

**Philadelphia International Airport
Concrete Restoration & Repair
Program
AT
PHL Garages
A,B,C,D,E & F**

**ICRI 2014 Fall Convention
November 12-14, 2014**

Quinn Construction, Inc.

- Founded in 1991
- Certified WBE
- Completed over 1700 Projects
- Earned Reputation of Quality Workmanship,
on time Completion and within budget
 - Our Team is highly Trained
- Professionalism & Experience Craftsmanship to
each project

ABOUT THE AIRPORT

- ✈ 27 Carriers – 600+ Daily Departures to 125 Cities
- ✈ 59 International Flights to 37 International Destinations
- ✈ 55% Origin and Destination Traffic
- ✈ Travelers - 50% Leisure/50% Business
- ✈ Employees
 - Approximately 22,000 Airport Employees
 - Supports 141,000 Jobs/200+ Employers
- ✈ \$14 Billion (USD) Regional Economic Impact Annually
- ✈ 2012 Total Passengers - 30.3 Million
- ✈ 2012 Total Operations - 443,236
- ✈ 2012 Total Air Cargo - 399,822 Tons
- ✈ Experienced Management Team

Source: Philadelphia International Airport, Activity Reports 5

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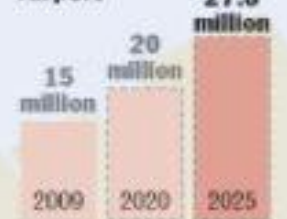
PHL – Future Plans

\$5.2 Billion Expansion Plan for Philadelphia International

A Federal Aviation Administration plan to expand the airport calls for two runways to be extended and one completely new runway to be built on top of where the UPS facility currently sits. A new commuter terminal is also included in the plan.



Passengers Boarding At Philadelphia Airport



PHL – PRESENT DAY



PHL – Expansion Plans



Philadelphia International Airport

Concrete Restoration & Repair Program

PHL – Project Team

- Owner:

Philadelphia Parking Authority (PPA)

- Design Professional:

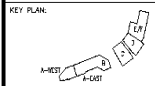
O'Donnell & Naccarato, Inc.

Philadelphia, PA



Philadelphia Parking Authority
 3101 MARKET STREET
 PHILADELPHIA, PA 19104
 2ND FLOOR

ODONNELL & NACCARATO, INC.
 CONSULTING ENGINEERS
 71 SOUTH INDEPENDENCE MALL, EAST
 SUITE 902
 PHILADELPHIA, PENNSYLVANIA 19106-3922
 TELEPHONE: (215) 925-8766
 FAX: (215) 307-4251
 Project No. 090209100



68(C) FOR BD 5/19/09

| REVISION | DESCRIPTION | DATE |
|----------|-------------|------|
| | | |

**CONCRETE RESTORATION
 REPAIR PROGRAM
 AT PHL GARAGES
 LOCATION KEY PLAN**

NO. NO. 0801.0038.00 CHECKED: RW

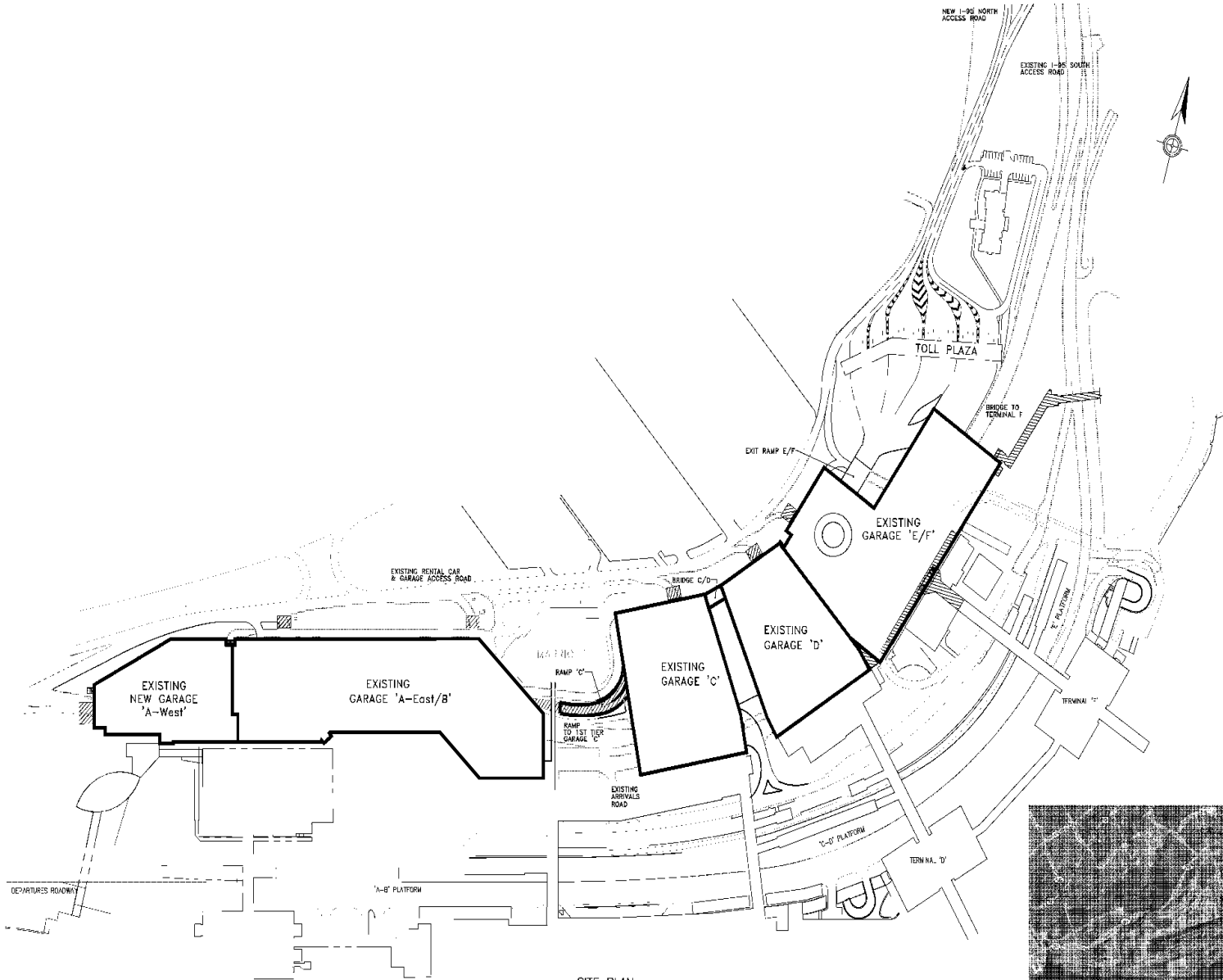
DRAWN: CAD DATE: 2009/05/19

BID NO. N.PHL.CR.09.001

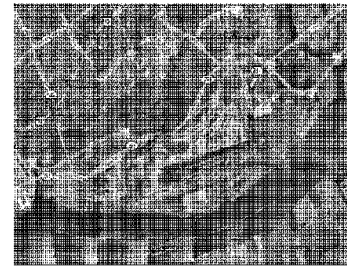
DRAWING NO.

AS-1

SHEET NO. 2 of 40



SITE PLAN
 SCALE: 1/128" = 1'-0"
 NOTES



VICINITY MAP

C:\PROJECTS\2009\CONCRETE RESTORATION\PHL GARAGES\AS-1.dwg 2/2/2009 10:36 AM 1" = 128' (Drawing by: J. Brennan)





PHL – Garage Structures

- Garage A - West – Precast Double Tee
- Garage A – East/B – Precast Tee’s with CIP Topping
- Garage C – Precast Tee’s with CIP Topping
- Garage D - West – Precast Tee’s with CIP Topping
- Garage E/F - West – Precast Double Tee
- Internal Helix Ramps – Cast in Place Concrete

PHL – Existing Conditions



GARAGE
← C →
W 40

GARAGE
← C →
W 39

4













Park ↻



PARK →

→

STAY





CHEVROLET
YTP-0544

6MHS-511A

EST-6094

Terminal II Terminal III

T/60

























Exit ↑



PHL – Bid Information

- All bidders were required to submit a Prequalification Package prior to Bidding
- Project was bid in April / May 2009
- 7 Contractors were accepted and allowed to bid the project.

PHL – Bid Form

- Bid Breakdown:

Base Bid (“C”; “D” Trench Drain & Safe off A-F)

Base Bid Alternate # 1 (“C” – Marriott Level)

Unit Prices for 2009 – 16 Each

Base Bid Alternate # 2 – (“A” West) 2009 or 2010

Base Bid Alternate # 3 – (“A” East; “B”) 2009 or 2010

Base Bid Alternate # 4 – (“E”/“F”) 2009 or 2010

Unit Prices for 2010 – 16 Each

PHL - Scope of Work

- Vertical & Overhead Concrete Repairs @ 7,415 SF
- Horizontal Shallow Depth Concrete Repairs @ 10,378 SF
- Horizontal Full Depth Repairs @ 750 SF
- Joint Sealant Replacement
 - Tee -Tee Sealants @ 350,561 LF (66 Miles) - LS
 - Control Joint Sealants @ 222,053 LF (42 Miles) - LS
 - Cove Joint Sealant @ 120,094 LF (23 Miles) - LS
- 10,000 Lf of Expansion Joint Replacement
- 3.3 Million SF of Clear Concrete Sealer - LS
- 286,000 SF of Epoxy Broadcast Deck Coating - LS

PHL - Scope of Work

- Horizontal Random Crack Repairs @ 13,065 LF
 - Vertical Random Crack Repairs @ 7,000 LF
 - Post Pocket Repairs – Concrete & Grout @ 40 Each
-

- Roofing Repairs – New Roofs @ Elevator Towers
- Stair Tower Repairs – Entrance Canopies
- Electrical Repairs – Boxes in the CIP Topping @ 100 Ea
- Plumbing Repairs – Drains @ 15 Each/Garage
- Plumbing Piping @ 125 LF/Garage
- Plumbing Repairs – Trench Drains @ “E”/ “F”
- Painting, Striping, Misl. Metals; Steel Angles

PHL – Bid Results

- Bidder # 1 – \$ 7,648,318.00
- Bidder # 2 - \$ 10,346,300.00
- Bidder # 3 - \$ 10,870,400.00
- Bidder # 4 - \$ 13,385,930.00

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* Bidder # 1 was not selected

PHL – Bid Award

- PPA Selected ALL Work Items
- Notice to Proceed – May 27, 2009
- Completion Dates:
 - Base Bid; Alternate # 1; Alternate # 2 –
December 21, 2009
 - Alternate # 3 & Alternate # 4 –
December 21, 2010
- Liquidated Damages of \$ 1,500.00/Day

PHL – Plan of Attack

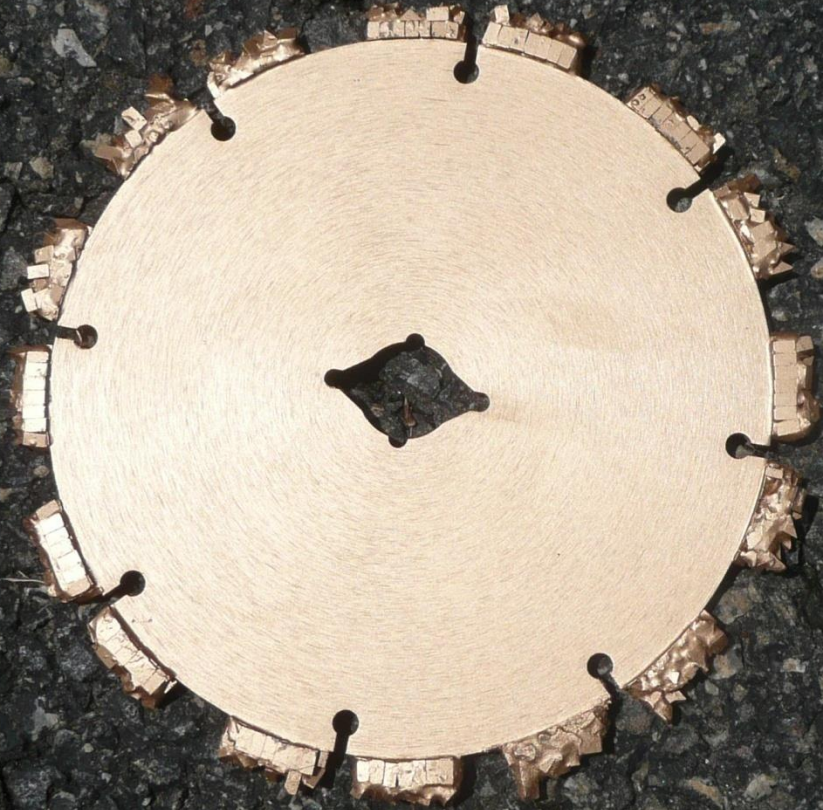
- Access to 2 Levels in C & D – 2009
2 Crews Working – 20 -30 Men
All Subs
- Access to 2 Bays – 2 Levels in A West; E & F - Access to 2 Levels A East/B - 2010
3 Crews Working – 20 - 30 Men
All Subs
- Completed 100 % in each Phase











80041 CCC
Caulking Materials
4" x .150" x 7/8"-5/8"
Max RPM: 15000
Made in China



Signature

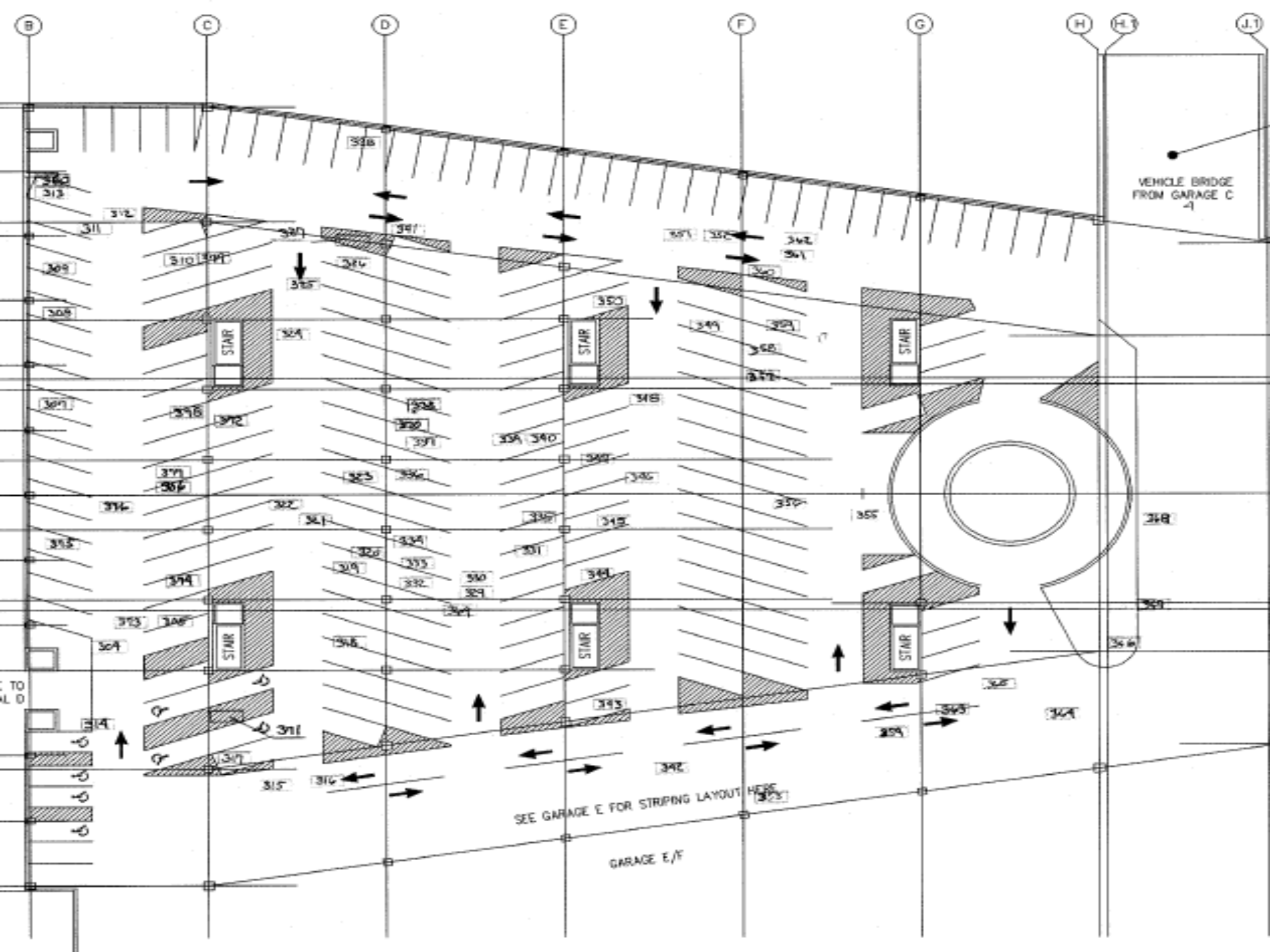
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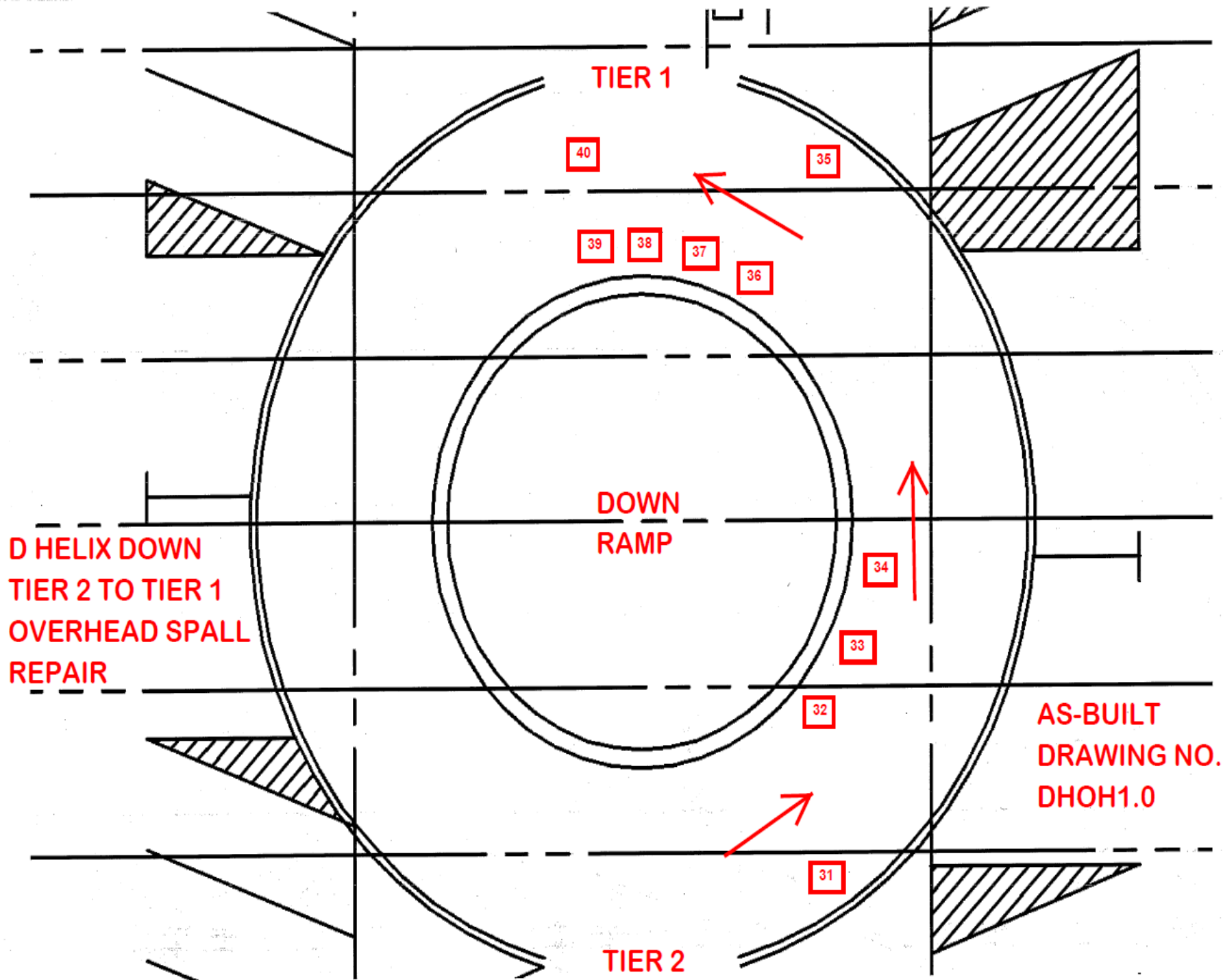
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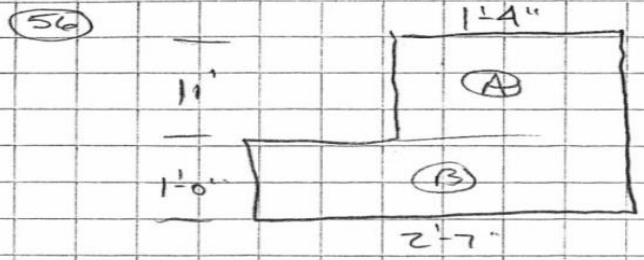


7

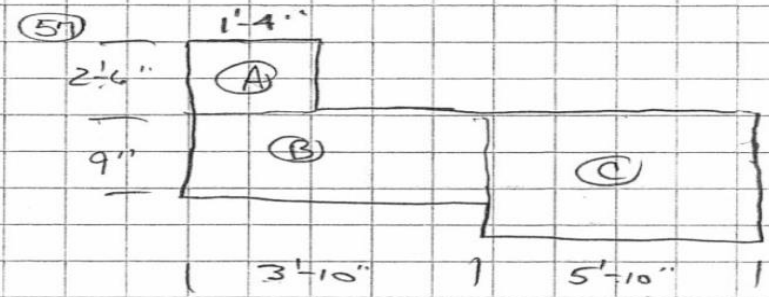






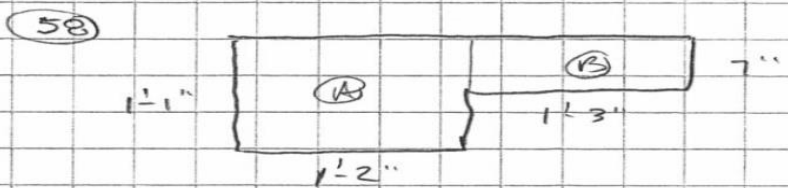


| | | |
|-----|--------|-------|
| (A) | 1.22 | 1 |
| (B) | 2.58 | 3 |
| | <hr/> | <hr/> |
| | 3.80 # | 4 # |

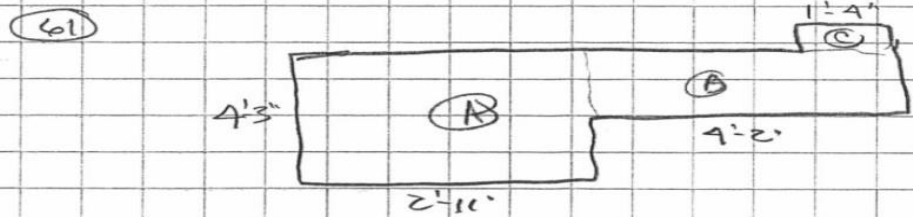


| | | |
|-----|---------|-------|
| (A) | 3.33 | 3 |
| (B) | 2.88 | 4 |
| (C) | 9.72 | 12 |
| | <hr/> | <hr/> |
| | 15.93 # | 19 # |

SAY 16 #

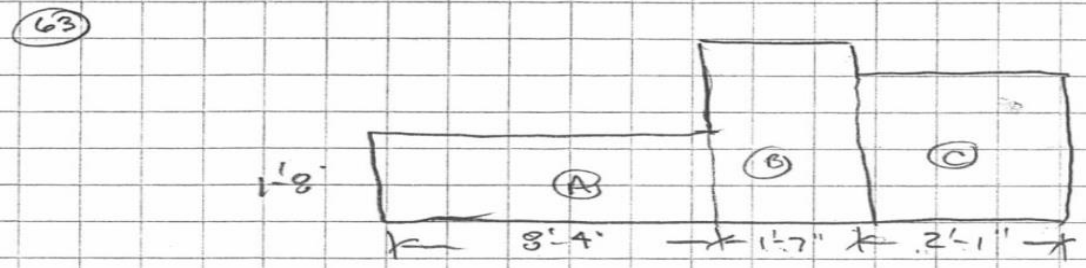


| | | |
|-----|--------|-------|
| (A) | 1.26 | 1 |
| (B) | .73 | 1 |
| | <hr/> | <hr/> |
| | 1.99 # | 2 # |



| | | |
|-----|---------|-------|
| (A) | 12.4 | 12 |
| (B) | 14.24 | 12 |
| (C) | .67 | 1 |
| | <hr/> | <hr/> |
| | 27.31 # | 25 # |

SAY 27 #



| | | |
|-----|---------|-------|
| (A) | 13.89 | 16 |
| (B) | 6.99 | 8 |
| (C) | 8.16 | 8 |
| | <hr/> | <hr/> |
| | 29.04 # | 32 # |

SAY 29 #

| REPAIR # | SF REPAIR | POUR DATE | METHOD | REPAIR # | SF REPAIR | POUR DATE | METHOD | REPAIR # | SF REPAIR | POUR DATE | METHOD | REPAIR # | SF REPAIR | POUR DATE | METHOD |
|----------|-----------|-----------|--------|----------|-----------|-----------|--------|----------|-----------|-----------|--------|----------|-----------|-----------|--------|
| 1 | 4 | 7/1/2009 | TK-4 | 41 | 1 | 6/26/2009 | BM | 81 | 12 | 6/30/2009 | TK-2 | 121 | 71 | 7/1/2009 | TK-3 |
| 2 | 3 | 7/1/2009 | TK-4 | 42 | 1 | 6/26/2009 | BM | 82 | 1 | 6/29/2009 | BM | 122 | 1 | 7/1/2009 | TK-4 |
| 3 | 6 | 7/1/2009 | TK-4 | 43 | 2 | 6/26/2009 | BM | 83 | 1 | 6/29/2009 | BM | 123 | 4 | 7/1/2009 | TK-4 |
| 4 | 4 | 7/1/2009 | TK-4 | 44 | 1 | 6/26/2009 | BM | 84 | 5 | 6/29/2009 | BM | 124 | 18 | 6/30/2009 | TK-2 |
| 5 | 18 | 7/1/2009 | TK-4 | 45 | 68 | 6/30/2009 | TK-1 | 85 | 4 | 7/1/2009 | TK-3 | 125 | 8 | 7/1/2009 | TK-3 |
| 6 | 7 | 6/26/2009 | BM | 46 | 41 | 6/30/2009 | TK-2 | 86 | 24 | 7/1/2009 | TK-3 | 126 | 1 | 6/29/2009 | BM |
| 7 | 9 | 6/26/2009 | BM | 47 | 56 | 6/30/2009 | TK-1 | 87 | 6 | 7/1/2009 | TK-4 | 127 | 2 | 7/1/2009 | TK-4 |
| 8 | 8 | 6/26/2009 | BM | 48 | 4 | 6/26/2009 | BM | 88 | 5 | 6/29/2009 | BM | 128 | 1 | 7/1/2009 | TK-4 |
| 9 | 2 | 6/26/2009 | BM | 49 | 36 | 6/30/2009 | TK-2 | 89 | 34 | 7/1/2009 | TK-3 | 129 | 2 | 7/1/2009 | TK-3 |
| 10 | 2 | 6/26/2009 | BM | 50 | 6 | 6/29/2009 | BM | 90 | 42 | 7/1/2009 | TK-3 | 130 | 4 | 6/29/2009 | BM |
| 11 | 5 | 6/26/2009 | BM | 51 | 1 | 6/29/2009 | BM | 91 | 7 | 7/1/2009 | TK-4 | 131 | 1 | 7/1/2009 | TK-4 |
| 12 | 14 | 6/26/2009 | BM | 52 | 2 | 6/26/2009 | BM | 92 | 4 | 6/29/2009 | BM | 132 | 1 | 7/1/2009 | TK-4 |
| 13 | 15 | 6/30/2009 | TK-1 | 53 | 4 | 6/29/2009 | BM | 93 | 3 | 7/1/2009 | TK-3 | 133 | 4 | 6/29/2009 | BM |
| 14 | 1 | 6/26/2009 | BM | 54 | 26 | 6/30/2009 | TK-2 | 94 | 2 | 7/1/2009 | TK-3 | 134 | 1 | 7/1/2009 | TK-4 |
| 15 | 1 | 6/26/2009 | BM | 55 | 4 | 6/29/2009 | BM | 95 | 9 | 7/1/2009 | TK-3 | 135 | 2 | 7/1/2009 | TK-4 |
| 16 | 2 | 6/26/2009 | BM | 56 | 10 | 6/29/2009 | BM | 96 | 6 | 7/1/2009 | TK-3 | 136 | 1 | 7/1/2009 | TK-4 |
| 17 | 73 | 6/30/2009 | TK-1 | 57 | 8 | 6/29/2009 | BM | 97 | 4 | 6/30/2009 | TK-2 | 137 | | | |
| 18 | 3 | 6/26/2009 | BM | 58 | 1 | 6/29/2009 | BM | 98 | 3 | 7/1/2009 | TK-4 | 138 | 3 | 6/30/2009 | TK-2 |
| 19 | 2 | 6/26/2009 | BM | 59 | 4 | 6/29/2009 | BM | 99 | 4 | 7/1/2009 | TK-3 | 139 | 2 | 7/1/2009 | TK-4 |
| 20 | 3 | 6/26/2009 | BM | 60 | 46 | 6/30/2009 | TK-2 | 100 | 2 | 7/1/2009 | TK-4 | 140 | 2 | 7/7/2009 | BM |
| 21 | 2 | 6/26/2009 | BM | 61 | 1 | 6/29/2009 | BM | 101 | 6 | 7/1/2009 | TK-4 | 141 | 4 | 7/7/2009 | BM |
| 22 | 5 | 6/26/2009 | BM | 62 | 2 | 6/29/2009 | BM | 102 | 4 | 7/1/2009 | TK-4 | 142 | 5 | 7/7/2009 | BM |
| 23 | 35 | 6/30/2009 | TK-2 | 63 | 182 | 6/30/2009 | TK-1 | 103 | 74 | 7/1/2009 | TK-3 | 143 | 1 | 7/7/2009 | BM |
| 24 | 14 | 6/30/2009 | TK-2 | 64 | 6 | 6/29/2009 | BM | 104 | 4 | 7/1/2009 | TK-4 | 144 | 1 | 7/7/2009 | BM |
| 25 | 27 | 6/30/2009 | TK-2 | 65 | 4 | 6/29/2009 | BM | 105 | 8 | 7/1/2009 | TK-3 | 145 | 3 | 7/7/2009 | BM |
| 26 | 2 | 6/29/2009 | BM | 66 | 9 | 6/29/2009 | BM | 106 | 2 | 7/1/2009 | TK-3 | 146 | 1 | 7/7/2009 | BM |
| 27 | 3 | 6/29/2009 | BM | 67 | 99 | 6/30/2009 | TK-2 | 107 | 24 | 7/1/2009 | TK-3 | 147 | 1 | 7/7/2009 | BM |
| 28 | 26 | 6/30/2009 | TK-2 | 68 | 4 | 6/29/2009 | BM | 108 | 5 | 7/1/2009 | TK-3 | 148 | 1 | 7/7/2009 | BM |
| 29 | 2 | 6/29/2009 | BM | 69 | 4 | 6/29/2009 | BM | 109 | 10 | 7/1/2009 | TK-3 | 149 | 1 | 7/7/2009 | BM |
| 30 | 7 | 6/29/2009 | BM | 70 | 2 | 6/29/2009 | BM | 110 | 8 | 7/1/2009 | TK-4 | 150 | 1 | 7/8/2009 | BM |
| 31 | 6 | 6/29/2009 | BM | 71 | 3 | 6/29/2009 | BM | 111 | 54 | 7/1/2009 | TK-4 | 151 | 1 | 7/8/2009 | BM |
| 32 | 2 | 6/26/2009 | BM | 72 | 3 | 6/30/2009 | TK-2 | 112 | 22 | 7/1/2009 | TK-4 | 152 | 1 | 7/8/2009 | BM |
| 33 | 1 | 6/26/2009 | BM | 73 | 4 | 6/29/2009 | BM | 113 | 2 | 7/1/2009 | TK-4 | 153 | 1 | 7/8/2009 | BM |
| 34 | 7 | 6/29/2009 | BM | 74 | 7 | 6/29/2009 | BM | 114 | 4 | 7/1/2009 | TK-4 | 154 | 1 | 7/8/2009 | BM |
| 35 | 2 | 6/26/2009 | BM | 75 | 8 | 6/30/2009 | TK-2 | 115 | 24 | 7/1/2009 | TK-4 | 155 | 1 | 7/8/2009 | BM |

GARAGE C
TIER 5

HORIZONTAL SPALL REPAIR LOG
PROGRESS AS OF 7/08/09

PREPARED BY
J. F. SCHAEFER

| | | | | | | | | | | | | | | | |
|----|-----|-----------|----|----|-----|-----------|------|-----|-----|----------|------|------------|-----|----------|----|
| 36 | 4 | 6/26/2009 | BM | 76 | 24 | 6/30/2009 | TK-2 | 116 | 32 | 7/1/2009 | TK-4 | 156 | 1 | 7/8/2009 | BM |
| 37 | 2 | 6/26/2009 | BM | 77 | 4 | 6/29/2009 | BM | 117 | 18 | 7/1/2009 | TK-4 | Helix-Down | 20 | 7/7/2009 | BM |
| 38 | 1 | 6/26/2009 | BM | 78 | 14 | 6/30/2009 | TK-2 | 118 | 6 | 7/1/2009 | TK-4 | Helix-up | 8 | 7/7/2009 | BM |
| 39 | 1 | 6/26/2009 | BM | 79 | 6 | 6/29/2009 | BM | 119 | 13 | 7/1/2009 | TK-4 | | | | |
| 40 | 12 | 6/26/2009 | BM | 80 | 36 | 6/30/2009 | TK-2 | 120 | 17 | 7/1/2009 | TK-3 | | | | |
| | 343 | | | | 744 | | | | 515 | | | | 182 | | |

TRUCK 1
TRUCK 2
TRUCK 3
TRUCK 4

| |
|--------------------------|
| TOTAL REPAIR AREA |
| 1784 |

PHL – Repaired Conditions











Exit
Down

Exit
Down

NO
SMOKING



Exit
Down

G

E

STOP

PHL – Major Movers

- Vertical & Overhead Concrete 56% of estimate
- Horiz. Shallow Depth Concrete 260% of estimate
- Horizontal Full Depth Repairs 27 % estimate
- Plumbing Repairs – Drains 200 %
- Plumbing Piping - 250 %

PHL – Final Contract

- Base Bid- \$ 10,346,300.00
- Final - \$ 10,307,780.14

PHL – Delta's

- Documentation
- TSA
- Marriott
- Stolen Cars
- Engineer Services Re-Bid

PHL – Plus's

- Weather
- Large Areas to Work
- PPA
- Safety



PHL - SAFETY

- Crew Size's Ran 10 to 30 Men
- Total QCI Man Hours 59,025
- No Lost Time Accidents
- One Reportable Accident:
a Thumb Laceration - 2009





QUINN CONSTRUCTION, INC.