R-712-2015
Contract #: 227-2014

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT CONTRACT CHANGE ORDER

Page 1 of 2

Date:	**November 16, 2015**	
Project:	Senior Citizen Center Construction	
Location:	Lexington	
Contract No.	227-2014	
Original Contract Amt.	$8,882,900.00	
Cumulative Amount of Previous Change Orders	$1,349,994.37	
Percent Change - Previous Change Orders		15.20%
Total Contract Amount Prior to this Change Order	$10,232,894.37	
Change Order No.	**28**	

To (Contractor):
Marrillia Design & Construction
259 West Short Street
Suite 325
Lexington, KY 40507

You are hereby requested to comply with the following changes from the contract plans and specification;

Current Change Order

Item No.	Description of changes-quantities, unit prices, change in completion date, etc.	Decrease in contract price	Increase in contract price	
1	Entry drive subsurface remediation per PR 40 (23 Days)		$41,188.00	
	Total decrease	$0.00		
	Total increase		$41,188.00	
	Net Amount of this Change Order	$41,188.00		
	New Contract Amount Including this Change Order	$10,274,082.37		
	Percent Change - This Change Order			0.46%
	Percent Change - All Change Orders			15.66%

The time provided for the completion in the contract and all provisions of the contract will apply hereto.

Recommended by Joyce Thomas	(Project Manager)	Date 11/16/15
Accepted by Josh Marrillia	(Contractor)	Date 11/16/15
Approved by	(Director)	Date 11-16-15
Approved by	(Commissioner)	Date 11-16-15
Approved by	~~(Mayor or~~ (CAO)	Date 11-17-15
	Mayor	17-Dec-15

JUSTIFICATION FOR CHANGE	PROJECT: Senior Citizen Center Construction
	CONTRACT NO. 227-2014
	CHANGE ORDER NO. 28

1. Necessity for change: Unsuitable soils have been discovered at the location of the entry drive from Life Lane into Idle Hour Park. This entry lane leads to the entrance of the Senior Center. If this remediation is not performed paving will crack and fail prematurely.

2. Is proposed change an alternate bid? ___Yes __X__No

3. Will proposed change alter the physical size of the project? ___Yes __X__No

   If "Yes", explain. This change order expands the current limits of construction.

4. Effect of this change on other prime contractors: N/A

5. Has consent of surety been obtained? ___Yes __X__Not Necessary

6. Will this change affect expiration or extent of insurance coverage? ___Yes __X__No

   If "Yes", will the policies be extended? ___Yes ___No

7. Effect on operation and maintenance costs: N/A

8. Effect on contract completion date: 23 working days

Jim Gray
Mayor

17-Dec-15
Date

Pending Owner Approval

PR-53 Cost to Remediate the Subsurface Grades Below the Paving Subgrade at the Life Lane Entry Drive per Proposal Request No. 40 - Revision #1

	Quantity	Units	Hr.	Rate	Labor	U/P	Materials	Subcontractor	Total
Cost to Remediate the Subsurface Grades Below the Paving Subgrade at the Life Lane Entry Drive									
Separate and Export Existing Asphalt for Recycling - Croucher Excavating	1	ls			2,800.00			2,800	
#2 and #57 Stone In-Place - Unit Cost Prices	582	tn			25.00			14,550	
Excavation of Unsuitable Soils - Unit Cost Prices	351	cy			9.00			3,159	
Off-Site Disposal/Haul-off of Undercut Soils - Unit Cost Prices	351	cy			7.00			2,457	
Mirafi HP570 High-Tenacity Polypropylene Yarn Geotextile Fabric (Assume 15% Lap Factor) - U.C. Price	583	sy			4.80			2,798	
Tensar Biaxial BX1200 Geogrid (Assume 15% Lap Factor) - Unit Cost Prices	583	sy			3.25			1,895	
8" Perforated Subdrain - Croucher Excavating	175	lf			16.00			2,800	
Construction of a Temporary Construction Entrance at the Fire Lane - Croucher Excavating	1	ls			3,500.00			3,500	
Steel Plates (Rental, Delivery and Return) at the New Temporary Construction Entrance	1	ls			900.00			900	
Credit for Open Graded Asphalt Bond Breaker - ATS Construction	1	ls			(7,897.00)			(7,897)	
Construction Review Services and Observation - Thelen Associates	1	ls			1,696.00			1,696	
Contingency for Additional Thelen Associates Inspections Fees as a Result of Potential Weather Delays	24	hr			40.00			960	
Additional Parking Lot Construction Staking - Endris Engineering	1	ls			650.00			650	
Marrillia Out-of-Pocket Expenses for Additional General Conditions (11/2/15 - 11/25/15*)	23	day			225.00			5,175	
*Projected Delay Assumes a Double Reading at the 11/19/15 LFUCG Council Meeting									
					0		0	35,443	35,443

Cost of In-Place Construction (Labor, Materials and Equipment) =	35,443
Marrillia Design and Construction Overhead Percentage =	10.0%
Overhead - Marrillia Design and Construction =	3,544
Marrillia Design and Construction Profit Percentage =	5.0%
Profit - Marrillia Design and Construction =	1,772
General Liability Insurance (Construction) =	57
Builder's Risk Insurance =	57
Performance and Payment Bond (Rate of $9.40 per $1000 of Cost for $0 - $2,500,000) =	N/A
Performance and Payment Bond (Rate of $8.15 per $1000 of Cost for $2,500,000 - $5,000,000) =	N/A
Performance and Payment Bond (Rate of $7.20 per $1000 of Cost for $5,000,000 and up) =	294
KY Surcharge on Project Bonds (1.8% of Bond Cost) =	5
Local Municipality Tax on Project Bonds (5% of Bond Cost) =	15
Total Construction Cost =	[redacted]

Proposal Request Transmittal

architecture | interiors

EOP Architects | 201 W Short St Suite 700 Lexington KY 40507 United States

PROJECT	LFUCG Senior Citizens' Center 201333	DATE SENT	10/27/2015
SUBJECT	Entry Drive Subsurface Remediation	PROPOSAL REQUEST ID	PR-040
TYPE	Proposal Request	TRANSMITTAL ID	00713
PURPOSE	For Review and Response	VIA	Info Exchange

FROM

NAME	COMPANY	EMAIL	PHONE
Harding Dowell	EOP Architects	hdowell@eopa.com	(859) 231-7538

TO

NAME	COMPANY	EMAIL	PHONE
Travis Harris	Marrillia Design and Construction	tharris@marrillia.com	

REMARKS:

Created by: Harding Dowell
Description:

Please provide pricing to remediate the subsurface grades below paving subgrade at the Life Lane entry drive, per recommendations by the geotechnical engineer. Site observation has shown the entire entry drive area designated for heavy duty pavement (per sheet L4.1) is unstable under construction traffic, and the recommendation is as follows:

- undercut below pavement subgrade by 24 inches
- install an 8" perforated pipe at the base of undercut as shown on attached sketch L10.0, drain to structure CI-6
- install stone and geotextile per PR-018 recommendations (similar to those used in main parking areas, see attached sketch)

Proposal Request Transmittal

DATE: 10/27/2015
ID: 00713

- install heavy duty asphalt paving (6" DGA, 5 1/2" base course, 1 1/2" surface course) over compacted sub-grade stone per A/L6.1

Please provide the following price breakdown for owner and architect review:

- Quantity and cost of excavation and hauling (include observation by Thelen) per project unit costs
- Quantity and cost of stone per project unit costs
- Quantity and cost of geotextile per unit costs
- Additional or revised staking as needed (hours and unit costs)
- Quantity and cost of drainage piping per unit costs
- Overhead and profit claimed by subcontractors

Thanks,

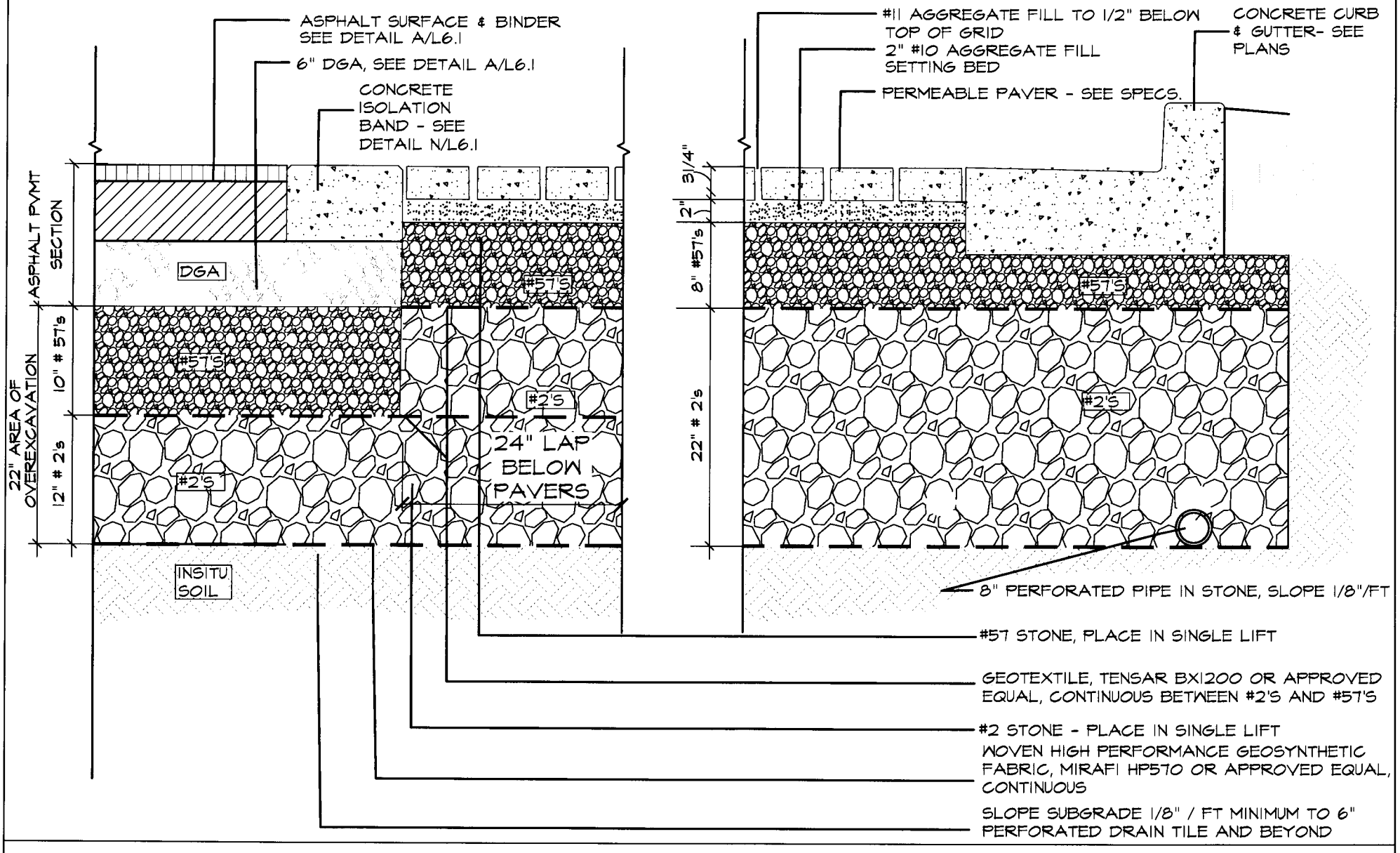
Harding

DESCRIPTION OF CONTENTS

QTY	DATED	TITLE	NUMBER	SCALE	SIZE	NOTES
1	6/11/2015	150611-PR018-Profile.pdf				
1	5/29/2015	Pavement Subgrade Letter-LSC-Stamped.pdf				
1	10/27/2015	L10.0-subdrain.pdf				

COPIES:

Brian Gravitt	(Marrillia Design and Construction)
Jim Hayes	(Marrillia Design and Construction)
Jim Martin	(Marrillia Design and Construction)
Josh Marrillia	(Marrillia Design and Construction)
Rob Price	(Marrillia Design and Construction)
Jessica Walker	(LFUCG)
Joyce Thomas	(LFUCG)
Martin Woodford	(LFUCG)
Ramona Fry	(Element Design)
Vaughan Adkins	(Element Design)



EOP architecture | interiors

LEXINGTON SENIOR CENTER

195 LIFE LANE
LEXINGTON, KY 40502

elementdesign
landscape architecture+civil engineering+planning

SHEET L6.1 R-1

Proj. No. 201333 Date June 10, 2015
Drawn by RF Checked by RF

No.	REVISION	DATE
1	pavement section - undercut	06/10/15

NOTE LIMITS OF FLOODPLAIN (SEE SITE SURVEY)- CONTRACTOR SHALL NOT COMMENCE WORK WITHIN LIMITS OF FLOODPLAIN PRIOR TO ISSUANCE OF AMENDED PERMIT FROM KENTUCKY DIVISION OF WATER. CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS OF KY DOW FOR WORK IN THE FLOODPLAIN AND ALL SPECIFIC REQUIREMENTS OF KY DOW PERMIT

STORM STRUCTURE CHART

STRUCTURE #	RIM:	INVERT IN:	INVERT OUT:	NOTES:
CI 4	984.8	N/A	982.8	
CI 5	984.1	982.2	982.1	
CI 6	983.5	N/A	981.8	
CI 7	983.2	981.1	980.0	
YI 20	988.0	986.0	982.0	
YI 21	982.4	980.5	980.4	connect 8" subdrain
HW 5	N/A	N/A	981.6	
HW 6	N/A	982.0	N/A	
HW 7	N/A	N/A	981.8	
HW 8	N/A	N/A	979.6	
HW 9	N/A	N/A	979.6	
HW 10	N/A	980.0	N/A	
HW 11	N/A	N/A	979.0	

STORM PIPE CHART

PIPE #	LENGTH (APPROX. L.F.)	MATERIAL	SLOPE (APPROX.)
P-19	10	12" RCP	0.9%
P-20	85	12" RCP	0.5%
P-21	8	12" RCP	2.5%
P-22	82	12" RCP	0.5%
P-23	50	12" RCP	1.0%
P-24	40	12" RCP	0.9%
P-25	35	12" RCP	2%
P-26	10	12" RCP	10%

NOTE: PIPE LENGTHS AND SLOPES ARE APPROXIMATE AND FOR INFORMATIONAL PURPOSES ONLY.

A

B

D

FUTURE PLAYGROUND GRADING BY OTHERS.

SEE SHEETS L3.0 & L3.1 FOR ADDITIONAL NOTES & REQUIREMENTS

GRADING LEGEND

- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- FV FIELD VERIFY
- BG BOTTOM OF CURB
- TC TOP OF CURB
- BW BOTTOM OF WALL
- TW TOP OF WALL
- DRAINAGE DIRECTION
- NEW STORM PIPE, SEE KEYNOTES
- NEW SUBDRAIN, SEE KEYNOTES
- YI NEW YARD INLET, SEE STORM STRUCTURE SCHEDULE
- CI NEW TYPE 7 CURB INLET, SEE STORM STRUCTURE SCHEDULE
- HW NEW HEADWALL, SEE STORM STRUCTURE SCHEDULE
- CO CLEANOUT, SEE DETAIL K/L6.0
- TURF REINFORCEMENT MAT (TRM) AT HEADWALL OUTLET / INLET

GRADING & DRAINAGE KEY NOTES:

1. MATCH EXISTING GRADES AT PAVEMENT EDGES
4. NEW BIOFILTRATION BASIN WITH 6" PERFORATED SUBDRAIN, SEE DETAIL 6/L5.1. SIMILAR. SEE LANDSCAPE PLAN L5.0 & L5.1 FOR LANDSCAPE MATERIAL AND INSTALLATION DETAILS. NO SUBDRAIN TO BE INSTALLED IN BASINS
16. EXISTING SANITARY SEWER MANHOLE. RAISE RIM TO ELEVATION IN ACCORDANCE WITH LFUCG / DIVISION OF WATER QUALITY STANDARDS. CONTACT LFUCG / DIVISION OF WATER QUALITY TO OBSERVE WORK AND TESTING REGARDING EXISTING SANITARY MH, AND VACUUM TEST PER LFUCG REQUIREMENTS
17. AT NEW 12" RCP STORM LINE BELOW PARKING LOT AND TRAIL PAVEMENTS, BACKFILL TRENCH WITH #4 STONE UP TO 6" D&A BASE
18. 6" PERFORATED SUBDRAIN BELOW PERMEABLE PAVERS- EXTEND SUBDRAIN TO TIE TO NEW YARD INLET WHERE INDICATED. SUBDRAIN TO BE IN 12" #57 STONE, WRAPPED IN FILTER FABRIC
19. FUTURE TRAIL CONNECTION BY LFUCG PARKS CONTRACT / BY OTHERS. COORDINATE WITH LFUCG PARKS TO TERMINATE EDGE AND GRADE
20. FUTURE COMMUNITY GARDEN SPACE. PROVIDE LEVEL PAD, SLOPE TO DRAIN AT 2% IN EACH DIRECTION
21. CONNECT NEW SUBDRAIN BEHIND SEGMENTAL RETAINING WALL TO NEW STORM LINE
22. CONNECT NEW SUBDRAIN BEHIND SEGMENTAL RETAINING WALL TO SUBDRAIN INCLUDED IN SENIOR CENTER BASE BID SCOPE.
23. CROSSING OF PROPOSED 12" RCP OVER EXISTING 8" PVC SANITARY LINE. TOP OF SANITARY PIPE IS APPROXIMATELY 980.5 / INVERT OF PROPOSED STORM LINE IS APPROXIMATELY 981.3 AT THIS LOCATION. PROTECT SANITARY LINE THROUGHOUT EXCAVATION.
24. AT NEW CONCRETE PAVEMENT OUTSIDE EXISTING BASEBALL FIELD- SLOPE CONCRETE TO DRAIN AWAY FROM FIELD AS INDICATED, MAXIMUM 2% SLOPE IN ANY DIRECTION
25. AT HEADWALLS IN BIOFILTRATION BASINS, USE STONE SALVAGED ON SITE TO STACK AROUND HEADWALLS AND HEADWALL OUTLETS. SEE DETAIL 6/L5.0 FOR STONE REQUIREMENTS AT HEADWALL OUTLET
26. EXISTING STORM INLET. RAISE RIM ELEVATION TO MATCH PROPOSED GRADES, REPLACE FRAME AND GRATE WITH TRAFFIC RATED FRAME AND SOLID LID.
27. NEW 8" SUBDRAIN, AT EXISTING LANDSCAPE AREA TO BE PAVED. CONNECT TO EXISTING STORM INLET. SEE L4.0 FOR BACKFILL REQUIREMENTS AND L11.0 FOR PAVEMENT REQUIREMENTS
28. NEW PAVEMENT WITHIN DRIP LINE OF EXISTING TREE- SEE DETAIL 5/L13.0 FOR REQUIREMENTS FOR PAVING NEAR TREE
29. EXISTING SANITARY MANHOLE- MATCH NEW SIDEWALK ELEVATION TO MANHOLE RIM ELEVATION.

ENTRANCE DRIVE WORK ADDITIONAL- ADD D&A BASE TO PAVEMENT AS REQUIRED TO MEET FINISH GRADES SHOWN HERE

8" perforated subdrain at low end of overexcavation, in stone backfill. Tie to new curb inlet or existing storm drain.

GRADING & DRAINAGE

SCALE 1" = 20'-0"

elementdesign
landscape architecture | civil engineering | planning

LEXINGTON SENIOR CENTER
IDLE HOUR PARK
LEXINGTON, KY 40502

BID DOCUMENTS

DATE	REVISION

EOP architecture | interiors

PROJECT TEAM

EOP Architects
Prime Architect
www.eopa.com

BHMJ, Inc.
Structural Engineer
www.bhmj.com

CMTA Consulting Engineers
MEP Engineer
www.cmteagrs.com

Element Design
Civil Engineer & Landscape Architect
www.element-site.com

Caitlin+Petrovich Architects
Consultant for Senior Design Issues
www.c-parchitects.com

KEYPLAN

TRUE PLAN

Job Number 201333
Drawn By RAF / MLA
Checked By RAF / VLA
Date JULY 8, 2015

STATE OF KENTUCKY — LICENSED PROFESSIONAL ENGINEER

STATE OF KENTUCKY — REGISTERED LANDSCAPE ARCHITECT

SITE GRADING & DRAINAGE PLAN

L10.0

Cardno ATC

Shaping the Future

May 28, 2015

Cardno ATC

11001 Bluegrass Parkway
Suite 250
Louisville, KY 40299

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Fax +1 502 267 4072
www.cardno.com

www.cardnoatc.com

Mr. Harding Dowell
EOP Architects
201 W. Short Street, Ste. 700
Lexington, Kentucky 40507
859-231-7538
hdowell@eopa.com

Subject: **Limited Exploration and Pavement Subgrade Recommendations**
Lexington Senior Citizens Center – Idle Hour
St. Ann Drive
Lexington, Kentucky

Dear Mr. Dowell:

Cardno has provided geotechnical consulting services in support of the referenced project. In particular, a *Report of Geotechnical Exploration* dated May 29, 2014 and a letter titled *Revised Subgrade Conditions and Recommendations* dated October 28, 2014, have been provided. Based on additional information provided to us and a recent limited exploration at the site, we provide the following summary of conditions with recommendations for remediation of unstable subgrade soils in the proposed pavement areas.

Information provided in the geotechnical report prepared by Cardno and logs of borings drilled on site indicated that underlying soils were suitable for the proposed construction at the time of exploration considering the site was prepared and foundations were designed and constructed as recommended in the report. However, during site development, the contractor and site inspection team noted that actual site subgrade conditions encountered outside of exploratory locations varied in both composition and consistency. Cardno visited the site as requested during initial foundation construction activities near the southeast corner of the building where unsuitable subgrade soils were encountered. A vein of unsuitable subgrade soils consisting of dark brown and gray lean clay containing intermixed organic debris overlain with variable soil fill was encountered near design subgrade elevation. The vein was observed to diminish as the excavation approached the southeast building corner where boring B-5 was advanced during the previous exploration. The unsuitable soils were observed to be outside of the advanced boring location and inconsistent with the materials encountered in the boring. Based on the unsuitable subgrade soils encountered in some foundation areas, the foundations were over excavated as determined and directed by Thelen Associates according to the undercutting recommendations provided by Cardno. The recommendation included overexcavating to either suitable bearing materials or to a specified depth below the footing and backfilled with flowable fill up to design footing subgrade elevation.

Cardno personnel were not present to observe and document the conditions encountered during further building construction activities; therefore, Cardno was not able to determine if conditions reported during construction varied from those encountered during the geotechnical exploration. However, it is our

understanding that unanticipated conditions were reported to the design team by the contracted testing agency, Thelen Associates, Inc. It should be reiterated as stated in the geotechnical report that regardless of the thoroughness of a geotechnical exploration, there is always a possibility that conditions between borings will be different from those at specific boring locations and that conditions may not be as anticipated by the designers or contractors. In addition, the construction process may itself alter soil conditions.

Throughout the period of building construction, the pavement subgrade areas were not addressed. The proposed pavement areas were stripped of topsoil during initial site preparation operations in Fall of 2014 and remained exposed through the winter and early spring of 2015 except for a narrow gravel lined construction access road adjacent to the south side of the building. The exposed subgrade in the proposed pavement areas has been subjected to repetitive passes of heavily loaded construction and excavation vehicles and equipment, freeze/thaw and wetting/drying cycles, and utility installation trenching and backfilling. No apparent protective measures were or are in place to protect the subgrades in these locations from destabilization as was recommended in section 5.1 of the geotechnical report.

Cardno recently performed a limited subsurface exploration in the proposed pavement areas. Travis Andres, Cardno Senior Geotechnical Engineer, visited the site on May 27, 2015 to observe the excavation of test pit excavations at select locations in the proposed pavement areas, particularly in the west central portion of the parking lot area where no previous borings had been located. A total of two test pit excavations were advanced. Test pit TP-1 was performed approximately 65 feet south of the south wall of the newly constructed building and just west of the geothermal well field. Test pit TP-2 was performed approximately 50 feet south of TP-1. Additional test pit excavations were preferred, but due to site utilities and the location of the geothermal well field, test pits were only advanced where no subsurface utilities, structures, or obstructions were expected. In general, subsurface conditions encountered in the test pits consisted of fill to depths of approximately 7.0 feet in test pits TP-1 and TP-2. The fill soils were observed to consist mostly of orange brown clay with intermixed crushed limestone, and occasional limestone cobbles and boulders. A layer of shot rock fill was encountered at the base of the fill in test pit TP-2. Layers of dark gray and brown silty clay with trace organic debris was encountered beneath the fill materials and extended to test pit termination depth of approximately 8.0 feet in both test pits. Based on available information pertaining to the site, it is likely that the presence of the dark gray and brown clay indicates the transition from fill to undisturbed soil. A dynamic cone penetrometer and steel probe rod was used to explore the consistency of encountered materials at the ground surface and at 2 feet depth intervals to excavation termination. In general, the observed and measured subgrade soil consistencies varied from soft to stiff with blow count "N-values" in the range of 2 to 10 blows per 1 ¾ inches. In addition, the excavation sidewalls were observed to be relatively unstable.

Samples of excavated soil were sampled and delivered to the Cardno laboratory for moisture content determination. Moisture content values in the range of 24.6 to 27.9 percent were measured. For reference, available results of standard proctor testing for site soils indicate optimum moisture content values in the range of 18.7 to 19.2 percent.

While on-site the Cardno representative walked proposed pavement areas of the site in an attempt to further identify conditions which could influence site preparation techniques and/or pavement design. The majority of exposed pavement subgrade areas exhibited signs of instability such as rutting, heaving, tension cracking, and pumping from construction traffic. Several areas of ponded water were also observed on the ground surface.

Cardno has reviewed available information including our experience with site and subsurface conditions and recent field observations. Since near surface subgrade soils throughout the proposed pavement areas are well above optimum moisture condition and consist of highly variable fill, considerable undercutting and moisture conditioning and replacement as controlled fill would be required to provide suitable subgrade bearing conditions for designed pavement sections. Therefore, subgrade improvement by undercut of unsuitable soils and filling with an improved aggregate section using one of the replacement options outlined below is recommended.

Undercutting

As indicated by the site contractor, as much as 1 to 2 feet of cut is planned to reach design pavement subgrades. The material proposed as cut should remain in place and be included in the undercut operation to help prevent further destabilization of the underlying subgrade during undercutting and hauling operations. Undercutting should be performed in subgrade areas deemed unsuitable by proofroll as recommended in the geotechnical report and project specifications. Additional undercutting considerations and recommendations follow.

- Perform undercut operations using a track-hoe excavator working from the rear of the site (northast) to the site entrance (southwest)

- Undercut a minimum of 24 inches below design subgrade elevation for Option 1 outlined below. Undercut a minimum of 36 inches below design subgrade elevation for Option 2 below.

- The undercut subgrade should be leveled and graded smooth with the track-hoe bucket only. Grading and leveling of undercut subgrade areas with tracks of the excavator or dozer or by roller should not be performed to help prevent further destabilization of the subgrade.

- All excavator and haul truck traffic should be prohibited from undercut subgrade areas. All traffic should remain on subgrade materials yet to be undercut and routed to avoid undercut areas where possible to prevent further destabilization. Traffic should remain removed from the stabilized section until the complete pavement section can be installed.

- The limits of undercutting should extend beyond the pavement limits at least 2 feet to assure adequate support of associated curbing and guttering and minimize differential settlement between these structures and adjacent pavements.

Filling

We recommended the undercut volume be filled by one of the methods presented below. Fill placement should be performed working from the site entrance (southwest) to the rear of the site (northeast). Fill material should be end dumped and pushed out into the undercut fill area. Only small dozer traffic should be subjected to the fill layers during installation. No haul traffic should be subjected to the stabilized section until the full depth of stabilization section and aggregate base course has been installed to help prevent further destabilization of the subgrade.

Option 1 – Geogrid Reinforced Aggregate Section (undercut 22 inches minimum)

- Line exposed undercut subgrade with a needle-punched non-woven geosynthetic filter fabric such as Propex 701 or Mirafi 170N. Provide lap of at least 12 inches to adjacent sides and ends.

- Overlie geosynthetic filter fabric with Tensar BX1300. Provide lap of at least 24 inches to adjacent sides and ends. Installation should be performed according to manufacturer and supplier recommendations

- Place 12 inches of KYTC #2 or #3 stone in single lift. Grade level and track-in place using a small dozer. No roller or vibratory compaction should be used to help minimize further destabilization of the subgrade.

- Line surface of KYTC #2 or #3 stone with layer of Tensar BX1200. Provide lap length of at least 18 inches to adjacent sides and ends.

- Place 10 inches of KYTC #57 stone in a single lift to finish the stabilized section. Grade level and track-in place using a small dozer. No roller or vibratory compaction should be used to help minimize further destabilization of the subgrade.

Option 2 – Shot Rock with Stone Choke (Undercut 36 inches minimum)

- Line exposed undercut subgrade with a needle-punched non-woven geosynthetic filter fabric such as Propex 701 or Mirafi 170N. Provide lap of at least 12 inches to adjacent sides and ends.

- Place 24 inches of shot-rock in single lift and track-in with small dozer.

- Place 6 inches of KYTC #57 stone over the placed shot-rock. Grade level and track-in place with dozer to help choke voids in the shot-rock surface.

- Place additional 6 inches of KYTC #57 stone and compact with a smooth-drum roller to finish the improved section.

Asphalt and concrete pavement sections should be constructed as designed overlying the stabilized subgrade section. Stone base placed as part of the design pavement section should be compacted using a smooth-drum vibratory roller to attain minimum compaction requirements. The permeable paver design section is noted to include similar aggregate and geosynthetic materials and dimensions. These design sections may include the stabilized section as part of the constructed section per the approval of the Civil Engineer and Landscape Architect.

All material recommendations provided herein should be installed per manufacturer and/or supplier recommendations. Contractor selection of equivalent materials should be approved by the engineer prior to installation.

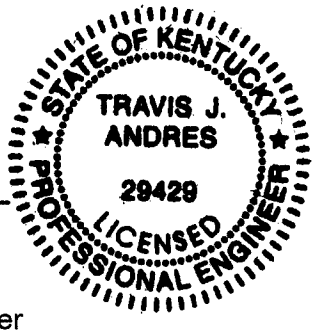
Logistics during subgrade stabilization is extremely important. Any excessive loading to the exposed undercut subgrades or incomplete stabilization sections could compromise the installed section or any stable subgrade support conditions that may exist. Undercutting and filling should be performed as outlined above and construction and paving traffic should be routed to avoid traversing unimproved subgrade areas. Following installation of the improved sections, repetitive passes of construction traffic should be kept to a minimum until site paving is completed.

Minimizing infiltration of water into the subgrade and rapid removal of subsurface water are essential to successful long-term pavement performance. Both subgrade and pavement surfaces should have minimum slopes of one-quarter inch per foot to promote drainage. Pavement edges should be provided a means of water outlet by extending the aggregate stabilization layers and base course through to daylight or to surface drainage features such as storm inlets. Drop inlets and other stormwater management structures should be provided weep holes in order to keep subsurface water from accumulating against their outside walls.

Although not retained to provide construction materials testing and special inspection services, the project geotechnical consultant should be present to observe the implementation of the recommendations provided herein to judge suitability of site preparation, undercutting, filling, and pavement construction. Actual subgrade conditions may differ from the expected conditions. Therefore, the engineer should be on site to confirm the recommendations provided herein are applicable and sufficient for the actual conditions encountered.

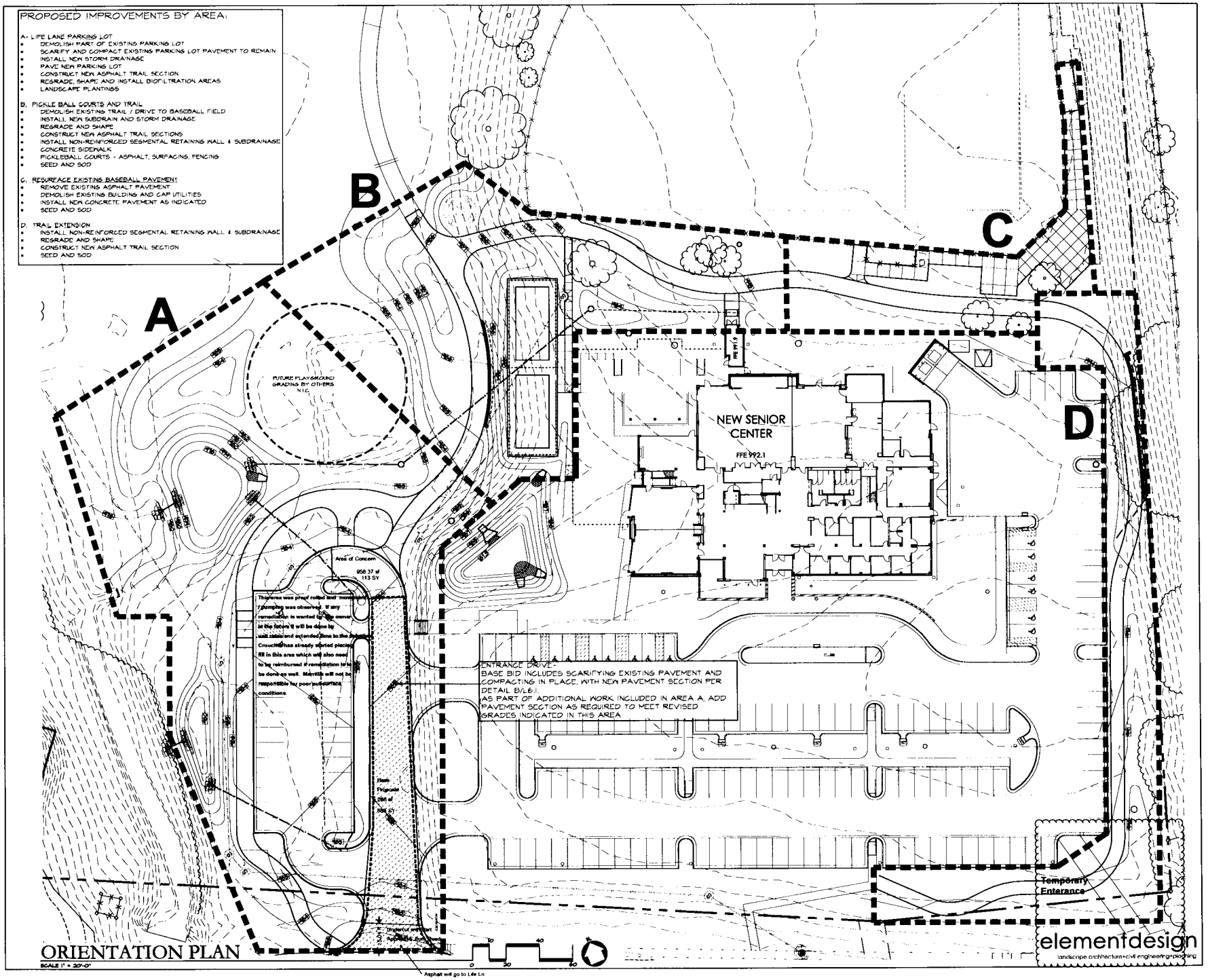
Cardno ATC appreciates the opportunity to have provided this service and we look forward to serving as your geotechnical consultant throughout project execution. Please contact us if you have any questions regarding the information presented.

Sincerely,
CARDNO



Travis Andres, P.E.
Senior Geotechnical Engineer

Mark Edmonson, P.E.
Branch Manager



LEXINGTON SENIOR CENTER
IDLE HOUR PARK
LEXINGTON, KY 40502
BID DOCUMENTS

DATE	REVISION

EOP architecture | interiors

PROJECT TEAM

EOP Architects
Prime Architect
www.eope.com

BPMJ, Inc.
Structural Engineer
www.bpmj.com

CMTA Consulting Engineers
MEP Engineer
www.cmtaeng.com

Element Design
Civil Engineer & Landscape Architect
www.element-site.com

Caitlin+Petrovich Architects
Consultant for Senior Design Issues
www.c-parchitects.com

KEYPLAN

TRUE PLAN

Job Number 201333
Drawn By RAF /VLA
Checked By RAF / VLA
Date JULY 9,2015

STATE OF KENTUCKY LICENSED PROFESSIONAL ENGINEER
STATE OF KENTUCKY REGISTERED LANDSCAPE ARCHITECT

SITE ORIENTATION PLAN
L7.0

Lexington-Fayette Urban County Government
DEPARTMENT OF GENERAL SERVICES

Jim Gray
Mayor

Geoff Reed
Commissioner

TO: Mayor Jim Gray
Sally Hamilton
Urban County Council

FROM: Geoff Reed, Commissioner of General Services

CC: Jamshid Baradaran, Director, Facilities & Fleet Management

DATE: November 16, 2015

SUBJECT: Request Council Authorization to Execute Change Order #28 with Marrillia Design & Construction in the amount of $41,188.00 for the Senior Citizen Center Construction Contract #227-2014

Request

Authorization to execute change order No. 28 for $41,188.00 with Marrillia Design & Construction, Lexington, Kentucky for the Senior Citizen Center Construction project. The new contract total is $10,274,082.37.

Why are you requesting?

This change order will provide undercutting and soil remediation in the entry drive from Life Lane which connects to the entrance of the new Senior Center where unsuitable soils were discovered. This work is necessary to prevent premature failure of the paving in that area.

What is the cost in this budget year and future budget years?

The cost for this FY is: $41,188.00
The cost for future FY is: $0

The funds are budgeted in:

Account number:

FUND	DEPT ID	SECTION	ACCOUNT	AMOUNT
2600	606101	6001	90511	$41,188.00

File Number:

Director/Commissioner: Jamshid Baradaran, Director of Facilities & Fleet