCHEMATIC DIAGRAMS
3	220-CI3	CHLORINE DEMOLITION PHOTOGRAPHS
4	220-CI4	CHLORINE DEMOLITION PLANS AND SECTIONS

SCREEN / GRIT BUILDING MODIFICATION

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-SG1	SCREEN / GRIT BUILDING DEMOLITION ELEVATIONS
2	220-SG2	SCREEN / GRIT BUILDING DEMOLITION PLAN AND PHOTOGRAPHS
3	220-SG3	SCREEN / GRIT BUILDING DEMOLITION PHOTOGRAPHS
4	220-SG4	SCREEN / GRIT BUILDING DEMOLITION SECTIONS
5	220-SG8	SCREEN / GRIT BUILDING STRUCTURAL PLANS, SECTIONS AND DETAILS

As Shown: July 2008
 Date: July 2008
 Drawn By: EJD
 Checked By: HOF
 Approved By: SHG

Revision: _____
 Date: _____
 Revision: _____
 Date: _____
 Revision: _____
 Date: _____

5178 CAMPBELL RLY. BLDG
 PITTSBURGH, PA 15208
 PROJECT # 12-09-0010
 INFO@KLEHENGINEERS.COM

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 DRAWING LIST AND DRAWING NUMBER CROSS REFERENCE SHEET 1 OF 2

KLH
 ENGINEERS, INC.

Sheet No.

2

Drawing No.

220 • G12

WASTEWATER TREATMENT PLANT EXPANSION DRAWING LIST

ADMINISTRATION / LAB SITE PLANS

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-A / LS6	ADMINISTRATION EXPANSION / LABORATORY ADDITION SITE DEMOLITION PLAN
2	220-A / LS8	ADMINISTRATION EXPANSION / LABORATORY ADDITION SITE IMPROVEMENT PLAN
3	220-A / LS7	ADMINISTRATION EXPANSION / LABORATORY ADDITION SITE IMPROVEMENT PLAN
4	220-A / LS9	ADMINISTRATION EXPANSION / LABORATORY ADDITION SEWER PROFILES AND DETAILS

ADMINISTRATION BUILDING

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-AE3	ADMINISTRATION BUILDING DEMOLITION PLAN AND DETAILS
2	220-AE1	ADMINISTRATION BUILDING DEMOLITION ELEVATIONS
3	220-AE2	ADMINISTRATION BUILDING DEMOLITION ROOF PLAN AND DEMOLITION PHOTOGRAPHS
4	220-AE6	GRIT BUILDING DEMOLITION PLAN AND PHOTOGRAPHS
5	220-AE4	GRIT BUILDING DEMOLITION ELEVATIONS
6	220-AE5	GRIT BUILDING DEMOLITION PHOTOGRAPHS AND SECTIONS
7	220-AE7	GRIT BUILDING DEMOLITION PLAN AND SECTIONS
8	220-AE11	ADMINISTRATION BUILDING EXPANSION PLAN AND DETAILS
9	220-AE12	ADMINISTRATION BUILDING EXPANSION PLANS AND SECTIONS
10	220-AE9	ADMINISTRATION BUILDING EXPANSION ELEVATIONS
11	220-AE10	ADMINISTRATION BUILDING EXPANSION ELEVATIONS
12	220-AE22	ADMINISTRATION BUILDING DOOR AND FINISH SCHEDULE
13	220-AE23	ADMINISTRATION BUILDING EXPANSION SECTIONS
14	220-AE13	ADMINISTRATION BUILDING SECTIONS AND DETAILS
15	220-AE15	ADMINISTRATION BUILDING SECTIONS AND DETAILS
16	220-AE14	ADMINISTRATION BUILDING SECTIONS AND DETAILS
17	220-AE28	ADMINISTRATION AND GRIT BUILDING LINTEL ELEVATIONS AND SECTIONS
18	220-AE26	ADMINISTRATION BUILDING WALL SECTIONS
19	220-AE16	ADMINISTRATION BUILDING ROOF SECTIONS
20	220-AE17	ADMINISTRATION BUILDING ROOF PLAN AND DETAILS
21	220-AE27	ADMINISTRATION BUILDING SCHEMATICS AND DETAILS
22	220-AE29	ADMINISTRATION BUILDING CEILING AND DUCT PLANS
23	220-AE25	ADMINISTRATION BUILDING PILE PLAN
24	220-AE19	ADMINISTRATION BUILDING FOUNDATION STRUCTURAL PLAN
25	220-AE20	ADMINISTRATION BUILDING STRUCTURAL SECTIONS
26	220-AE21	ADMINISTRATION BUILDING STRUCTURAL SECTIONS
27	220-AE24	ADMINISTRATION BUILDING STRUCTURAL SECTIONS
28	220-AE18	ADMINISTRATION BUILDING STRUCTURAL PLAN, SECTIONS AND DETAILS
29	220-AE30	ADMINISTRATION BUILDING STRUCTURAL STEEL PLAN

LABORATORY

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-LA1	C & I BUILDING DEMOLITION PLAN
2	220-LA2	C & I BUILDING DEMOLITION ELEVATIONS
3	220-LA4	C & I BUILDING DEMOLITION PHOTOGRAPHS
4	220-LA3	C & I BUILDING DEMOLITION PHOTOGRAPHS
5	220-LA6	C & I BUILDING DEMOLITION PHOTOGRAPHS
6	220-LA8	LABORATORY ADDITION PLANS AND DETAILS
7	220-LA9	LABORATORY ADDITION PLANS AND DETAILS
8	220-LA7	LABORATORY ADDITION ELEVATIONS
9	220-LA10	LABORATORY ADDITION SECTIONS
10	220-LA11	LABORATORY ADDITION SECTIONS AND DETAILS
11	220-LA13	LABORATORY ADDITION SCHEMATIC DIAGRAMS
12	220-LA17	LABORATORY ADDITION CEILING PLAN AND DUCT PLAN
13	220-LA12	LABORATORY ADDITION STRUCTURAL PLAN AND SECTIONS
14	220-LA15	LABORATORY ADDITION STRUCTURAL SECTIONS
15	220-LA16	LABORATORY ADDITION STRUCTURAL ROOF FRAMING PLAN AND SECTIONS

ELECTRICAL SITE PLANS

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-SE1	WWTP ELECTRICAL SITE PLAN
2	220-SE2	WWTP ELECTRICAL ENLARGED SITE PLAN SHEET 1 OF 4
3	220-SE3	WWTP ELECTRICAL ENLARGED SITE PLAN SHEET 2 OF 4
4	220-SE4	WWTP ELECTRICAL ENLARGED SITE PLAN SHEET 3 OF 4
5	220-SE5	WWTP ELECTRICAL ENLARGED SITE PLAN SHEET 4 OF 4
6	220-SE6	WWTP ELECTRICAL DUCT BANK DETAILS
7	220-SE7	WWTP ELECTRICAL DETAILS SHEET 1 OF 2
8	220-SE8	WWTP ELECTRICAL DETAILS SHEET 2 OF 2
9	220-SE9	WWTP ELECTRICAL MOTOR CONTROL CENTER DETAILS
10	220-SE10	SCADA COMMUNICATIONS & VIDEO SURVEILLANCE OVERVIEW DIAGRAM
11	220-SE11	ELECTRIC UTILITY CONSTRUCTION DETAILS SHEET 1 OF 4
12	220-SE12	ELECTRIC UTILITY CONSTRUCTION DETAILS SHEET 2 OF 4
13	220-SE13	ELECTRIC UTILITY CONSTRUCTION DETAILS SHEET 3 OF 4
14	220-SE14	ELECTRIC UTILITY CONSTRUCTION DETAILS SHEET 4 OF 4

ELECTRICAL SINGLE LINE DIAGRAMS

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-SLE1	ELECTRICAL SINGLE LINE DIAGRAM SHEET 1 OF 5
2	220-SLE2	ELECTRICAL SINGLE LINE DIAGRAM SHEET 2 OF 5
3	220-SLE3	ELECTRICAL SINGLE LINE DIAGRAM SHEET 3 OF 5
4	220-SLE4	ELECTRICAL SINGLE LINE DIAGRAM SHEET 4 OF 5
5	220-SLE5	ELECTRICAL SINGLE LINE DIAGRAM SHEET 5 OF 5
6	220-SLE1	WWTP TEMPORARY ELECTRIC PARTIAL SITE PLAN AND SINGLE LINE DIAGRAM

WASTEWATER TREATMENT PLANT PUMP STATION ELECTRICAL

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-PSE1	PUMP STATION ELECTRICAL PLANS AND DETAILS
2	220-PSE2	PUMP STATION ELECTRICAL PLANS AND DETAILS
3	220-PSE3	PUMP STATION LIGHTING PLANS
4	220-PSE4	PUMP STATION LIGHTING PLANS
5	220-PSE5	ELECTRICAL SCHEMATIC SHEET 1 OF 2
6	220-PSE8	ELECTRICAL SCHEMATIC SHEET 1 OF 2
7	220-PSE7	WWTP PUMP STATION SCADA CONTROL PANEL (PS-CP-101) LAYOUT AND DETAILS
8	220-PSE8	WWTP PUMP STATION SCADA CONTROL PANEL (PS-CP-101) SCHEMATICS SHEET 1 OF 4
9	220-PSE9	WWTP PUMP STATION SCADA CONTROL PANEL (PS-CP-101) SCHEMATICS SHEET 2 OF 4
10	220-PSE10	WWTP PUMP STATION SCADA CONTROL PANEL (PS-CP-101) SCHEMATICS SHEET 3 OF 4
11	220-PSE11	WWTP PUMP STATION SCADA CONTROL PANEL (PS-CP-101) SCHEMATICS SHEET 4 OF 4

HEADWORKS ELECTRICAL

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-HWE1	HEADWORKS BUILDING OPERATIONAL FLOOR ELECTRICAL PLAN
2	220-HWE2	HEADWORKS BUILDING CHASE ELECTRICAL PLAN
3	220-HWE3	HEADWORKS BUILDING BASEMENT ELECTRICAL PLAN
4	220-HWE4	HEADWORKS BUILDING OPERATIONAL FLOOR LIGHTING PLAN
5	220-HWE5	HEADWORKS BUILDING BASEMENT LIGHTING PLAN
6	220-HWE6	HEADWORKS BUILDING ELECTRICAL DETAILS AND SCHEMATIC
7	220-HWE7	INTAKE FAN CONTROL PANEL (HW-CP-108) LAYOUT AND SCHEMATICS
8	220-HWE8	BOILER RECIRCULATION PUMPS CONTROL PANEL (HW-CP-107) LAYOUT AND SCHEMATICS
9	220-HWE9	HEADWORK BUILDING ELECTRICAL SCHEMATICS
10	220-HWE10	GAS MONITOR SYSTEM DIAGRAM AND SCHEMATIC
11	220-HWE11	HEADWORKS SCADA CONTROL PANEL (HW-CP-101) LAYOUT AND DETAILS
12	220-HWE12	HEADWORKS SCADA CONTROL PANEL (HW-CP-101) SCHEMATICS SHEET 1 OF 7
13	220-HWE13	HEADWORKS SCADA CONTROL PANEL (HW-CP-101) SCHEMATICS SHEET 1 OF 7
14	220-HWE14	HEADWORKS SCADA CONTROL PANEL (HW-CP-101) SCHEMATICS SHEET 1 OF 7
15	220-HWE15	HEADWORKS SCADA CONTROL PANEL (HW-CP-101) SCHEMATICS SHEET 1 OF 7
16	220-HWE16	HEADWORKS SCADA CONTROL PANEL (HW-CP-101) SCHEMATICS SHEET 1 OF 7
17	220-HWE17	HEADWORKS SCADA CONTROL PANEL (HW-CP-101) SCHEMATICS SHEET 1 OF 7
18	220-HWE18	HEADWORKS SCADA CONTROL PANEL (HW-CP-101) SCHEMATICS SHEET 1 OF 7

SEQUENTIAL BATCH REACTOR (SBR) ELECTRICAL

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-SBRE1	SEQUENTIAL BATCH REACTOR (SBR) ELECTRICAL PLAN
2	220-SBRE2	SEQUENTIAL BATCH REACTOR (SBR) LIGHTING PLAN

UV BUILDING ELECTRICAL

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-UV1	UV BUILDING ELECTRICAL PLAN AND DETAILS
2	220-UV2	UV BUILDING LIGHTING PLAN AND DETAILS

CHLORINE BUILDING ELECTRICAL

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-CLE1	CHLORINE BUILDING ELECTRICAL PLAN
2	220-CLE2	CHLORINE BUILDING LIGHTING PLANS AND DETAILS
3	220-CLE3	CHLORINE BUILDING DETAILS AND SCHEMATICS
4	220-CLE4	CHLORINE BUILDING ELECTRICAL SCHEMATICS
5	220-CLE5	CHLORINE BUILDING SCADA CONTROL PANEL (CL-CP-101) LAYOUT AND DETAILS
6	220-CLE6	CHLORINE BUILDING SCADA CONTROL PANEL (CL-CP-101) SCHEMATICS SHEET 1 OF 2
7	220-CLE7	CHLORINE BUILDING SCADA CONTROL PANEL (CL-CP-101) SCHEMATICS SHEET 2 OF 2

PROCESS AIR BUILDING ELECTRICAL

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-PAE1	PROCESS AIR BUILDING ELECTRICAL PLANS
2	220-PAE2	PROCESS AIR BUILDING LIGHTING PLANS AND DETAILS
3	220-PAE3	PROCESS AIR BUILDING DAMPER CONTROL PANEL (PA-CP-102) SCHEMATIC AND LAYOUT
4	220-PAE4	ELECTRICAL SCHEMATICS SHEET 1 OF 3
5	220-PAE5	ELECTRICAL SCHEMATICS SHEET 2 OF 3
6	220-PAE6	ELECTRICAL SCHEMATICS SHEET 3 OF 3
7	220-PAE7	PROCESS AIR BUILDING SCADA CONTROL PANEL (PA-CP-101) LAYOUT AND DETAILS
8	220-PAE8	PROCESS AIR BUILDING SCADA CONTROL PANEL (PA-CP-101) SCHEMATICS SHEET 1 OF 2
9	220-PAE9	PROCESS AIR BUILDING SCADA CONTROL PANEL (PA-CP-101) SCHEMATICS SHEET 2 OF 2

DIGESTER AIR BUILDING ELECTRICAL

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-DAE1	DIGESTER AIR BUILDING ELECTRICAL PLANS
2	220-DAE2	DIGESTER AIR BUILDING LIGHTING PLANS AND DETAILS
3	220-DAE3	DIGESTER AIR BUILDING DAMPER CONTROL PANEL (DA-CP-102) SCHEMATIC AND LAYOUT
4	220-DAE4	ELECTRICAL SCHEMATICS SHEET 1 OF 2
5	220-DAE5	ELECTRICAL SCHEMATICS SHEET 2 OF 2
6	220-DAE6	DIGESTER AIR BUILDING SCADA CONTROL PANEL (DA-CP-101) LAYOUT AND DETAILS
7	220-DAE7	DIGESTER AIR BUILDING SCADA CONTROL PANEL (DA-CP-101) SCHEMATICS SHEET 1 OF 3
8	220-DAE8	DIGESTER AIR BUILDING SCADA CONTROL PANEL (DA-CP-101) SCHEMATICS SHEET 2 OF 3
9	220-DAE9	DIGESTER AIR BUILDING SCADA CONTROL PANEL (DA-CP-101) SCHEMATICS SHEET 3 OF 3

C & I BUILDING MODIFICATION ELECTRICAL

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-CIE1	CONTROL AND INCINERATOR BUILDING BASEMENT ELECTRICAL PLAN
2	220-CIE2	LABORATORY ADDITION ELECTRICAL PLAN AND DETAILS
3	220-CIE3	LABORATORY ADDITION LIGHTING PLAN AND DETAILS
4	220-CIE4	SCADA CONTROL ROOM PLAN AND DETAILS
5	220-CIE5	FUME HOOD No. 1 EXHAUST/SUPPLY FANS CONTROL PANEL (CI-CP-101) LAYOUT

ADMINISTRATION BUILDING ELECTRICAL

SHEET NO.	DWG. NO.	DESCRIPTION
1	220-AEE1	EXISTING ADMINISTRATION BUILDING ELECTRICAL AND LIGHTING PLAN
2	220-AEE2	ADMINISTRATION BUILDING EXPANSION ELECTRICAL AND LIGHTING PLAN

NOTE:

The total bid price for the Wastewater Treatment Plant Expansion Project is inclusive of all work identified in the Contract Drawings and Specifications inclusive of the Administration Building Expansion Construction and the Laboratory Construction.

The CONTRACTOR is required to provide in the Contract Bid Form a price for the Administration Building Expansion Construction work and should the Owner elect not to complete the Administration Building Expansion work with the Wastewater Treatment Plant Expansion Project, the work items contained in the Screen / Grit Building Modification Drawings 220-SG1, 220-SG2, 220-SG3, and 220-SG8 located inside and outside the Screen and Grit Building is the minimum work effort required at the Screen and Grit Building for the Wastewater Treatment Plant Expansion Project and shall be completed separate from any work identified for completion of the Administration Building Expansion.

The CONTRACTOR is required to provide in the Contract Bid Form a price for the Laboratory Construction work and should the Owner elect not to complete the Laboratory work with the Wastewater Treatment Plant Expansion Project, the work items contained in the C&I Building Modification Drawings 220-C11, 220-C12, 220-C13, and 220-C14 located inside and outside the Chlorine Room is the minimum work effort required at the Chlorine Room for the Wastewater Treatment Plant Expansion Project and shall be completed separate from any work identified for completion of the Laboratory.

The Contractor is alerted should the Owner elect not to complete the Administration Building Expansion and / or the Laboratory with the Wastewater Treatment Plant Expansion Project the site work pertaining to the Administration Building Expansion and / or Laboratory as identified in Drawings A/LS6, A/LS7, A/LS8, and A/LS9 will not be completed. The contractor shall include site work cost for the Administration Building Expansion and / or the Laboratory based upon the site limits identified in the Contract Drawings A/LS6, A/LS7, A/LS8, and A/LS9 into his price respectively for the Administration Building Expansion and / or the Laboratory.

Revisions	Date	Description

5172 CALDWELL BLVD
PITTSBURGH, PA 15203
PHONE: 412-944-9433
FAX: 412-944-9433
INFO@KLHENGINEERS.COM

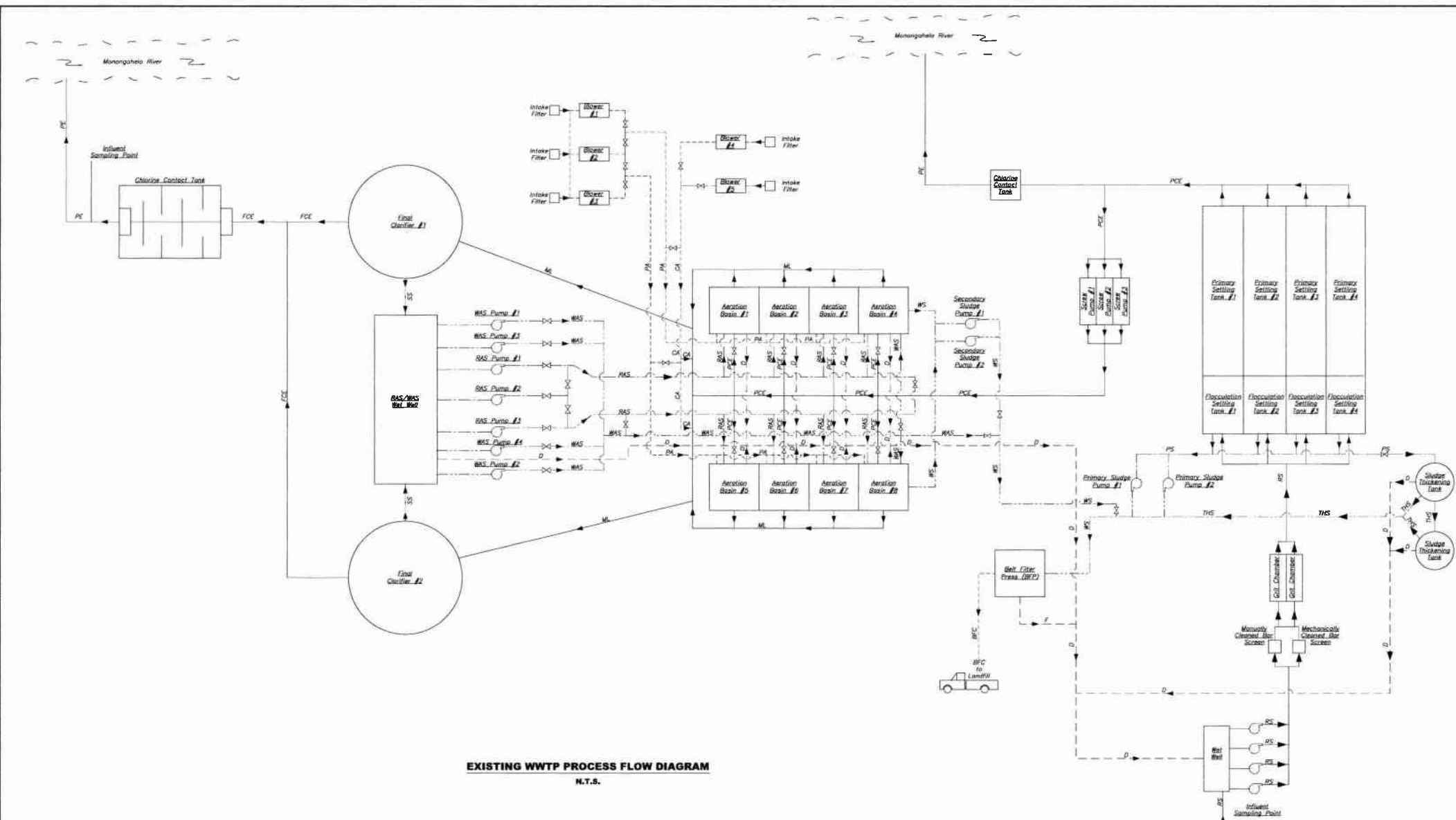
KLH
ENGINEERS, INC.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
DRAWING LIST AND DRAWING NUMBER CROSS REFERENCE SHEET 2 OF 2

Scale:	As Shown
Date:	October 2009
Drawn By:	DWB
Checked By:	HOF
Approved By:	BDH

Sheet No. **3**

Drawing No. **220 - G13**

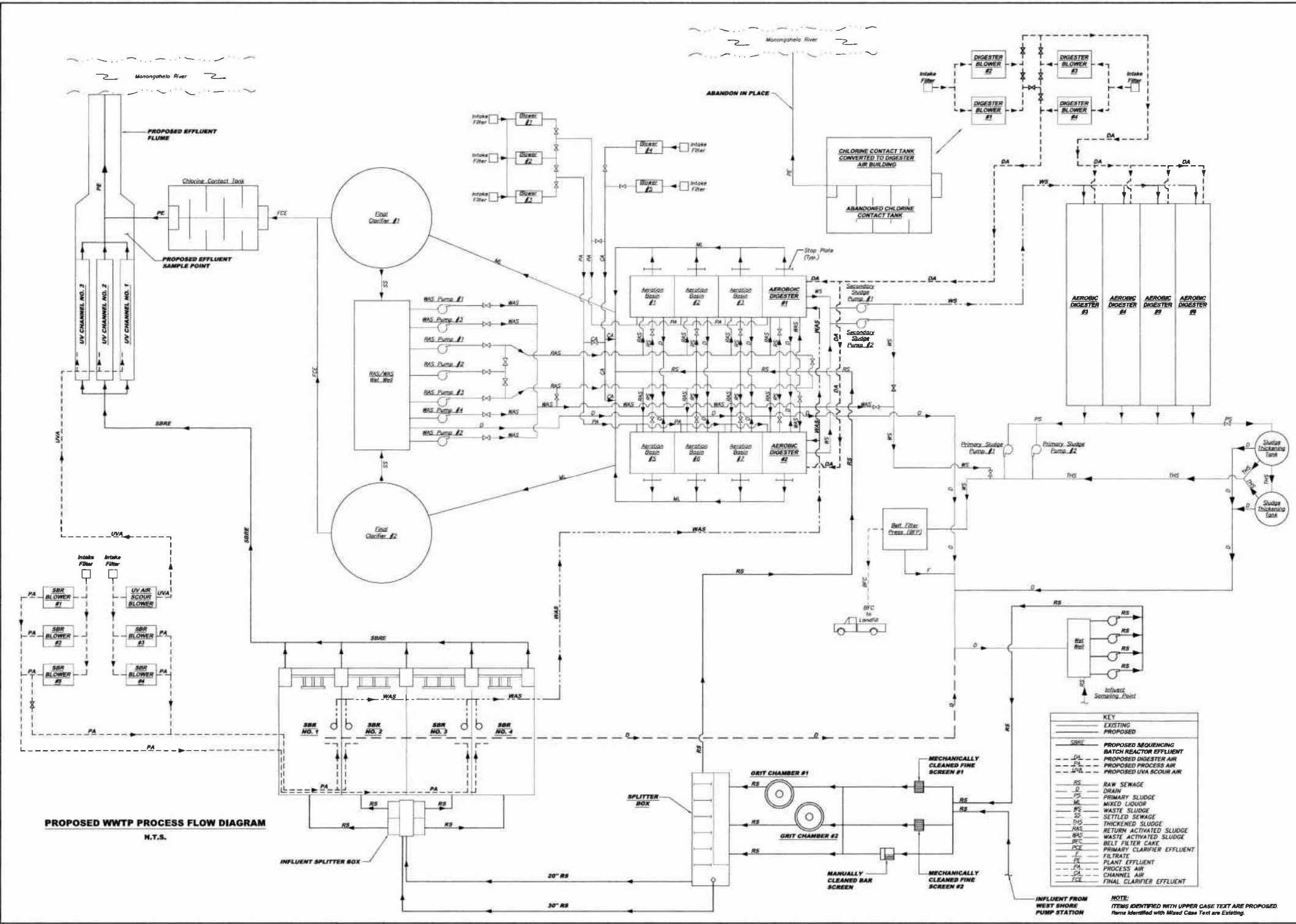


EXISTING WWTP PROCESS FLOW DIAGRAM
N.T.S.

KEY	
—	EXISTING
- - -	PROPOSED
RS	RAW SEWAGE
D	DRAIN
PS	PRIMARY SLUDGE
M	MIXED LIQUOR
WS	WASTE SLUDGE
SS	SETTLED SEWAGE
TS	THICKENED SLUDGE
RAS	RETURN ACTIVATED SLUDGE
WAS	WASTE ACTIVATED SLUDGE
BFC	BELT FILTER CAKE
PCE	PRIMARY CLARIFIER EFFLUENT
F	FILTRATE
PE	PLANT EFFLUENT
PA	PROCESS AIR
CA	CHANNEL AIR
FCE	FINAL CLARIFIER EFFLUENT

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Mixed Case Text are Existing.

Scale:	N.T.S.	Date:	July 2009
Drawn By:	DRG	Checked By:	HGF
Approved By:	SHO	Sheet No.:	1
<p>MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT ALLEGHENY COUNTY, PENNSYLVANIA CONTRACT NUMBER 2010-01 AND 2010-02 WASTEWATER TREATMENT PLANT EXPANSION EXISTING WWTP PROCESS FLOW DIAGRAM</p>			
<p>KLH ENGINEERS, INC. 8172 CAMDENVILLE BLVD. #200 PITTSBURGH, PA 15208 PHONE: 412-444-8100 FAX: 412-444-8101 INFO@KLHENGINEERS.COM</p>			
Date:	7-1-09	Revisions:	DSP BOB/MITAL
	10-06		REVISED
	1-2011		RELEASE FOR MD
			Revisions
			Date



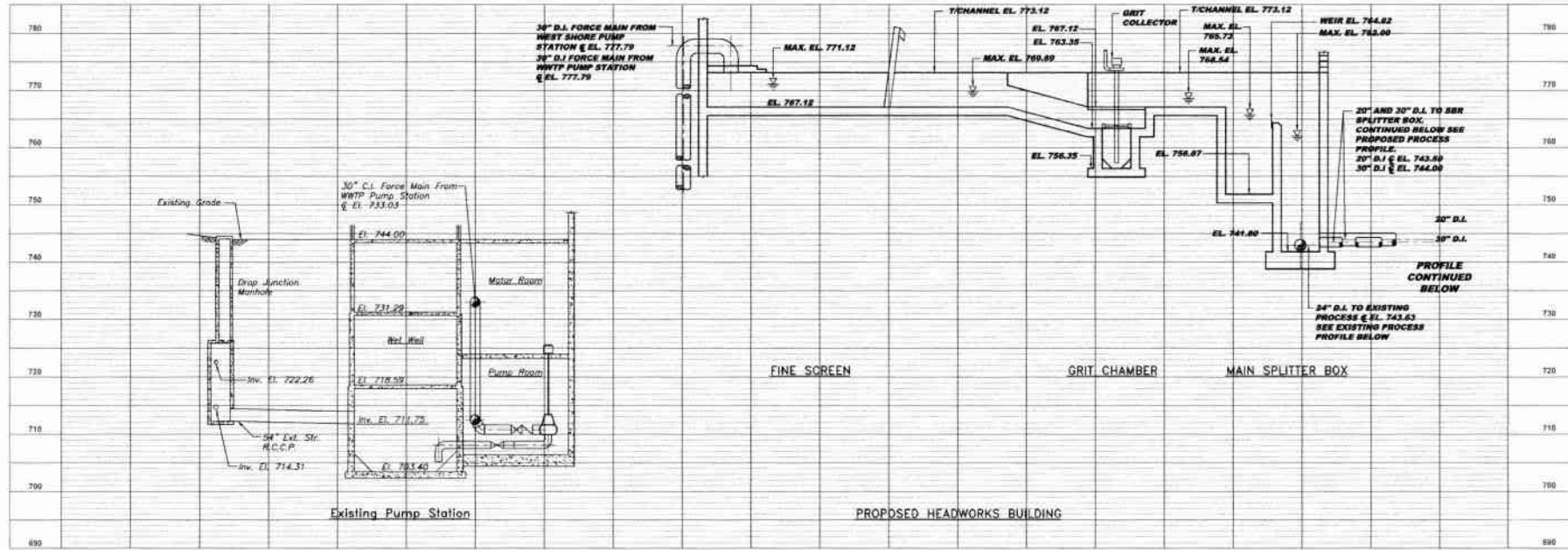
MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
PROPOSED WWTP PROCESS FLOW DIAGRAM

KLH ENGINEERS, INC.
8175 DAVENPORT BLVD
PITTSBURGH, PA 15206
PH: 412-444-9438
FAX: 412-444-9438
INFO@KLHENGINEERS.COM

Date	Revisions	Revised By	Checked By	Approved By
7/1/08	001 SUBMITTAL			
10/08	REVISION			
4/09	REVISION			
1/2011	RELEASE FOR BID			

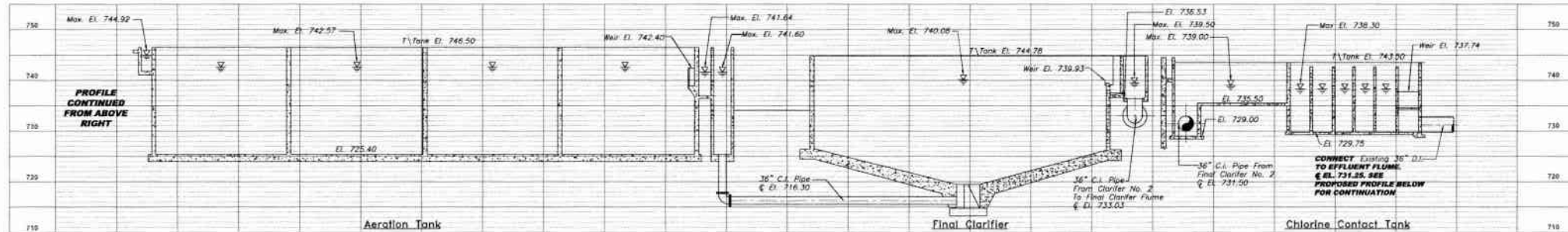
Scale: N.T.S.
Date: July 2009
Drawn By: DMB
Checked By: TCF
Approved By: BHS

Sheet No. 2
Drawing No. 220-PF2



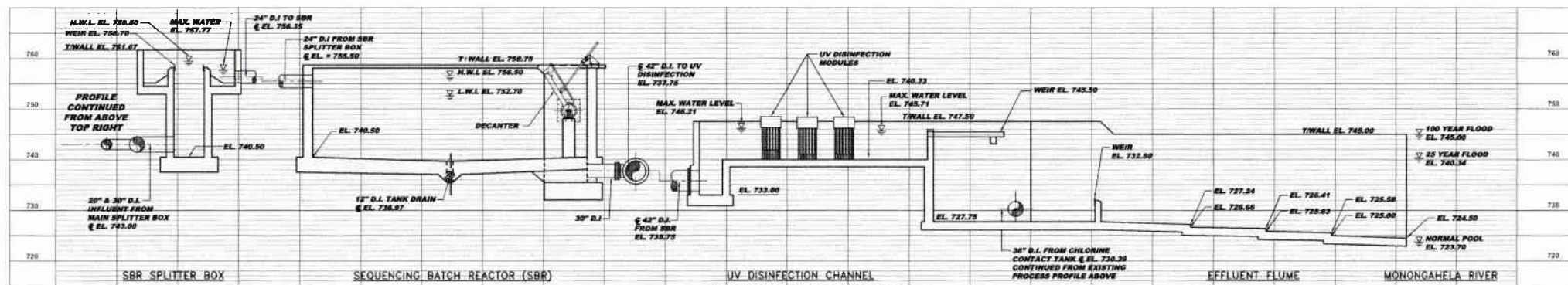
PROPOSED PROCESS PROFILE

1"=10' VERTICAL
N.T.S. HORIZONTAL



EXISTING PROCESS PROFILE

1"=10' VERTICAL
N.T.S. HORIZONTAL



PROPOSED PROCESS PROFILE

1"=10' VERTICAL
N.T.S. HORIZONTAL

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Mixed Case Text are Existing.

Revision	Date	Revised By
01	07/20/09	DRG
02	07/20/09	DRG
03	07/20/09	DRG
04	07/20/09	DRG
05	07/20/09	DRG
06	07/20/09	DRG
07	07/20/09	DRG
08	07/20/09	DRG
09	07/20/09	DRG
10	07/20/09	DRG
11	07/20/09	DRG
12	07/20/09	DRG
13	07/20/09	DRG
14	07/20/09	DRG
15	07/20/09	DRG
16	07/20/09	DRG
17	07/20/09	DRG
18	07/20/09	DRG
19	07/20/09	DRG
20	07/20/09	DRG
21	07/20/09	DRG
22	07/20/09	DRG
23	07/20/09	DRG
24	07/20/09	DRG
25	07/20/09	DRG
26	07/20/09	DRG
27	07/20/09	DRG
28	07/20/09	DRG
29	07/20/09	DRG
30	07/20/09	DRG
31	07/20/09	DRG
32	07/20/09	DRG
33	07/20/09	DRG
34	07/20/09	DRG
35	07/20/09	DRG
36	07/20/09	DRG
37	07/20/09	DRG
38	07/20/09	DRG
39	07/20/09	DRG
40	07/20/09	DRG
41	07/20/09	DRG
42	07/20/09	DRG
43	07/20/09	DRG
44	07/20/09	DRG
45	07/20/09	DRG
46	07/20/09	DRG
47	07/20/09	DRG
48	07/20/09	DRG
49	07/20/09	DRG
50	07/20/09	DRG
51	07/20/09	DRG
52	07/20/09	DRG
53	07/20/09	DRG
54	07/20/09	DRG
55	07/20/09	DRG
56	07/20/09	DRG
57	07/20/09	DRG
58	07/20/09	DRG
59	07/20/09	DRG
60	07/20/09	DRG
61	07/20/09	DRG
62	07/20/09	DRG
63	07/20/09	DRG
64	07/20/09	DRG
65	07/20/09	DRG
66	07/20/09	DRG
67	07/20/09	DRG
68	07/20/09	DRG
69	07/20/09	DRG
70	07/20/09	DRG
71	07/20/09	DRG
72	07/20/09	DRG
73	07/20/09	DRG
74	07/20/09	DRG
75	07/20/09	DRG
76	07/20/09	DRG
77	07/20/09	DRG
78	07/20/09	DRG
79	07/20/09	DRG
80	07/20/09	DRG
81	07/20/09	DRG
82	07/20/09	DRG
83	07/20/09	DRG
84	07/20/09	DRG
85	07/20/09	DRG
86	07/20/09	DRG
87	07/20/09	DRG
88	07/20/09	DRG
89	07/20/09	DRG
90	07/20/09	DRG
91	07/20/09	DRG
92	07/20/09	DRG
93	07/20/09	DRG
94	07/20/09	DRG
95	07/20/09	DRG
96	07/20/09	DRG
97	07/20/09	DRG
98	07/20/09	DRG
99	07/20/09	DRG
100	07/20/09	DRG

5175 CAMPBELL BLVD. SUITE 200
 PITTSBURGH, PA 15203
 PHONE: 412-444-9000
 FAX: 412-444-9001
 INFO@KLHENGINEERS.COM

KLH ENGINEERS, INC.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 PROPOSED WWTW HYDRAULIC PROFILE

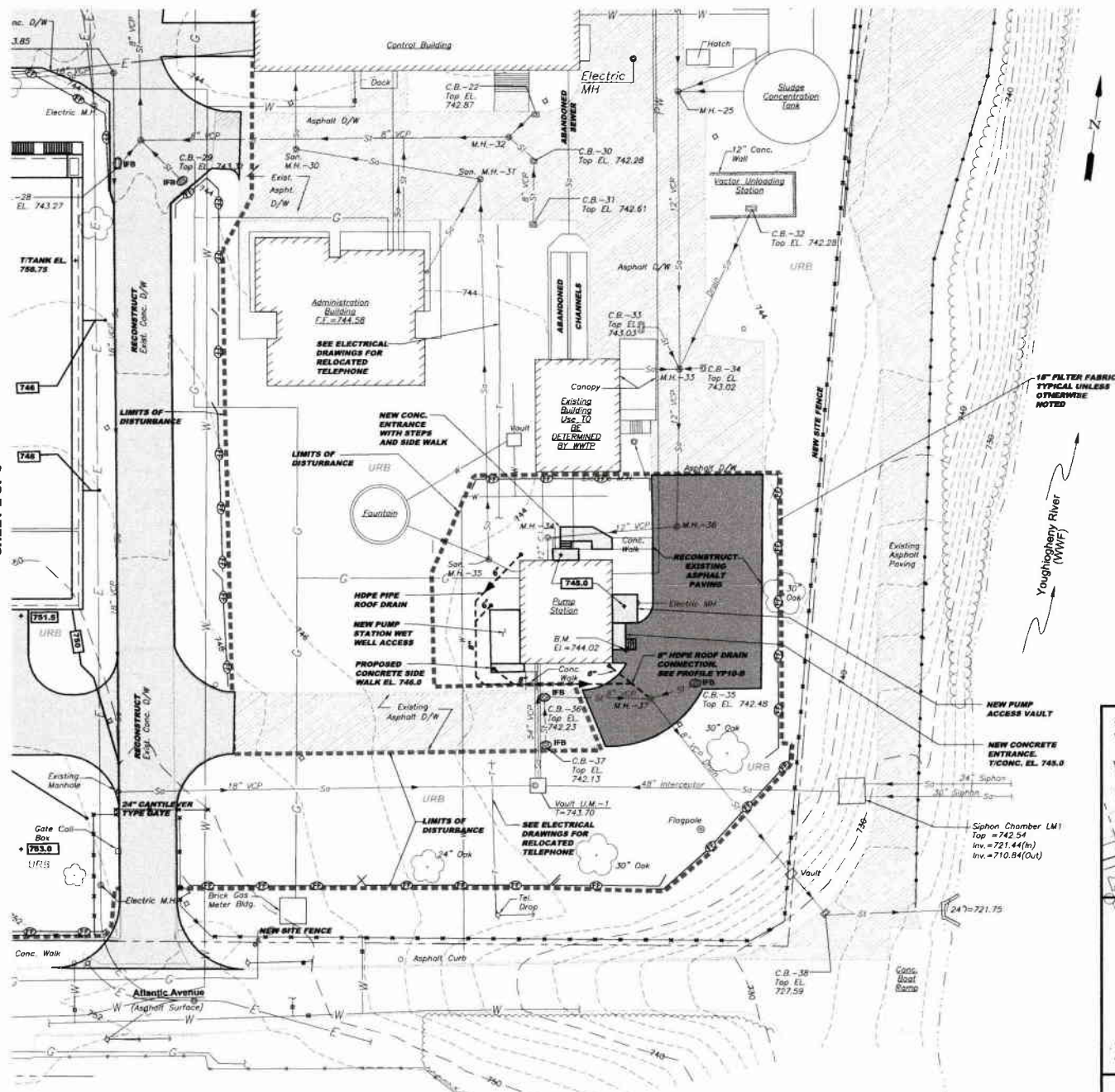
Scale:	As Shown
Date:	July 2009
Drawn By:	DRG
Checked By:	DRG
Approved By:	DRG

Sheet No. 4

Drawing No. 220-PF4

FOR PLAN CONTINUATION SEE WWTP SITE GRADING
AND EROSION AND SEDIMENT POLLUTION CONTROL PLAN
SHEET 4 OF 6

FOR PLAN CONTINUATION SEE WWTP SITE GRADING
AND EROSION AND SEDIMENT POLLUTION CONTROL PLAN
SHEET 2 OF 6

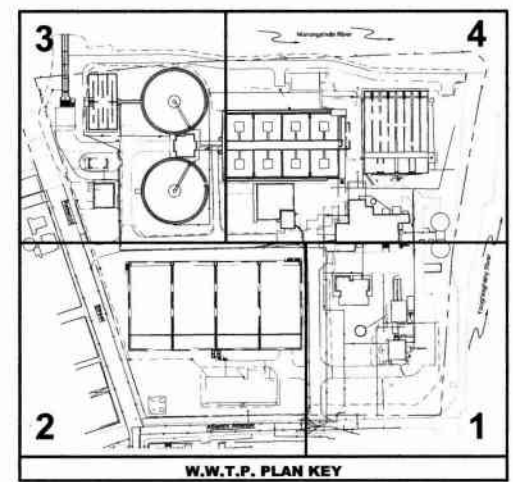


PROPOSED SITE GRADING & EROSION
AND SEDIMENT POLLUTION CONTROL PLAN SHEET 1 OF 6
SCALE: 1" = 20'

DRAWING IDENTIFICATION KEY

EXISTING CONTOURS	--- 10.30 ---
PROPOSED SANITARY GRAVITY SEWER	--- S ---
PROPOSED SANITARY FORCEMAIN SEWER	--- SF ---
EXISTING SANITARY FORCEMAIN SEWER	--- S ---
EXISTING STORM SEWER	--- ST ---
PROPOSED STORM SEWER	--- ST ---
EXISTING WATERLINE	--- W ---
LIMITS OF WATER	--- W ---
PROPOSED CHAIN LINK FENCE	--- CL ---
EXISTING FENCE	--- F ---
EXISTING GUDDERAL	--- G ---
TREE	--- T ---
TREELINE	--- TL ---
SOIL IDENTIFICATION SYMBOL	URB
SOIL BOUNDARY LINE	--- SB ---
FILTER FABRIC FENCE	--- FF ---
30" FILTER FABRIC FENCE	--- F30 ---
SUPER SALT FENCE	--- SF ---
INLET FILTER PROTECTION BAG	--- IFB ---
ROCK CONSTRUCTION ENTRANCE	--- RCE ---
PROPOSED SPOT ELEVATION	742.0
PROPOSED CONTOUR	--- 700 ---
EXISTING MANHOLE	--- M ---
PROPOSED MANHOLE	--- M ---
EXISTING CATCH BASIN	--- CB ---
EXISTING ASPHALT PAVING	--- ASP ---
EXISTING CONCRETE / CONCRETE WALK	--- CON ---
PROPOSED ASPHALT PAVING	--- ASP ---
PROPOSED CONCRETE PAVING	--- CON ---
PROPOSED STONE DRIVEWAY	--- SD ---
LIMIT OF DISTURBANCE / PROJECT BOUNDARY	--- LD ---
EXISTING POLE	--- P ---
EXISTING LIGHT	--- L ---

DISTURBED AREA: 245,950 S.F.
OR 5.65 ACRES



W.W.T.P. PLAN KEY

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
Items Identified with Lower Case Text are Existing.

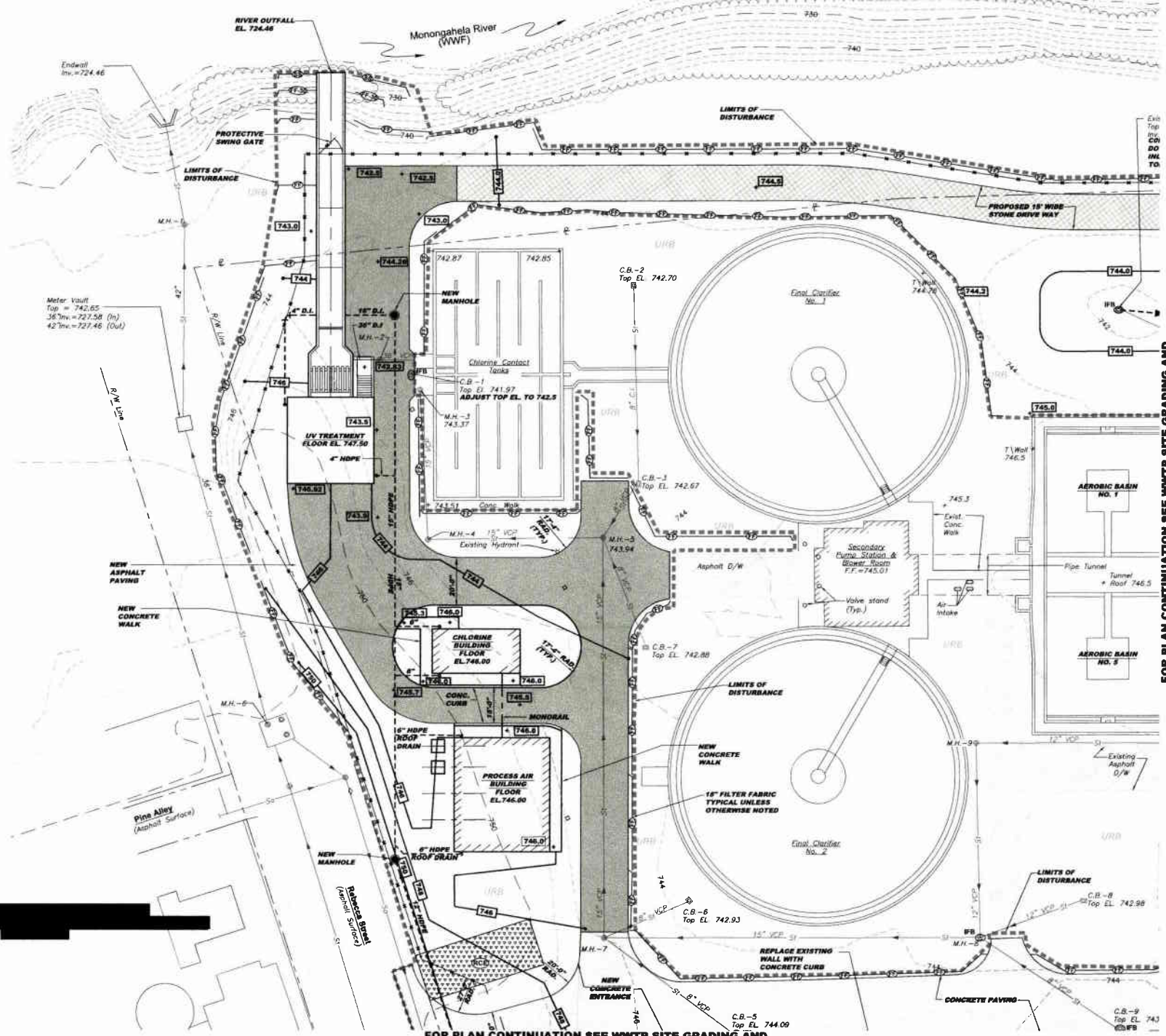
Scale:	1" = 20'	Date:	February 2009
Drawn By:	DRG	Revisions:	DEF SUBMITTAL
Checked By:	WCF	Date:	10-08
Approved By:	ME	Date:	10-08
Sheet No.:	1	Date:	10-08
Drawing No.:	220-WP1	Date:	10-08

8175 CAMPBELL RUN ROAD
PITTSBURGH, PA 15228
PROJECT # 03-04-0000
PROJECT # 03-04-0000
INFO@KLHENGINEERS.COM

KLH ENGINEERS, INC.

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
ALLEGHENY COUNTY, PENNSYLVANIA
CONTRACT NUMBER 2010-01 AND 2010-02
WASTEWATER TREATMENT PLANT EXPANSION
PROPOSED SITE GRADING & EROSION AND SEDIMENT POLLUTION CONTROL PLAN SHEET 1 OF 6

Existing Manholes				
M.H. No.	Top EL	Inv. EL (In)	Inv. EL (Out)	Inv. EL (In / Out)
M.H.-1	742.23	726.16		726.72
M.H.-2	742.34	729.29 (36")		729.08 (36")
M.H.-3	743.47			
M.H.-4	BURIED			
M.H.-5	743.84			733.60
M.H.-6	750.09			735.45E
M.H.-7	746.23			734.52
M.H.-8	742.09			734.07
M.H.-9	743.04			735.07
M.H.-10	740.72			
M.H.-11	740.00	730.92(6")		729.64
M.H.-12	743.71			735.85
M.H.-13	743.35			738.01
M.H.-14	743.88	737.89(8") (West)		736.80(8")
		734.69(8") (South West)		
		740.25(8") (North West)		
		739.55(4") (South East)		
		737.91(8") (South)		736.88(12")
		736.80(8")		
M.H.-16	743.30			
M.H.-18	741.84			724.53
M.H.-17	740.28			723.24
M.H.-18	741.15			725.11
M.H.-19	741.07			721.93
M.H.-20	743.94			724.74
M.H.-21	742.87			737.72
M.H.-22	743.10	738.80 (South West)		
		738.27 (South)		
		737.54 (North East)		737.54
M.H.-23	742.70	724.62		724.48
M.H.-24	743.11	724.32(10") (East)		724.31
M.H.-25	743.06	729.54(8") (North West)		724.11
		728.35(8") (North East)		
		724.28(10") (East)		
M.H.-26	748.90			738.64
M.H.-27	730.01	741.88 (12")		741.39(15")
M.H.-28	748.83	743.70 (South East)		740.63
M.H.-29	743.51	738.23		
M.H.-30	743.50			718.41
M.H.-31	743.11	738.08 (8")		717.88 (12")
M.H.-32	743.18			738.84
M.H.-33	743.30	738.92 (East)		723.86
		738.41 (West)		
		738.13 (North West)		
		736.78 (Vector D.S.)		
M.H.-34	743.51	723.05		722.86
M.H.-35	743.13	738.38 (4")		715.42
M.H.-36	743.64	723.77		723.59
M.H.-37	743.20	727.19 (East)		726.82
		727.87 (West)		



FOR PLAN CONTINUATION SEE WWTP SITE GRADING AND EROSION AND SEDIMENT POLLUTION CONTROL PLAN SHEET 2 OF 6

FOR PLAN CONTINUATION SEE WWTP SITE GRADING AND EROSION AND SEDIMENT POLLUTION CONTROL PLAN SHEET 4 OF 6

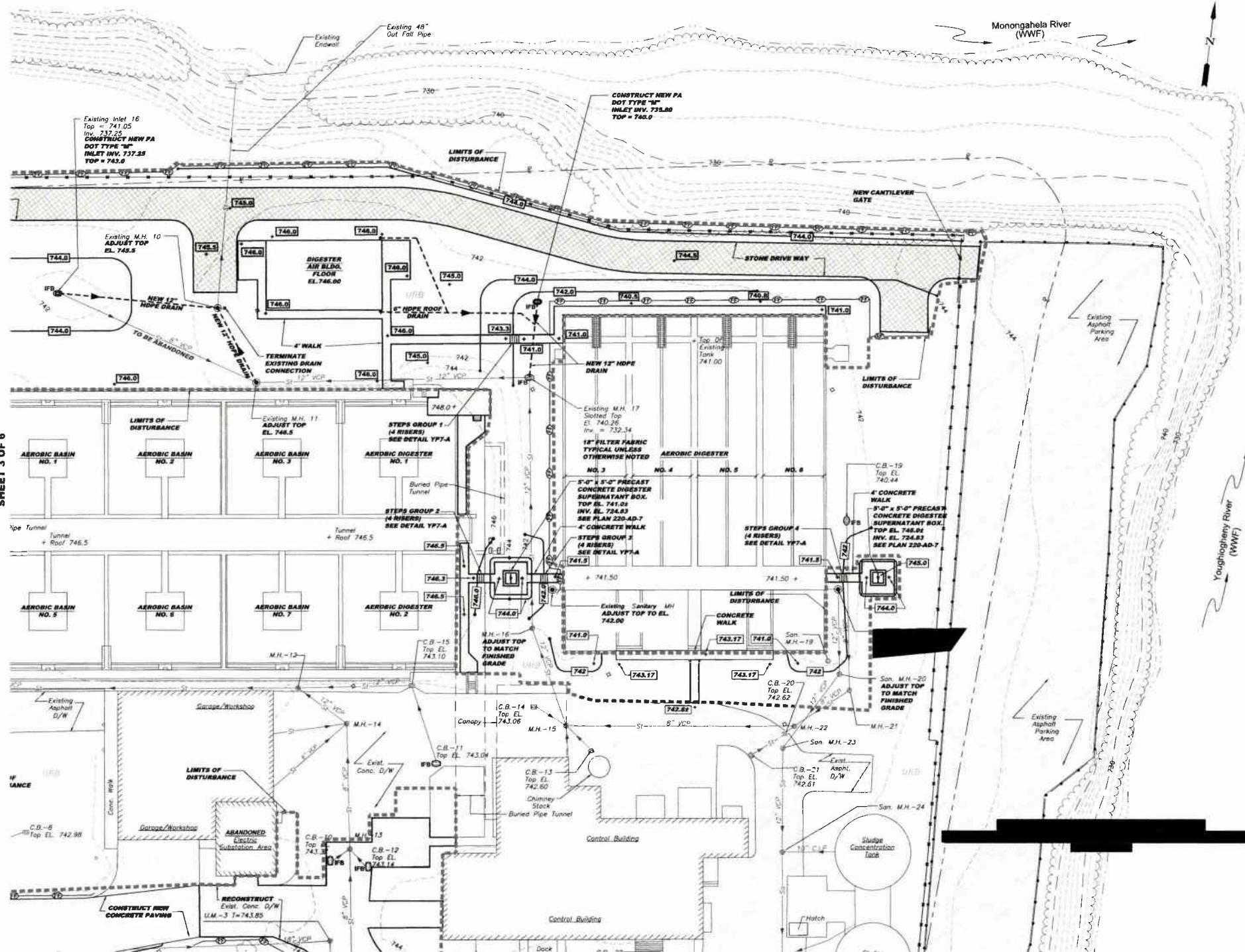
NOTE: ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED. Items Identified with Mixed Case Text are Existing.

Scale:	1" = 20'	Revisions:	
Date:	February 2008	Drawn By:	DRB
Checked By:	HOF	Approved By:	ME
Sheet No.:	3	Drawing No.:	220-WP3

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 PROPOSED SITE GRADING & EROSION AND SEDIMENT POLLUTION CONTROL PLAN SHEET 3 OF 6

KHLH ENGINEERS, INC.
 817 S. CARROLLS BLVD. ROOM 200
 PITTSBURGH, PA 15109
 PHONE: 412-444-0910
 1-800-444-0910
 INFO@KHLHENGINEERS.COM

FOR PLAN CONTINUATION SEE WWTP SITE GRADING AND
EROSION AND SEDIMENT POLLUTION CONTROL PLAN
SHEET 3 OF 6



FOR PLAN CONTINUATION SEE WWTP SITE GRADING AND
EROSION AND SEDIMENT POLLUTION CONTROL PLAN
SHEET 1 OF 6

NOTE:
ITEMS IDENTIFIED WITH UPPER CASE TEXT ARE PROPOSED.
ITEMS IDENTIFIED WITH LOWER CASE TEXT ARE EXISTING.

Scale:	1" = 20'
Date:	February 2008
Drawn By:	DWG
Checked By:	HGF
Approved By:	ME
Sheet No.:	4
Drawing No.:	220-WP4

MUNICIPAL AUTHORITY OF THE CITY OF MCKEESPORT
 ALLEGHENY COUNTY, PENNSYLVANIA
 CONTRACT NUMBER 2010-01 AND 2010-02
 WASTEWATER TREATMENT PLANT EXPANSION
 PROPOSED SITE GRADING & EROSION AND SEDIMENT POLLUTION CONTROL PLAN SHEET 4 OF 6

5172 CAMPBELL BLVD. SUITE 300
 PITTSBURGH, PA 15201
 PHONE: 412-241-9400
 FAX: 412-241-9401
 WWW.KLHENGINEERS.COM
 INFO@KLHENGINEERS.COM

KLH ENGINEERS, INC.

Revisions	Date	By	Reason
1	7-31-07	DEF	FOR SUBMITTAL
2	10-07	REV	REVISED
3	1-20-11	REV	RELEASE FOR BID