Guaranteed Pavement Information System: Coordinating Disruption

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City of Philadelphia
Streets Department

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Abstract

The City of Philadelphia Streets Department developed an application to allow Highways Right of Way managers to coordinate all street opening activity in the City. The application allows utility companies to input their work plans. It also allows the Highways Division to track it's resurfacing and street reconstruction activity. The application is constantly looking for scheduling overlaps and work that is planned during the one year guarantee period after resurfacing occurs. This allows Right of Way Managers to work with the utilities to reschedule work so that disruptions to the road surface and to citizens are minimized.
Purpose of GPIS

• Coordinate street opening projects
  – City projects
  – Utility projects

• Allow self-service for street opening permits
• Consolidate paving and reconstruction databases
  – Planning
  – Design
  – Construction
  – Guarantee Period

• Create GIS accessible data for mapping and use in other applications
# Scheduling Conflicts

**BUFFER ZONE**

<table>
<thead>
<tr>
<th>Streets Construction</th>
<th>PECO Construction</th>
<th>Verizon Construction</th>
</tr>
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Structural Conflicts

- Potential conflicts are identified by PA One Call by Census Tract
- Must request clearance for the following:
  - Facilities within 18"
  - Facilities crossing over or under
- Once all clearances are received permit can be issued

- If a utility does respond to requests for clearances from others in a timely manner, the system will not allow them to get their own permits
Data Flow

- Planned Utility Street Openings
- Preventive Maintenance
- Paving Work
- Pot Holes, etc.
- Emergencies
- Street Work
- Unplanned Utility Street Openings

GPIS
- Paving Projects
- Customer Affairs Center

facilitated by GIS
Application Architecture

- Citrix Secure Gateway – Access for non-CityNet users
- NFuse – web access for all users
- Visual Basic 6 and MapObjects 2 - client
- Citrix Metaframe XP Server Farm
- Windows Terminal Services/Windows 2000
- MS SQL Server database
- GIS data as shape files
Benefits of GPIS

- Reduced permit process time
- Protects newly resurfaced and historic streets
- Promotes joint construction projects
- Reduced traffic congestion
- Reduction in permit operation costs and faster project construction.
- Ability to Coordinate with parades and special events
- Ability to set moratoriums on street openings
- Record of who is in the Right of Way for legal claims
- Increased accountability will deliver more City projects on time.
- Insures that the City will receive utility "as-built" drawings.
Funding Source

• Now: Operating Funds
• Future: Permit fees (proposed City Council Ordinance)
• Projected annual fees: $1,000,000 to offset cost of application and Right of Way Unit
• Long term savings by extending the life cycle of the streets
GPIS Screen Shots
Welcome to Citrix® MetaFrame™

Please log in

- To log in to the application portal, type your user name, password, and domain name in the boxes at left.
- Click the Log In button to log in.

If you do not know your login information, please contact your help desk or system administrator.

Citrix® NFuse™ Classic Message Center

The NFuse Classic Message Center displays any informational or error messages that may occur.
Access to Applications on Citrix Servers
Search by Attributes

- Project Name
- GPIS Project #
- Bid Number
  - Custom Data
  - Cross Reference
- Last 10 Projects Saved
- Owner
  - Type of Work
  - Current Phase
- Division
- Highway District
- Police District
- Traffic District
- Council District
- Projects w/ conflicts
- Max Recs Returned: 25
Search by Locations
Search By Location Example
Conflicting Project
Both Project Location Screens

- Conflict on N 19th St
- Conflict at N 19th St & Church Ln
### Conflict Report

#### Scheduling Conflict Report

<table>
<thead>
<tr>
<th>Conflict #</th>
<th>Owner</th>
<th>Project #</th>
<th>Project Name</th>
<th>Street</th>
<th>From/At</th>
<th>To</th>
<th>Construction Dates</th>
<th>Who</th>
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</thead>
<tbody>
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</tbody>
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- **Conflict resolution methods:**
  - Reschedule work
  - Direct communication
  - Monthly Board of Highways Supervisors Meetings
Request Utility Clearances

Based on the Pa One Call Numbers Listed below, a design plan with compiled utilities has been sent to the following parties within the 36" impact zone:

Pa One Call Design Numbers:

<table>
<thead>
<tr>
<th>Pa One Call #</th>
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<tbody>
<tr>
<td>0245367</td>
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<tr>
<td>0245698</td>
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</tbody>
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Impacted Utilities:

- Comcast Cablevision
- Verizon Communications
- Philadelphia Water Department
- Level (3) Communications
- MCI Worldcom
- City Signal Communications
- Sunesys Inc
- Danella Engineering

Plans Must Be Sent To:

- Streets

Owner (Utility): PECO Energy
Project Name: 19th Street Power Project
GPIS Project #: G2003-584

Drawing Information:

<table>
<thead>
<tr>
<th>Drawing #</th>
<th>Date Sent</th>
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<td>233445</td>
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<tr>
<td>345656</td>
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Send | Close
Failure to Respond Warning Notice

City of Philadelphia
Department of Streets

Warning: Utility Clearance Requests are awaiting your response. You have 10 day(s) to respond. If you do not respond you will be barred from obtaining new permits.

Guaranteed Pavement Information System

- Create New Project
- Existing Projects
- Check Status At Location
- Project Permit Status
- Respond to Utility Clearance
- Create Emergency Permit
- Create Accelerated Permit
- Reports
- Admin Menu

Last Update 04/24/2003
Projects with approved Utility Notifications but Pending Permits cannot have the permit issued if the current date is greater than 365 days from the send date of the Utility Clearance Letter.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Approval Status</th>
<th>Date Approved</th>
<th>Comments</th>
<th>Contact</th>
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<tr>
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<tr>
<td>Streets</td>
<td>Approved</td>
<td>2/5/2003</td>
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</table>
Reports

Select a report, supply any requested criteria, click 'Launch' to print the report to the screen.

The selected report has no criteria.

Click 'Launch' to print the report to the screen.
Adminstration Switchboard

City of Philadelphia
Department of Streets

Guarenteed Pavement Information System

- Project Type
- User
- Grouped Data
- Custom Data Template
- Recurring Events
- Owner
- Contact
- Back to Main Menu
Credits

• Akcelerant Technologies
  – Frank Mirigliano, project manager and main programmer
  – Many others

• Streets Department
  – John Cunningham, Right of Way Manager (Business Project Manager)
  – Nancy Sen, Engineering Supervisor
  – Marion Storey, Information Technology Applications Program Manager (Technical Project Manager)
  – Evelyn Chrol, IS Director
  – Paul Reisner, GIS Manager for Transportation
  – Grant Ervin, GIS Specialist III
Questions…

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